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Module 5: Breeding

Pigeon Life Cycle

To help you understand what to expect from your pigeons, we will briefly follow them for one year. Because a year is a long time and many things can and will happen it will be impossible to explain everything. We will just explain the basics. Also, please remember that there are very many ways to keep, raise, and train pigeons. When you are ready for more information, go and ask a good flier. They are almost always ready to help you. Remember, they enjoy raising and racing pigeons. They also know that the sport of racing pigeons continues through new members.

As the amount of daylight increases in the Spring, hormones inside the pigeons get the birds excited. Cock birds (boy pigeons) will begin to puff up their chests and fan their tails as they chase the hens (girl pigeons) around the loft. The hens also get turned on, so to speak, and get ready to make eggs. By Valentines Day, many fanciers are ready to mate their birds.

Most fanciers spend many Winter nights planning on which cocks and hens are to be mated together. When the day comes to mate their pairs together, most fanciers place their planned pairs inside the nest boxes and lock them up. The cock birds might get so excited that they will scalp their hens. To prevent this, it is helpful to place a brick inside one corner of the nest. This allows the hen to stand above the cock and saver her from a possible pecking. The next day, you let them out to feed and stretch. After they have had a chance to feed and stretch, you lock them up again. After several days, they will begin to pair up. Most become paired up after just a few days. Some may go as long as two weeks, and there are a few that will never become paired. Fortunately those are few and far between.

After about 10 days from mating, the hen will lay her first egg. If it is not freezing outside, she will probably not sit on it all the time. She will skip a day, and then lay her second egg. Now she is ready to sit tight and incubate both of her eggs.

There are exceptions to every rule, and here is an exception. Remember when we mentioned that it was important to know how much your birds ate? Now, you will notice some extra feed being left in the trough. Here is the exception to the rule about leaving left over feed in the trough. Leave the food ! Some hens and cocks sit so tightly on their eggs or squeakers, that they will not go to eat until their mates are finished eating. When the mates are full, they will come and trade places and sit on the eggs or squeakers while the pigeon previously sitting on the nest can go and eat.

The hen will sit on the nest from late afternoon until mid morning. At mid morning, the cock will go into the nest and take over for a while. Now the hen can stretch and relax. Late in the

afternoon, she will return to the nest and take over once more. During this time, both the cock and hen begin to form pigeon milk. This milk is made from partially digested grain. They will pump the milk into the newly hatched squeakers when the squeakers place their bill into the bills of their parents.

The first egg will begin to pip after 17 days. The squeaker uses an egg tooth to hammer his way out of the egg. One day later, he will crawl out of his shell. After the first one is hatched, the second one will begin to pip his shell.

The cock and hen will both feed the squeakers pigeon milk. Pigeon milk is partially digested grain which forms in the parent's crops. The squabs grow fast. By the time they are 5 to 7 days old they will be covered with quill feathers and are ready to band.

As the days pass, they will reduce the amount of milk and feed the squabs more and more whole grains. The parents also will be eating more and more, so be prepared to increase their feed ration.

In 5 weeks, they will be ready to fly and the parents will be back on another set of eggs. The squeakers are now ready to wean. Just move them into your young bird section. They will be eating and drinking as well as the adults in a few days.

Preparing For The Breeding Season

With the racing seasons all behind us now, we are blessed with the chance to all become "Kings" again, at least in our own little kingdoms. Almost nothing is more relaxing than sitting in a favorite chair, reading lamp on bright because the day becomes night sometime around 5-6 pm now, with a stack of pedigrees in front of us, each one begging to be next year's primo breeder! But, alas, we know better – because we have the race results in the next stack...

It's time to prepare for breeding season, and while perusing the pedigrees of last year's breeders is a wonderful way to wile away an evening, it's time to get down to some serious work if we want to work our way up that ol' race sheet come next year.

Many people make a list of things to do, and it looks something like this:

- check out the auctions, see if there are any good birds within my budget;
- go through my breeders and see what I feel like keeping;
- feed the birds once a day at noon, for the next month or so;
- talk to "Joe" about getting something out of his good pair;
- take a nap.....

Well, I'm here to let you know that if your list looks like the one above, you better unbuckle your belt a notch or two because you'll be spending more time in the buffet line next year than you will in the winner's circle. There's some serious work that needs to be attended to if you want to be good at this game, and we're going to talk about a few of them in this article.

This series will cover the four most important parts of “the off season”, or getting ready for next year! Here’s what we’ll cover:

- **SELECTION:** Who are your first string breeders? Is there a need for a second string?
- **FEEDING:** Fat pigeons don’t like to make whoopee!
- **MEDICATION:** Listen to your mama – make everything clean before you start.
- **UPGRADING:** Auction tips and pitfalls.

If you do your homework, listen to good advice (as opposed to advice from well-intended flyers who are never at the top of the sheet...) and follow through with your plan, then your NEXT racing season will have the strongest possible foundation upon which your skills as a handler will then become the true test of your team.

Selection of your Breeding Team

“Put your first string team on the field!”

Ok. So the racing season is over, you’ve had a little break, the weather has turned and snow is fast approaching. At least for us here in the northeast part of the US. It’s time to start the next racing season.

The next season? Yup. As the old saying goes, races are won in the preparation. And that’s what we’ve got to get doing now. Like a good sports team, it’s important to have a game plan, so let’s put a list of things that we need to do as we begin selecting who our first string breeders will be for our team.

Here’s a list that I think makes sense.

First, review your race team performance.

Decide who stays on the OB team, and who goes. Look closely at your breeders. Compare two years ago to last year, if you have the records. If a pair hasn’t bred multiple winners in each of the last two years, consider re-pairing them with new mates. If they haven’t bred more than the occasional “one shot wonder” then it’s out they go!

Bas Verkerk, Gerard Koopman and Marcel Sangers, all top professional European pigeon racers (not fanciers, but true RACERS!) employ the same breeding program. You may have thought the Roundabout System was only for old bird racing, but their system could easily be called the Roundabout Breeding System – and it works!

Second, MAKE A PLAN.

One of the biggest mistakes that fanciers make, myself included, is getting too many breeders that are simply just wasting feed. Sit down and see what birds are breeding winners for YOU. Forget about the fancy advertisements of the feather merchants.

What works for you and your system? Is it a family of birds? Are the best breeders somehow related? Are they crosses, or are they simply the best birds from your Old Bird and Young Bird

race teams? Where did these good breeders come from? Were they gifted? Were they OOA racers sent in to be on your team? How did they end up on your breeding loft???

Once you have identified your top breeders, IF – again, IF – you have a hole or two that needs to be filled, then you can consider looking for that one or two special pigeons that will help upgrade your breeding team to be a better contender in the races.

Part of your plan will be to decide what type of birds you are trying to breed. Never thought of that before? Well, it's one of the most important parts of your plan.

If you're breeding for your own flying, racing and enjoyment, then you need birds that will be "horses for YOUR courses". If you live in northern Illinois, and you want to breed birds to compete in the SnowBird race series in southern California, well, then, you need to rethink the type of birds you will be breeding.

There are definitely "horses for courses" and by that I mean that pigeons are designed by their genetics to be better at one kind of course over another. Racing over the deserts and mountain ranges in Vegas, California, Utah and other places is certainly quite different than the humid, flat and HOT courses flown in Florida, Georgia, Louisiana....you get my point.

Too many flyers make the mistake of thinking they can "buy" their way to the top of the race sheet. What they fail to take into consideration is what their personal goals are, where they want to succeed in racing and the types of birds that it will take to win there.

Ken Easley of New Mexico is a newcomer to racing, but certainly not to pigeons. A world-class competitor with performance rollers – oops, no, a WORLD CHAMPION with performance rollers – Ken has had pigeons for decades but only recently took the plunge into racing.

Never one satisfied with less than the best, Ken set his sights on the biggest prize in the racing sport – The Sun City Million Dollar Pigeon Race (SCMDPR). After fine tuning his skills over a couple of seasons and setting new club records across the board, Ken has made his plan to not only be competitive, but top the SCMDPR.

To do so, he searched out the breeder that has more consistently put birds into the top of that race sheet, and won that race outright with a very modern family of birds. A complete team of breeders is in quarantine right now from this winning loft, to be combined with his winning family of racers at his New Mexico loft and will be the foundation of the plan that Ken has in place to take his place as the #1 pigeon racer in the world.

Part of Ken's PLAN to top the SCMDPR is his very successful breeding program called Pretzel Breeding. Through this program, Ken developed his world champion family of roller pigeons that kept him at the pinnacle of the roller competitions. This same program has proven very quickly to be the path to success in the racing game, as well.

So, to summarize. To move up in this pigeon racing game, keep only your very, very best PROVEN breeders. Then, have a plan in place to take you where you want to go. Then – GO DO IT!

Breeding Season at a Glance

September

Most fanciers start to evaluate their young birds from the past breeding season during September, which makes this a time of year that we especially enjoy in pigeon racing. Only now can we start to assess the quality of our previous year's pairings. This is an exciting time for both racing or show fanciers, when we find out if we bred that "special bird" or discovered a "special pair." The thrill of the possibilities is what I believe keeps many of us in the sport and provides so much pleasure. I know that this is true for me, anyway.

I'd like to share with you some thoughts on training and feeding. A few years back, I was speaking with a champion young-bird fancier with several decades of experience, and what he shared with me was quite intriguing.

He told me that he had been keeping detailed records on his young birds for many years, and he had developed a theory that his pigeons seemed to come into and go out of condition in cycles lasting three-weeks. He described how he had monitored his top clock birds over the many years of his racing career, and with the exception of the occasional super champion, most of his pigeons seemed to take approximately three weeks of intense training to come into condition, remaining in condition for about three weeks, and giving good performances.

The other part of the cycle was apparently that they would fall off for about three weeks before their results would again be outstanding. After that conversation with him, I have closely followed the results of not only my own teams of birds, but also those of the many fanciers that I have worked with over the years.

Our findings seem to indicate a definite correlation with the "three week rule."

Many fanciers have birds that they fly week in and week out with outstanding results, but those birds are rare and are certainly the exceptions to the rule. The vast majority of our birds give one or two or perhaps three good performances, with less than stellar results for the rest of the racing season.

I wonder about a way to monitor or assess top condition in our birds-perhaps by measuring the blood-oxygen ratio-through which we could determine before shipping them, if they are in optimum condition to give a top performance. Knowing this, we could strategize to save our best racers and rest them when their condition is not its best. We could know when the bird was at its very best and put the "pedal to the metal" so to speak!

I have personally never been a big fan of super-hard training, and I have never regretted that approach to racing. Of course, everything is relative, and hard training in one area of the country might not be considered so hard in another, but I can attest to the following: In my line of work, I field questions from fanciers every day, and I'm glad to be able to say that in almost no case has this method of training and feeding young birds failed to produce winning results, from the smallest club level of competition to the biggest and most prestigious competitions in America.

I'd like to offer some ideas for your consideration.

Remember my earlier statement about our birds coming into form over a three-week period and remaining in form for three weeks—with the exception of the champion bird. I believe that a successful training regimen would look something like this: Start training at a distance that you think your young birds can handle without stressing them too hard. This way, if you have a team of birds that hasn't been flock flying around the loft very well, you have no reason to go out two miles.

On the other hand, if your birds have been training around the loft very well, and you are sure that they have "routed" from as far as three or more miles from home, you might consider starting your birds a little farther out.

Personally, I don't think it matters much whether you start at one mile or ten miles. I think what is important is that the birds feel comfortable and capable of handling the task you give them. I like to keep the pigeons' confidence up, because confident pigeons race faster than those that are having second thoughts as to where they actually are. By training often, every day, but not necessarily so very far, I think that you can accomplish getting the birds' confidence up.

Naturally, I also take the birds to longer distances, but to this date, I have never taken my birds to the first race station prior to a race, and although we (meaning myself and those that I help) compete against many who do, we've never seemed to lose very much ground to those guys who train super hard prior to the season. Keep in mind the "three week rule."

Of course, if you have a large number of birds, and you work them very hard very early, you're in a better situation at the beginning of racing season to send only the better birds to the most important races, just as long as those birds have been given some time to "get their wings back under them."

I don't have the time or the room to have a very large team of birds, and most people that I have helped don't either, so I prefer to train the birds in a gradual way so that for the most important races on the schedule, I have birds that are capable of competing well in them. And I haven't had to take a loan at the bank to pay for the fuel and a new set of tires on my truck!

Another tidbit I'll throw out is this: I'm not a great fan of tossing the birds in small groups, unless I have someone at home who can feed the birds the proper amount as they arrive and

not let them over-eat. We all read about this or that champion fancier who trains his pigeons in small groups so that they learn how to separate from the flock, and develop more confidence flying in smaller groups, rather than becoming accustomed to flying in a large flock.

I agree with the premise of this idea, but I also know that every fancier trains under very different circumstances, and we must all consider every aspect of our training regimen before we take a particular course of action.

Last racing season a friend told me that he was having trouble with his young bird team. They were sluggish, wouldn't fly well around the loft, and he was having trouble getting them on line with the training. He thought that the birds were sick. I asked him to detail his regimen, and he told me that he was taking the birds out every morning for training, and either he or his training partner was letting the birds out one basket at a time.

This meant that the birds were being released about 15 at a time up to twenty minutes apart. From the first to the last basket there was often an almost two-hour time differential. I asked him who was at home when the birds arrived. He told me, "No one." When he trained the birds himself, he had barely enough time to let the birds go and get to work, and when his buddy trained for him, he was always at work when the birds eventually arrived.

After thinking about it for a second, I told him this: "Your birds are not sick, and they aren't stupid, but they are being fed in a very improper way." He balked at that, saying that he fed the best mixture that he could afford. I told him that it wasn't the mixture itself, but the way in which the birds were getting the mixture that was the problem.

The first two groups of birds being released on his tosses were coming home and taking their pick of what was in the feeders. All the others were having to make do with what was left, if anything was left. He confessed to me that he was really loading the feeders down with feed so that he could make sure that the later arrivals had something waiting for them. I told him to immediately stop training his birds in small groups and start letting the entire flock up at one time. I also told him to measure the amount of feed that the birds were cleaning up within ten or twelve minutes after he fed. That would be his "base amount" of feed.

I then told him to put that measured amount of feed in the feeders and let the entire flock fly home to that amount of feed every day. Within a week, with no medication, his birds began doing much better. By the time the races started, his birds were flying like gang-busters. He ended up winning ten of the fourteen races that season.

Were his birds sick? No. Was it so necessary for him to train the birds in small groups? In his case, certainly not. He had no one there to keep the early arrivals from over-eating at the later arrivals' expense. Once all of his birds got on the same feeding schedule, the entire flock benefited.

For those of you who work during the daytime and don't have anyone at home to separate the arrivals, or feed them as they come in, I recommend that you forget all the fancy small flock tosses. Leave that to those who have all day to train, and have the assistance of a group of helpers. About all that they will gain on you will be a couple of short early races, because once your flock has had a few faces under its belt, your birds will be on the same page as the others, and the quality of the pigeon will be the ultimate determining factor in whose birds are winners on race day.

October

By the time October comes, fanciers all over the United States are enjoying the young bird racing season. Of course, geography dictates what is going on in our lofts now. In the south, there are still a few weeks of races left. In the northern part of the United States, we have seen the end of the racing season. What your friends are doing in other parts of the country will be different from what you need to do with your birds now.

To you fanciers in the north who are at the end, or nearing the end, of the racing season, now's the time to evaluate your race team as well as to evaluate your breeders. You need to plan for plenty of time to acclimate any new birds that you want to bring into the loft before the breeding season begins.

What birds should be held over from the race team for either the old bird races or for the breeding loft? This is the key question in evaluating your racing team. And then, how do you decide which pigeons make the grade? I have always believed that consistency in the races is far more important than one good performance. I have long believed that a bird that comes early week after week, race after race, has far more breeding potential than a pigeon that delivers only one spectacular win.

If you think of two birds as being equal, but for whatever reason you are not able to keep both, study their pedigrees. Which bird is linked to more winners? Which bird has better background and genetics? Which bird or birds do you like more than others? If you're looking for a breeder, keep the inbred or linebred over the outcross. If you are looking for a racer, then keep the linebred or outcross over the inbred.

Remember that there could be some "sleepers" in the loft. These are birds that always come home but haven't managed to find their true form or their ideal distance in the young bird races. These birds may be better at the long distances, and you might want to consider keeping them another season.

A super young racer, cock or hen, that is out of an old breeder should always be considered for the breeding loft. You don't want this blood to die out. Throughout the best lofts of Europe, many champions cherish the first set of eggs out of a super racing young hen. This should surely be reason enough to check this out for yourself!

There are specific health measures that you should take at the end of the racing season. In our lofts, we start by purging the birds for one or two days before starting our medication routine. This means that we give only water, no food. I think this is the ideal length of time for purging, although fanciers in Europe purge their pigeons for up to a week. Now is also the time to vaccinate breeders for PMV and salmonella.

Get your general health program under way for breeders by treating for coccidiosis, canker, and worms. I strongly recommend Turbosole for canker. Aureomycin Sulmet powder is also a good tool for fighting coccidiosis, as well as a number of other diseases. Göpox Worm Tablets work well for individual worming, and for many years Eqvalan has been a fine wormer for flock treatment. Since Dr. Colin Walker developed Moxidectin and Moxidectin Plus (which also targets tapeworms), I have been keen on these two Australian products for their effectiveness on the worms and their gentleness on the birds.

Immediately after we dip our birds in a 57 percent (1/4 cup to 2 gallons of water) Malathion solution, we vaccinate them for salmonella with Sal-Bac, and for PMV with Lohmann Animal Health International's PMV-1. The skin on the neck shows well for easy vaccination when the birds are wet.

Line up heaters now for your drinkers if you live where freezing weather can affect your ability to keep your birds watered on a regular basis.

To you fanciers who live in the southern part of the country, you will want to follow this end of the racing season regimen as soon as your races have finished. But if you are still racing, you need to consider how to train your team for the last few important races. I believe that much success results from focusing on those few birds that have already given you the best performances. What you want to provide for these few birds now is rest, medication, retraining, and motivation.

Why is rest so high on my list? Superior-quality birds generally fly to their pedigree if they have the opportunity. For example, pigeons that would compete best in a 300-mile, 1,200 yards-per-minute race won't fly "to their pedigree" if they only participate in 100- to 200-mile, 1,600 yards-per-minute races. It's a fact that racing pigeons stay in top form for only about three weeks. My method is to set aside the young birds with the most potential and keep them out of the races during the middle of the young bird season simply to rest. Then, I put them back into the races for the last three weekends. After resting, these high-potential flyers will come back into top condition for the next one, two, or three weekends.

It would be smart to look through your entire race team for this kind of potential. You'll start to see "levels" form on the team—those with consistent ability and those that race "hot and cold." Keep those with consistent ability for the last or most important races of the season, and focus the most attention on them during that time.

Assuming that the inconsistent birds are in excellent health, try to continue to race them during the middle of the season to assess their quality. It is only by racing them that you can determine if they are flying to their pedigree. It really helps to know the background of the parent birds to make this evaluation.

It is also important to decide what your high-priority races are. Are you racing for average speed, money, or for other reasons? You'll want to target your best birds for these races. Make sure you are putting a large percentage of your birds in the races where their pedigrees indicate they should be capable of competing well.

Medication in the last weeks of young bird racing season is another subject. You want to look for young hens, which mature faster than cocks and are thus often better young-bird flyers. You can also motivate young hens more quickly. Set aside the young hens and widowhood cocks, or spare cocks during this late part of the young bird season. You might want to think about saving the young cocks for the old bird season if you are a widowhood cock specialist.

It is a fact of genetics that breeding two extremes together gives the largest degree of uncertainty in the results. The savvy fancier considers this when he's pairing his pigeons. As an example, pairing a long-distance bloodline bird whose parents and grandparents excelled at two-day races to a bird with hereditary factors that point to ability at short-distance speed events will produce a large percentage of young with a huge variation in ability. So as percentages go, it is best to pair sprinters to sprinters, middle-distance to middle-distance, and long-distance to long-distance birds.

Motivation and training come next. After these six to eight hens have selected a mate, let them stay with the cock for a week. This is long enough to mate, but it's not long enough to be ready to lay. Then put the young hens back on the young bird race team. Give them an hour or two with their mates before shipping when you're ready to send these young hens to a race.

Begin training only after a week of complete rest. In those seven days, you are medicating and motivating the birds. When you sense that they're ready to come back onto the race team, take them for just a few short tosses. Then increase the distance to a few 70- to 80-mile tosses. By then these young hens will be in top form to compete during the season's last few races.

No matter where you live, these suggestions about rest, medication, re-training and motivation can be carried out in the middle of the racing season.

November

We urge you to vaccinate for salmonella and for paramyxo now, since November is the month to take care of this health requirement for your breeders. It's also time to prepare the breeders for breeding season. So November is the month for medicating, worming and giving them a preventative canker medication treatment.

With a complete regimen of medication, fertility and hatchability improve greatly—sometimes reaching 90 percent. Sometimes hens will retain an infection in their oviducts that will lie dormant in their bodies. In hens, the bacteria transfer into the egg, so the embryo dies in the egg or just shortly after hatching.

Cock birds can also have an infection in their system which can decrease fertility, because of bacteria which settle in the internal organs and lie dormant. The birds are resistant to it, but they're carriers, and pass it on to their offspring. It can affect fertility in cock birds, hatchability in youngsters, and the way a hen will lay—how easy it is for her to lay her eggs, how many she'll lay, etc. How can you prevent this? Treat for salmonella and E. coli two weeks before the breeding season begins. Ecol-Tonic is an excellent product that is creating great feed-back to us from fanciers around the country on its effectiveness. Why not go ahead and mark this important step to treat for salmonella and E. coli on your calendar now?

Most fanciers pair their breeders around Thanksgiving. You need to vaccinate and medicate two to three weeks before pairing the birds up, so that they can be fully recovered from the vaccines and already be gaining their strength back.

It's also a good time to begin to boost the birds by giving them vitamins, and there are several fine products on the market that will enhance your effort and improve the condition and preparation of the birds for breeding. Vitamin E is considered a fertility vitamin, and besides being proven to aid in fertility, it is known to help to build resistance to disease. We have used either a combination vitamin called Pego AD3E, or a Vitamin E drop from Pego, which is pure vitamin E. Either one can be put directly on the food for flock treatment, or given individually. We use vitamin E several days in a row to really build the birds up.

We are also very excited about a highly specialized product from Comed called Breeding Oil. According to the pigeon laboratory that developed it, Comed Breeding Oil is adapted to the specific needs of breeders, and replaces Fine Oil during the breeding period. Fertibol, also from Comed, is a product that will greatly benefit your breeders and their babies as well. It's a tremendous aid for fertility and hatchability.

Giving extra calcium at this time of year is also a great idea. We prefer the Calcium-Vitamin D3 Syrup from the Australian Pigeon Company. This is especially important to prevent a calcium deficiency in the hens when they lay. Hens may still not have replenished their calcium reserves from the prior year's breeding season, and it never hurts to give extra calcium. It really helps the birds, because we can see that when they've had a calcium supplement, they're much more vigorous. This is a sure sign that they feel good. Extra calcium also helps to add bone mass. Birds that are not very active in a breeding loft tend to lose bone mass, just like inactive people. We recommend a four- to five-day treatment for canker, with products like Pegosan, Turbosole or Ridzol, which in our experience have proven to be very effective against canker.

Worming is essential. The optimum time for treating for worms is the first week in November for three days with Moxidectin or Moxidectin Plus, if you want to treat the flock. Moxidectin and Moxidectin Plus are also good for individual treatment. Ivomec drops are also good. Göpalex Worm Tablets from Pego are the ticket if you prefer individual treatment. Worms won't be a problem after you use any of these approaches.

Something for salmonella, E. coli, and coccidiosis should be your final medication at this time. Divet tablets and Enroxil tablets work very well against salmonella and E. coli. APC Baycox and our Ten-in-One Capsules are also among the products that are safe and effective against coccidiosis. These treatments can render an excellent prevention against bacterial infections if done two weeks before pairing up the birds. The breeders will have a great start if you follow this advice.

The "good" gut bacteria are always affected by this or any other medication. After medication, we give our birds two days of a pro-biotic. Pro-Bac, Digestal, Pro-Digest, and Optimix are all excellent gut restoratives. The positive feed-back that we get from fanciers around the country about Health Gard as a fine pro-biotic can't be ignored, either. Then we like to give them Pigeon Power, a tonic to start building them up for the breeding season. It's loaded with minerals and amino acids. Pigeon Power helps to get the birds into condition for the stress that they're bound to go through, with wintertime coming, and cold, damp and nasty weather, added to the stress of breeding and raising young!

By now, the pigeons have just finished the moult, and we have had them on a program of Biochol from Oropharma or Methio Forte from Herbots. These promote good feather condition and bring out shine and silkiness, and help to make the wattles white. Now is also a good time to add garlic juice or garlic oil to the water or feed. This conditions the birds and makes them just shine. When they feel so good, it brings out the "romance" in them. The birds are separated right now, but the hens are getting very "matey," and they're cooing to the cocks. The cocks are cooing back to the hens and are getting very aggressive, and they're fighting more with one another. With all of this going on, you know the hormones are working. It's easy to see that the more active the birds are, the better they are feeling.

We are conscious of the possibility of needing to treat our breeders for a respiratory condition, but we do not do this as a preventative. We do it only if there is an obvious problem. In the last 13 years, we've not had to give our breeders anything for a respiratory condition because their stress levels are not that high. Our very best weapon against a respiratory infection is Doxy-T from the Australian Pigeon Company, which is the perfect mixture of doxycycline and Tylan. Linco-Spectin and Tylan Concentrate are also effective.

Routinely, we give every breeder a salmonella vaccine. After this vaccination, the birds become much more resistant to disease over the winter. The hens lay better and do not "go light." Pigeons are just all-round healthier when they've been vaccinated for salmonella and

paramyxo. The birds should have this vaccination each year for at least three years or so. An adult bird that has been vaccinated three times or more will have a resistance that will last quite a few years against the disease, so that once the bird has been vaccinated three times, it may not be necessary to vaccinate that bird every year. It would be fine to vaccinate these birds for salmonella every other year. Giving the vaccine improves the overall condition of the bird by raising the immune level, and it's advisable to go ahead and vaccinate them for paramyxo, too.

To get rid of any lice or mites, we pick a fine-weather day and dip the birds in a Malathion solution. Dipping them also helps to keep the pigeon flies down. Use ¼ teaspoon of malathion 57 percent solution to two gallons of water, and this will protect them all the way through the winter and into the spring-almost six months-with one dipping.

(Please note that our Malathion Liquid is this 57% solution which is safe and effective for our birds. We cannot vouch for the concentration or the safety for treating pigeons of these types of pesticides sold in garden supply stores.)

We also check the health and the weight of the breeders. Heavy pigeons don't breed as well as pigeons of proper weight. We also want to make sure that the birds are not too thin, which could indicate a problem like worms or salmonella.

So to summarize, we've vaccinated the breeders, treated them for bacterial infections and worms, given them a gut restorative, dipped them for external parasites, given them a calcium treatment, checked them for a respiratory problem, and treated them with a feather conditioner. When they are through with the moult, we have a shiny pigeon, in excellent health, ready for the rigors of mating and raising young for the next year.

Now the fun begins! It's time to start to pair the birds

December

Most fanciers in December are either pairing their birds, or they're purchasing new stock by attending auctions and sales around the country. So I'd like to talk a bit about purchasing pigeons. There are a number of ways to buy birds, but I think that two particular approaches can bring you the most success.

The least expensive way is to buy in volume, buying a large number of late-hatch babies. Some people even arrange to purchase eggs from a breeder. Late-hatch babies can also be a good way to go. When I'm interested in buying birds from a breeder, I examine the race records and futurity records of their birds to determine the answer to these questions:

How successful is the loft in its own competition?

How successful are this breeder's birds for other fanciers?

We go to Europe once or twice a year to purchase birds. Sometimes I go into a loft that I have been studying for some time, watching the results, to see the kind of pigeons that I'm looking

for. We like to purchase middle-distance birds that have the ability to fly 300- and 400-mile races as young birds. These are the areas where the biggest money is to be won in the sport, and it's certainly nice to have birds that can do that.

In selecting these young, we ask the fancier what his most successful pairs of breeders are, and at this point we are still gathering information. It's most important for us to know what the successful breeding pairs are in any particular loft. For example, in a loft of 40 to 50 pairs, surely there are 8 or 10 pairs that are outstanding among them in producing a higher percentage of good birds than the other pairs will produce.

We also will not restrict ourselves just to birds from established breeders. We also like to find a particularly hot young pair, especially if it's a pair of birds that have produced two or three really good racers. We like to take babies from these. They often produce a higher quality bird.

Once we identify the top pairs in the loft, we make arrangements to purchase their young. Of course, we're always trying to deal with reputable people, so we can be sure that we are getting what we select. Many fanciers in Europe will ask you to come and choose the young in the nest, letting you into the loft to copy their band numbers for later verification.

One problem with buying young birds is that you don't always know how they're going to turn out. We all know that, percentage-wise, fewer than 20% of all racing pigeons produced turn out to be good birds. So we know going in that in purchasing unproven young, you'll be getting only 2 out of 10 "keepers." You should keep this in mind when you purchase.

If you're dealing with reputable people, you can generally buy 10 youngsters for the same amount that one adult bird would cost you. Most top lofts in Europe will not want to sell their best racers or their best breeders for an affordable amount of money. In most cases, purchasing young will be the best shot you have. And if you do this, buy them from the pairs that have the highest success percentages, so that your chances of your getting good birds will go up.

Another way to purchase birds is to go after proven racing stock. We often buy birds right out of the racing loft. A bird that is not a great racer, but is a very good racer, can be a very, very good or even a great breeder. Depending upon how they're bred, some birds that are only average racers become great breeders. If you can afford it, buying a great breeder gives you a much better chance of getting super racers. A super champion that costs many thousands of dollars can be a disappointment in the breeding loft.

We know of European lofts that like to retire their racing birds at four or five years of age, and we often buy birds from this group. Often, you can buy a pigeon that's been on the widowhood team for two or more years. A bird like this may be expensive, but will be worth the purchase

price. It's obviously a high-quality bird if it's managed to stay in a high-quality loft for this long and has earned its keep.

For buying hens, we often go into a loft that races only cocks and has a number of excellent widowhood hens that are being used only to stimulate the cock birds. In many cases, you can buy a good quality stock hen from a fancier's widowhood hen loft. We try to select young hens that have had excellent racing records and have been put into the breeding loft or into the widowhood loft.

Another way to buy breeding stock is to go for the really big money and to buy birds out of the breeding loft, or ace pigeons from certain competitions. Champion birds are put up for sale every year at the end of the season in Europe. But few champion racers ever produce pigeons that race as well as they have raced themselves. Very often, it has more to do with a pedigree.

We like to follow a pedigree, meaning a family of birds that produces a high percentage of first ace pigeons. If you can obtain a high quality racing cock from the loft and a high quality hen from the widowhood loft, such a pairing from a good family will very often produce much better than average pigeons, especially if the birds are related.

While ace pigeons are nice to have and can certainly be good advertising, the average fancier doesn't need ace pigeons at all to compete at the highest level.

Buying birds from a breeding loft can be risky business. A pair of birds in the breeding loft that are for sale has probably not been as successful as the owner had hoped they would be.

In some cases, older breeding pigeons can be purchased at reasonable prices, because sometimes fanciers want to breed only from very young birds. You have to be patient and willing to work with these birds. I recommend putting their eggs under younger foster parents. Normally, the reduction in performance that you see in the youngsters of older breeders doesn't have to do with the parents' genetic quality as a breeder, but in the reduced level of care that older pigeons can give the young once they are hatched.

The solution to this potential problem is to set up foster pairs that are young, and "float" the eggs from the older breeding pairs to them to be raised. This brings high quality genes into your loft without spending an exorbitant amount of money.

We have also managed to purchase birds from lofts that are being completely sold out. Such sales, in which every bird is accounted for, often yield gold-mine pairs for fanciers lucky enough to purchase them. All the records are available for the best pairs in the loft, and the best results in the loft. If you manage to get those pigeons, it's up to you, the fancier, to get the same kind of results.

January

This month, I want to map out for you a nutrition and medication regimen that has worked very dependably for us, and that I believe will make a real difference in the success of your breeding season.

By January, most fanciers have either paired their birds and are raising the first round of youngsters, or they're still in the process of preparing the breeders for pairing in the weeks to come. If you're one of the many fanciers whose breeders are raising their first round, you should be paying extra attention to nutritional needs for your breeders like mineral supplements, grit, and picking stones. While breeding pigeons are feeding and rearing their young, their bodies require extra minerals—no exceptions.

The pigeon fancier who takes this need for mineral supplements seriously is treating his birds as they deserve to be treated, while at the same time insuring that he will have a very successful breeding season. In our lofts, we like to use a liquid mineral supplement either on the feed or in the water during the breeding season. All of these are excellent mineral additives: Siegel's Pigeon Power, Herbots Aminovit, Colombine's Aminovital, Pego's Ferro-Prodol and Calcamineral, and Oropharma's Biochol.

Any of these supplements, used properly, will make a significant difference in keeping your pigeons in good condition during breeding season. Another product which I recommend without reservation is Naturaline from the Natural Company. It's formulated to help the breeders come into peak condition before pairing up.

Fertibol from Comed is a combination vitamin-mineral supplement that promotes fertility and hatchability, and I recommend using it during weaning to promote strong bone development. Calcium supplements like Calcium Vitamin D3 Syrup, BioCal and Calcivite Plus (all from the Australian Pigeon Company) are great for laying hens, especially older hens that have had a problem laying. These mineral supplements will quickly eliminate the leg paralysis so often found in hens with severe calcium deficiency.

We keep picking stones in our lofts during the breeding season. We place a pick stone in the pot in each loft and also crumble part of a picking stone into the grit bowl in each loft. We mix the picking stone in with the grit and place that in a small covered container so that the birds can take all that they want any time. APC's Calcium Cakes and Mineral Blocks are really effective at delivering the mineral supplements that our breeders need during this time of year. Vita-Mineral is another excellent supplement of this type. It's a powdered vitamin and mineral supplement that can be mixed into the grit or directly onto the feed. All of these nutritional supplements insure that your birds are getting the right amounts of vitamins, minerals, and trace elements to help them raise healthy, vigorous young. They also help your breeders keep in good shape for the later rounds to come.

Remember, pigeons kept confined in a loft, especially during the cold winter months, are not capable of getting all the minerals and trace elements that their bodies require from the feed alone, so supplements are not only wise, but necessary.

One supplement that has consistently received very strong positive feedback from fanciers all around the country for a number of years is Health Gard, a pro-biotic water-additive formula. In fact, we have had negative feedback from no one using the product during the nearly nine years that we have carried Health Gard, while we have heard hundreds of personal testimonials about its effectiveness. We have used it regularly in our own lofts since the 2002 breeding season, and we have been completely gratified with the results in our babies. We send many birds to a number of out-of-area races, and the babies that are raised by our breeders taking Health Gard do not succumb to many of the diseases that affect other birds of the same age in the same lofts. Parent birds given Health Gard seem to pass on to the babies a high resistance to viral infections for many months after the product is removed from the diet, and racing birds have shown a greater resistance to disease.

The concept behind Health Gard is to use large doses of naturally occurring micro-organisms to help correct or control health problems in our pigeons. We use Health Gard in our own lofts during the breeding season every day on our breeders from the beginning of January until the end of March, which encompasses our first two rounds. The Health Gard is given in addition to our regular supplements like Pigeon Power.

Each year, we send out nearly 200 youngsters from our first two rounds to other lofts to race, either in futurities or in convention races, or to partner lofts to be tested. After a couple of months, some of the lofts that I've sent birds to will begin to report sicknesses like Cercle Virus, but the overwhelming majority of our babies remain healthy, even when there are babies of the same age from other breeders dying all around them. Given all the circumstances, I have concluded that Health Gard makes the difference.

Fanciers in areas subject to freezing must take extra precautions to make sure that the birds are getting enough fresh water every day. There are heaters for drinkers that are helpful, but they are by no means a sure bet to keep the water from freezing in extremely cold climates. For birds living in these conditions, I recommend extra vitamins and minerals, because these birds are being stressed at higher levels than pigeons living in more moderate climates.

If you don't maintain good hygiene in your loft, disease is sure to visit. The most important aspect of good loft hygiene is to keep the feeders and drinkers clean. In our lofts, we like to disinfect the feeders and drinkers periodically with Sani-Coop. One capful to a gallon of water will disinfect anything in the loft, and you can also use it on the perches. We keep enough drinkers on hand to be able to rotate them, so that some are being disinfected while others are in use. This way, whenever we need a fresh drinker, there are several clean ones waiting to be used.

The old bird races will be beginning in just a few months in some areas of the country. So, obviously, the old bird race team also needs attention at this time. Fanciers who'll be flying widowhood will probably be pairing racers now, depending on the starting time of the race season. This can be challenging, because you must move the new yearling cocks and hens into the loft with the older birds, and having them take the proper nest box is always stressful.

We lock our pairs into their boxes with a separation between them until they appear to have become interested in each other. Then we take away the separator but continue to keep the pair locked up in the main part of their box. At this time, all of the racers are locked in their boxes with their hens, and they are fed and watered in the nest box. Because of the intense stress of this close confinement, we add vitamins and Pigeon Power to the water. A similar supplement that our customers like is Ferro-Prodol. It also does a good job of keeping the birds in fine shape even during the most intense times of stress.

Once the racers are paired, we begin by letting one pair out at a time, until they show us that they know where their box is. Once this is established, we start letting out two pairs at a time, but always make sure that their boxes are at opposite ends of the loft from each other. For example, a top right box would be opened along with a bottom left. After a few weeks, things in the old bird loft should start to settle down, and the racing pairs will go down on eggs.

We like to time this so that our old birds will lay and raise one round of young, then go down on their second set of eggs about ten days before our first race. To do this, we always figure 54 days backwards from the first weekend of racing. This includes 10 to 12 days for pairing and laying of the first egg, 18 days for setting, then 24 to 26 days for raising the young and then the laying of the second round. Since we do not want our birds to start moulting, we normally pull the hens from their cocks three days after the second egg of the second round is laid. We also like to leave a squeaker with its father for several days after the hen has been removed. (But we will go into detail about this technique in next month's "In the Loft.")

Because we like to allow six weeks for training the old birds, we usually start taking the cocks and hens on alternate days just after the hens have laid—weather permitting—for their shorter tosses during January. Since this training is just a refresher for the old birds, it usually doesn't take them quite as long to get the hang of it, and they start coming quite well after only a few tosses. Loft exercise is also quite beneficial at this time, and we will often let the birds out for whatever exercise they will take on their own.

We also medicate the old bird race team now as a precaution against the major diseases. We like to give a combination treatment for salmonella, E.coli, and coccidiosis for about seven to ten days. We use Trimethoprium Sulfa, which takes care of all of these. Immediately after the treatment, we give two days of a probiotic to restore the gut bacteria. Probac from the Australian Pigeon Company, Cometose from Comed, Digestal from Colombine, and Prodigest from Herbots all do a good job. We use it on the feed with either wheat germ oil or garlic oil to

make it stick. After a few days, we begin a respiratory treatment for 14 days. We have had success alternating between Doxyvet alone and Doxy-T. For severe infections, Dr. Steve Weir has found that adding Suanovil to either product increases the potency of the treatment. A third option would be Tylan with Aureomycin.

After each medication treatment, we use a probiotic for two days. Our final medication treatment before the races begin is a three-day canker treatment. Generally, we select two canker products and alternate between them for an entire racing season.

Once our training begins in earnest, we treat on alternate weekends with a respiratory product and a canker product for two days.

Following this nutrition and medication program will prepare our birds for the seasons ahead. But over the years, we've found that nothing replaces observation, so it's a great idea to spend a few minutes each day just observing the birds and learning to detect if all is not right in the loft. Early detection of disease can be the best approach for prevention of bigger problems down the road.

February

Last month I referred to a way to keep our racing birds from molting too soon by pulling a widow hen from her mate after the second egg of the second round is laid. Pigeons will molt a feather for each round that they lay and brood, and in order to delay the process of those all-important wing flights on a racer from molting too fast, we can slow down this process in a widow cock by removing his hen and removing the eggs so that he does not go through the process of setting and raising another round of young. Some fanciers think that taking both the hen and the eggs away at the same time could cause undue stress for the cock bird.

That is why they leave the youngsters (or at least one youngster) with the cock, because at this point in the rearing process he is the main care-giver for the babies, and the idea is that even if his hen and the next round of eggs are missing, he will become so totally absorbed in taking care of his youngsters that he will not become overly distressed by his missing hen and eggs.

Obviously, if there are no youngsters, then a good way to undertake this process would be to remove the hen from the loft while the cock is sitting the nest, and then let him continue to sit the eggs until he quits the nest, which might be two or three days later. But in this way, the stress of separation from his hen and eggs will be much more gradual and less stressful. The idea is to get the cock to develop a strong bond to his nestbox, to identify this as his most sacred place in the world, a place that he will put forth great effort in getting back to as fast as he can, but NOT to wear him out by having him raise too many youngsters or drive his hen too many times, and in the process proceed too far in the molt.

Most experienced racing fanciers do not concern themselves too much with whether the first, second or third (counting from the middle out) flights are missing when a bird goes to the races,

but the farther out on the wing that a flight is missing, the more important it becomes to successful flight. Thus, it might be important for you to take note of this during the winter preparation of your race team, and try to make a plan about when you will pair your racers and how many eggs and young you will allow them to raise before the races start.

By February, most fanciers throughout the country have paired their breeders. Many pairs are already sitting their second round of eggs, while some are just being paired for their first. In some parts of the country, fanciers are beginning to train their old-bird race teams for the upcoming season. Because the winning that fanciers do with young birds is entirely tied to the health of the breeders when they were paired, I want to explore what is considered a healthy pigeon as well as to detail what to look for to determine that a pigeon is not in top health for the upcoming breeding and racing seasons.

Before pairing up his breeders, a successful fancier will determine that the birds are in absolute top health. How is this done? First, I like to look at the flock in general. An experienced fancier can tell at a glance if a flock of pigeons is healthy and happy by the way that they act in the loft. Is there great energy in the loft? Do the birds sparkle, and have sheen on their feathers? Are they active and full of life? If so, things in general are good. But what about individual birds? Sometimes, even in a good loft with overall excellent health, a bird or two can slip through the cracks so to speak, and the fancier can miss the fact that a few birds are not up to par.

Many weeks prior to racing and breeding, I like to take each bird in hand and thoroughly inspect it. When I handle a bird, the first thing I consider is the pigeon's weight. If a bird is light, I want to know why. If a bird is extremely light, I put it in isolation for closer observation. Once I have determined that the particular bird I am handling is within the "window" of weight for proper health, I examine the head, paying particular attention to the nose cere or wattle. I want the cere to be extremely white in color and chalky looking. If it is not, and the pigeon is not feeding young, I will generally remove that bird from the flock because a sure sign of trouble in a pigeon is if the nose cere is gray or brown and wet looking, especially if that bird is not feeding young. Only if a bird is feeding young will I disregard this area being discolored.

If you have birds in your loft that are not feeding young, and who show signs of a discolored nose wattle, you should check these birds immediately. Usually "brown noses" indicate a canker or respiratory problem, but this could also be an indicator of even more problems. If I detect a problem with the "brown nose," I will usually look inside the beak to see if I can detect mucous in the throat. Almost always (unless feeding young), when a bird has a brown nose, there will be throat mucous present. Of course, if a veterinarian is readily available, a throat smear would be the best first course of action.

Unfortunately, in the United States, experienced vets for pigeons are rather hard to find, so we fanciers have to inform ourselves about the diseases and medications used to treat them. In a situation where I find a bird with a brown nose wattle and throat mucous, I recommend

isolating the bird and treating for five days for canker, using either Turbosole, Ridzol, Pegosan, Trichoron Forte or Spartrix. Bear in mind that our Ten-In-One Capsules will attack a wide variety of conditions very effectively, including canker. Generally speaking, where there is smoke there is fire, and I would become extremely suspicious of the entire flock if I found even one bird suffering from such symptoms. If you can be certain that there are only one or two birds in a particular loft that have disease symptoms, then isolating the affected birds and treating only them could be good advice, but I would keep a cautious eye on that flock for several weeks, and if any more pigeons were to become afflicted, immediate flock treatment would be the most prudent action to take.

A single sick bird should always be isolated from the rest of the flock and observed very closely. If things don't improve rather rapidly once a canker treatment has begun, I would then consider a treatment for respiratory disease.

After evaluating the nose and body weight, I always examine the eyes looking to see if the eyes are brilliant, full of color and not wet or dull. It is necessary to examine both eyes, because I have often found that one eye is slightly more brilliant than the other in what would appear to be an otherwise healthy pigeon. If I find this condition, then I know that the bird either is suffering from a respiratory condition, or did at one time. In some cases, birds that have suffered from a severe respiratory infection in one eye never get the complete color back in that iris ever again.

If there is excessive moisture around the edge of the eyelid where it touches the eye itself, I know immediately that there is presence of respiratory infection. An eye loupe is an excellent tool to use to check this ridge of the eyelid to see if there is moisture around the rim. The only way to know how to recognize an excess of moisture is to examine a great many birds, and especially to look for this when you are looking at birds from a champion fancier's loft. You will see that birds that are in peak health will have relatively "dry" or normal eyes.

Eventually, you will be able to determine what is considered a healthy looking eye as opposed to one that is too wet. With experience, you'll be able to determine, even without a loupe, if certain birds have "wet eyes." If you detect too much moisture here, a respiratory infection is certain to exist. One tip I look for is the presence of trapped air bubbles lining the edge of the eye, this is a sure sign that the pigeon is suffering from a mild respiratory infection. If so, I would strongly recommend checking several other birds in the same loft for this eye condition, because I have rarely seen just one bird in a given loft suffering from "wet eyes."

If several birds have this "wet eye" symptom, you should check the loft for excessive drafts and/or dust, and immediately start a respiratory treatment program. Also, changes to the loft should be made to eliminate overcrowding or excessive drafts. It would probably be wise to treat that loft of birds with a respiratory medication for a period of up to 14 days. We like to vary the medications we use for respiratory treatment, so we alternate between Tylan with

Aureomycin, or Doxyvet with Tylan, and sometimes, if suspect a severe problem, we especially like Doxyvet and Suanovil together. It is helpful to keep in mind that in cases of severe infection, combinations of these respiratory medications, as well as alternating treatments, can be very beneficial. I'd like to offer some advice concerning respiratory medications.

First, it's important to know that giving other types of drugs at the same time as respiratory drugs is not always recommended. When in doubt, it is always better to give a respiratory drug by itself than to give it in a mixture of other drugs as has become so popular today. Next, distilled water can help to make the drug more effective, because distilled water does not contain any chemicals that could react with the active ingredients in these drugs. Finally, all grit, calcium, and mineral supplements, such as picking stones, should be eliminated from the diet during the time that respiratory drugs are being given. If you follow these guidelines, the birds will get maximum benefit from the use of your respiratory medications.

I check the overall appearance of the feathers once I have finished assessing the condition of a bird's eyes. I like to see a sheen on the feathers and a feeling of softness and pliability. I know that these are relative terms, but if you are conscious of these things when you are handling pigeons, eventually, with experience, you will be able to determine what "soft and supple" and "silky and pliable" mean. If the feathers appear dry and coarse and don't have any plume (white powder that looks like talc) on them, then this is a sign of something wrong.

Very often, a vitamin or mineral deficiency is the cause of dull feathers, and one of the things that can cause such deficiencies in pigeons is worm infestation. If I find a bird or two with dull feathers, I immediately separate them from the flock and give them a worm treatment. (Moxidectin, Moxidectin Plus, and Eqvalan are very good ones.) The next day, I check the droppings for the presence of worms in the stool. Very often, fanciers neglect worming their birds, and we have found that it can make a very big difference in their overall health.

Among other things, I open the wing and check the flight feathers. What I am looking for, aside from the shape of the flights, is fret marks and plume on the feathers. If I see a bird that is just done with the molt that has lines across the feathers, like indentations running completely across the feather, then I know that this bird was in stress at the time that that flight was coming out. An infection the bird was fighting, or, for a racer, an overnight or very tough race can cause frets to develop.

If the bird appears in good health otherwise, I just try to figure out what caused the fret to determine whether or not it was something I could have controlled. If I see a large number of these frets, then I will not breed from that particular bird during the upcoming breeding season. Also, I'll give it a year off to hopefully come back the following year with a better molt, in better health and with more sure signs of being fit enough to breed high-quality youngsters.

Of course, while I have the wing open, I always check for feather lice—either the lice themselves or their eggs embedded along the main quill of the feather. If I see a minor infestation of lice, I'll use an aerosol spray (Colombine Spray, Natural Spray, Cansafix, or Ecto-Spray, etc.) and douse the feathers of the wing along with the rump and the neck before I put the bird back into the loft.

If I see a more than one or two lice on a bird, or if I see signs of pigeon flies (identified by finding small holes in the feathers), I would then consider dipping the entire flock in a solution of Malathion diluted with water. I've been doing this for over thirty years with extremely good results. I use ¼ cup of 57 percent Malathion to two gallons of water. Generally, every bird is dipped at least once a year, and the racers are dipped more often, as they often come into contact with feral pigeons that are infested with external parasites. This dipping will protect the pigeons from lice, mites and pigeon flies for months at a time.

Of course, you want to be extremely careful not to let the Malathion solution come into contact with the birds' eyes, and prevent any of the solution from being ingested, so we take extra precaution when dipping. We use latex surgical gloves to protect our hands, and we are careful not to let any part of the pigeon's head go into the solution.

We always pick a sunny, dry day to do this, with temperatures above 50 degrees. We have found that the birds will dry off completely within thirty to forty minutes and seem to show a great deal of enthusiasm and renewed vigor once they have dried. I know that many fanciers around this country have problems with pigeon flies, and I can assure you, if you do, your race results will not be at the very top.

These are among the things that I look for in the overall health of my birds. If any bird does not come up to what I consider top health, I will not breed from that bird—or race it. I have found through experience that it would be a complete waste of time.

Remember: The winning you will do with the young birds that you hatch in the spring is entirely tied to the overall health of the breeders when you paired them. Only the healthiest breeders will produce pigeons good enough to perform in today's intense competition, and only birds that have been cared for properly before the breeding season begins will be fit enough to produce the kinds of pigeons that will win.

March

Breeders that have been carefully paired in lofts all across the U.S. are reaping one of the most exciting rewards of the time and money and effort that they devote to our sport, and that is babies hatching. American fanciers everywhere acknowledge the legendary status of Belgian pigeon racers, and the enormous contributions that Belgian avian veterinarians have made to the health regimens that keep our birds breeding and racing.

We all want to give these babies as great a start as possible, and I'd like to share with our readers some valuable recommendations from Professor P. De Backer, a pigeon veterinarian at the University of Ghent in Belgium, along with my own commentary and suggestions. The following seven recommendations focus on what the savvy fancier can do to make a baby pigeon's start as strong as possible and give it a great advantage in future competition.

#1: From age 5 to 6 days until they are 25 to 26 days old, each baby should get an Ideal pill every other day. This gives them an excellent mix of mineral and vitamin supplements that improves their health tremendously. Wean your youngsters at the age of 25 to 26 days, because feeding youngsters is a big job for the parent birds. If they are going to be as vigorous in raising their third and fourth rounds as they are with their first, they need to have each round taken away from them as soon as possible.

Separation from the parents is very stressful for the young birds, so make sure that everything possible is done to make the new babies feel completely safe and at home. Since at this age they cannot fly, they will spend all of their time on the floor of the weaning loft. Place some straw or bedding material (tobacco stems are excellent) on the floor so that the babies can pile on and snuggle up. This close contact with other babies will help to ease the stress of being removed from their parents. The straw will help to keep them warm and the tobacco stems can help to keep parasites away.

In our loft, we dip our youngsters in a mild solution of 57% Malathion and warm water just as we take them from their parents. This warm water solution is not stressful to the babies. In fact, it seems to have a calming effect on them. Since they are wet, it is necessary to keep them in a warm environment, but the Malathion keeps them free of all external parasites for months. In less than an hour, they are dry, clean, happy and all snuggled up with their loft mates.

#2: About 14 days after separation from their parents, all baby pigeons should be treated for canker. 1-1/2 teaspoons per liter of water of Ridzol-S, or Turbosole from the Australian Pigeon Company (1 1/2 teaspoons per gallon of water for 3 to 5 days). Either of these should go far in taking care of any possible outbreak of this most insidious disease. Make sure that several drinkers are placed on the floor of the loft, where the babies can easily access them. We place three one-liter drinkers on the floor of our young bird section, which is 5'x 9'.

Be very mindful of the youngsters that stay in the corners of the loft or those whose eyes are constantly squinting. These youngsters have not found the drinkers yet and need to be assisted with their first drink. (When we find a "squinting" youngster, we take its head gently between our thumb and forefinger and place the tip of its beak in the drinker. As soon as the baby's tongue gets wet, it will drink like mad, and will never forget where the water is.)

#3: For the first fourteen days after a baby has been weaned from its parents, it should be given the same feed as its parents, for example, a breeding mix, or breeding mix with added corn.

After fourteen days, the mix can be switched to a standard young bird mix of about 14-16% protein. Keep in mind that pigeons should “go to bed with a light meal,” not the other way around.

It is also important to remember that young pigeons should be fed lightly and sparingly. To overfeed a youngster leads to disaster. This concerns their health as well as their discipline in the loft, as young pigeons should be taught to listen as soon as they are weaned. Always use some method of calling to the birds when you are feeding them. In this way, they associate the call with the feed and learn to listen to the fancier. Some fanciers use whistles, some shake a tin full of feed, some whistle with their mouth and others just talk to the birds.

Whatever method you decide to use, do it at every feeding. This can only serve to help create the bond of understanding that is so necessary as the babies grow up and take to the air.

#4: Slow down the moult without using drugs by darkening the loft. For maximum effect, the darkening should be started immediately as they are weaned, this from 6 in the evening to 8 in the morning. You certainly can adjust this to fit your work schedule, but no more than 10 hours of “light” time should be allowed. Fit your windows with drapes or covers, so that extraneous light cannot enter the loft. Some extra method of ventilation may be necessary, such as ventilators, but the race results can surely be most inspiring later in the year, as the young will moult all of their body feathers but retain most of their wing flights.

Generally speaking, the darker the loft, the better. It has been proven that youngsters treated in this way also mature faster and are much more inclined to respond to the mating urge than those that are left on natural light. But be careful when letting young birds out of the loft after they have been in the dark. Many fanciers have experienced horrendous “fly-aways” because they didn’t give their babies enough time in the aviary to “orient” after they’ve been in the dark.

The most successful fanciers we know who use the darkening method always let their babies have a couple of hours in the aviary before letting them out to fly. Some will even let them fly for a while, then call them in before taking them out on a training toss. The theory here is that once the babies have oriented around the loft for a few minutes, they basically know where they are.

#5: What is the safest, cheapest and most efficient medication? Oxygen! Pigeons can never have too much of it! Oxygen has nothing to do with drafts. The simplest solution to having a well-oxygenated loft is to put windows where the air is stagnant. Many fanciers today are using small room ventilators set on a thermostat or timer to ensure that the “contaminated” air is continually removed.

In our lofts, we have our front windows underneath our landing boards. The usual wind direction will cause air to enter the loft from low, drift through the loft taking the contaminated

air with it, and leave through the roof ventilators. During particularly windy weather, we close the windows partly or entirely depending upon the severity of the weather. A little can go a long way in providing good oxygen for your birds. Be mindful that the “best bird sitting on a bad perch can’t beat a bad bird sitting on a good perch.”

#6: Young pigeons are just that, young pigeons. Their bodies need to mature and develop, and to do this they need sufficient grit, calcium, minerals and trace elements in their diet. It is a proven fact that baby pigeons given the proper amount of supplementation develop stronger and more robust bodies and brains than pigeons that are deprived of these supplements. Since these are potential racing birds, they need not only have a healthy and robust body, but they must be able to think quickly to orient.

Mineral and trace elements play a larger than expected role in proper brain functions. We always give our birds, especially the babies, an abundance of supplements like grit, picking stones, seaweed grit (which has iodine), and herbal supplements. We especially like the herbal supplement Naturaline from the Natural Company. Another one that we use which is very good and very popular is Orovital from Oropharma.

Another must for the young bird loft is a pro-biotic, which supplements the good gut bacteria and can actually contribute to an increase in resistance to disease. We highly recommend Health Gard, and Digestal from Versele-Laga, Prodigest from Herbots or Cometose from Comed are also all good choices for pro-biotics. It is a well-proven fact that pigeons whose diets include these types of supplements are far less likely to become ill due to bacterial infections.

#7: As soon as the young birds begin to “route” or “trip” away from the loft, it is a good idea to take them on their first training tosses. We like to let our babies become totally comfortable in the training baskets, so we leave the baskets in the loft and let them enter the basket to eat and drink. Often when we go into the loft, we find an entire group of youngsters piled together in one of our training baskets, just relaxing. It is much easier to teach a bird how to eat or drink in the basket, if that bird has been doing it since it was a baby.

Once they become comfortable in the basket, it will be far less stressful on them to be taken on training tosses. Training is just that, training. A baby pigeon need not be taken on a marathon to teach it how to come home. Homing instinct is hereditary. They either have it, or they don’t, but taking baby pigeons on long tosses can often lead to disastrous results that could have been avoided. Let the babies mature into the game by taking them on more short tosses.

We prefer many short tosses. This gets them “coming home fast,” racing home, which is what we want. Our observation has been that pigeons single tossed in their earliest tosses usually dawdle around and don’t learn to break from the release site as well. We usually employ the single or small group tosses later in the training, after the babies have got a “crawl” full of confidence. Since we figure pigeons can’t count, once they have their confidence, they don’t

care how many birds are flying with them. If they are hungry and fit, they will come home fast. And that will become a habit.

After the Breeding Season

After your breeders have produced the youngsters to your race team, they should be stopped from raising any more young ones. Some fliers separate the pairs, while others take the real eggs away and let the pairs sit on glass or dummy eggs. One or the other needs to be done because as the Fall begins, the birds begin to molt. All of their feathers will be replaced during the Fall. They molt a few feathers each day until all their plumage has been replaced. If you allow the parents to raise youngsters in the Fall, they will not have the strength to replace their feathers properly. The parent's plumage will be dull because they gave too much of their food supply to their late hatched youngsters.

Establishing Goals

Before you begin breeding your birds it is very good practice to take some time to write down what your desired goals are going to be for your loft. It is much easier as well as more effective to follow a detailed plan rather than to plan as you go. Often times the breeders with the plan will experience consistent results rather than hit and misses. During the planning process you will want to establish the goals that you want the youngsters to accomplish. These goals will establish which foundation birds you choose as well as how you will begin pairing the breeders. For example if your flying goals are to be successful at long distance races then you will need to choose birds and pair birds that have been successful in long distances and vice versa.

Racing Pigeon School

If homing pigeons are not "in racing pigeon school," then they are in the wild – even in a pigeon loft. If homing pigeons do not continually interact with fanciers on a daily basis (at a minimum), then they are growing up in a "natural" or "wild" psychological environment. As with all animals, pigeons are born with genetic codes that control psychological predispositions. Most pigeons' psychological predispositions are not particularly compatible with the domesticated environments found in typical homing pigeon lofts. The psychological predispositions of all pigeons, including domesticated homing pigeons, are naturally bent towards "the wild." Homing pigeons are "naturally" suspicious, timid and afraid of anything other than other homing pigeons. People are strangers that should be naturally feared. It takes a great deal of time, dedication, patience, and positive reinforcement by knowledgeable and caring fanciers for pigeons to overcome these "natural" genetic tendencies and psychological predispositions.

Every day after young birds are hatched, and certainly after they open their eyes, they should experience some type of "racing pigeon school." Without experiencing the phenomenon of human interaction through a formal pigeon school, young birds will develop and mature solely in response to their natural genetic tendencies and natural psychological predispositions. Domesticating, teaching and training homing pigeons to play the racing pigeon game is a

process that is in direct contradiction to their “natural” tendencies and predispositions. Pigeons do not hatch automatically or naturally knowing anything at all about the socially constructed racing pigeon game as it is practiced by fanciers around the world. Pigeons are hatched with natural tendencies for self preservation only. These tendencies include the basic components of survival, i.e., eating, drinking, finding shelter, using fear and procreating the species. Fear is a very important part of the successful survival of wild animals and domesticated animals. Successfully reacting to fear is the epitome of success for most pigeons. Fear is a survival tool. For wild pigeons, exhibiting fear is the primary measure of success. For champion racing pigeons, exhibiting trust is the primary measure of success.

One of the primary goals of “racing pigeon school” is to overcome and neutralize the “natural” fear that occurs in the survival mentality of both wild and domesticated pigeons. Pigeons must be taught and trained to trust their fanciers. Consequently, a primary goal of “pigeon school” is to reduce and eliminate fear and to replace natural fear with learned trust. What is “racing pigeon school?” Racing Pigeon school is a daily process during which fanciers teach and train their pigeons to play the racing pigeon game at the top of the race sheet. Racing Pigeon school should begin immediately after hatching. Hatchlings should be gently handled. Gently handling hatchlings will allow them to smell and touch their fanciers. They should also hear their fanciers’ voices. When their parents are fed in their nest boxes, fanciers should signal feeding times through voice commands or some other type of artificial instrument like a whistle. In the rural west, chuck wagon cooks or ranch cooks would use a ringing or clanging signal to communicate to the ranch hands that it was time to eat. When the dinner or supper signal rang, cowhands briskly headed for the dining table. It is the same with racing pigeons. Pigeons learn “to come” during the feeding process. The natural tendency of pigeons is to move away from fanciers as they encounter them inside or outside the loft. Using feed as an enticement, pigeons can be taught to move toward their fanciers because they trust them rather than move away because of fear.

Racing Pigeon school varies from fancier to fancier. Racing Pigeon school varies based upon the likes and dislikes of each and every fancier. That is one of the great beauties and enticements of the pigeon racing sport. All fanciers can develop their own management system based upon the social circumstances in which they find themselves, i.e., living alone, family requirements, money constraints, time constraints, work requirements, building codes, city regulations, neighborhood covenants, etc. Regardless of the pigeon school that a fancier develops and practices, pigeons should experience pigeon school every day of their lives. Animals and pigeons learn optimally through daily repetition. Repeating the same routine day after day will constantly reinforce the basic components of a fancier’s pigeon school. Consistency and repetition develop trust. Pigeons will learn to trust if their expectations are consistently met day after day.

Regrettably, many fanciers will try to teach or train their pigeons on an inconsistent basis – only during specific critical periods. Many fanciers will ignore their youngsters until they encounter the following critical periods: (1) banding or ringing; (2) weaning; and (3) training just prior to the beginning of the young bird race series if the young birds are trained at all. There are those fanciers who state that they use the races to train their young birds how to return home and how to play the game.

One of the purposes of today's blog is to suggest that a more proactive and thoughtful "racing pigeon school" during which young birds learn the fundamentals of a sophisticated loft management system each and every day of their lives is a far superior teaching method than waiting to domesticate or teach young birds anything until they reach one or two critical periods during the first year of their lives. Many fanciers postpone education and training because they drastically underestimate the true intelligence of their pigeons. These fanciers do not see a danger or disadvantage in waiting to train their young birds until some future point in time. However, good homing pigeons are incredibly smart birds. They understand and absorb far more information than many fancier realize. One negative act can undue weeks or months of positive training. Why? Again, because pigeons are wild creatures by nature. They expect to be scared. Consequently, when they are frightened, their natural fears are validated and reinforced. Undoing negative acts by retraining pigeons to trust takes a tremendous amount of time and patience.

For those fanciers who have bred winter youngsters, racing pigeon school is now in session. Please do not wait until your young birds are weaned to first handle them; to teach them to come when called; to teach them to eat on their own; to let them sense you through smell and touch as well as sight and sound. By the time your young birds are weaned, they should already know how to eat on their own. They should already know how to come when called; although they might not respond correctly at each and every feeding because they are babies – not adults. Weanlings should know who you are. They should have experienced your management and care through as many of their senses as possible: sight, sound, touch and smell. They are wonderful intelligent birds that should be taught and trained through a formal pigeon school that you have developed based upon best management practices in order to neutralize their natural tendencies that fostered by fear.

Key Dates

Racing Pigeon School is a twelve month/365 day per year program. Racing Pigeon School begins each year on November 1st. Here are a few of the key dates each year for Racing Pigeon School:

(These dates are approximate.)

- November 1 – all of the pigeons, especially the breeders, are medicated during the first several months of November. Breeding pairs are pre-mated during the month of November.
- December 1 – breeding couples are coupled.
- December 10 – 14 – breeding couples lay eggs.
- January 1 – First round of young birds hatch.
- January 7 – 14 – First round youngsters banded or rung.
- February 1 – First round youngsters are weaned.
- February 10 – Second round hatches.
- March 1 – First round youngsters are training around the loft.
- March 10 – Second round youngsters are weaned.
- April 15 – First round begins road training from 1 to 5 miles.
- April 10 – Second round youngsters are training around the loft.
- May 15 – Second round begins road training from 1 to 5 miles.
- June 1 – First and second rounds are combined and continue to road train up to 50 miles.
- July 1 – Primary race teams (cocks/hens) are selected and coupled with older widowhood mates. Primary race team builds nests and lays eggs. Road training continues. Selected secondary team remains in training loft.
- August 1 – Race teams' eggs and nests are removed. Widowhood road training begins. (Race team remains celibate during the week and train home to mates on Friday or Saturday mornings depending upon weather.
- September 10 – Young Bird Race Series begins from 100 miles.
- October 31 – Young Bird Race Series ends.
- November 1 - Pigeon School begins again.

Racing Pigeon School has no recess during the summer. It has no recess for Fall Break, Thanksgiving, Christmas, or Spring Break. Racing Pigeon School is a 365 day a year job. Having made this statement, I am not advocating that fanciers never take vacations or take breaks from the birds. What I am trying to demonstrate is that in theory, Racing Pigeon School is an annual program that never ceases. There is something important to do every day of the year. At a minimum, the pigeons require clean lofts, clean food, clean water, fresh supplements, and regular medication.

Racing Pigeon School is one of the primary reasons that I advocate playing the game with small race teams. Just as with people, class size is an issue in quality education. It is a general policy that one teacher cannot successfully manage and teach more than 20 to 25 students in a class. In graduate school where learning is supposed to be much more intense and rigorous, the number of students in one class drops to 10 to 12 students. I believe that the same ratios are

true for pigeons. For the best in quality education, race teams should probably be capped at 20 to 25 pigeons unless fanciers have help from partners or other family members.

Racing Pigeon school is a system. Racing Pigeon school is goal oriented. Racing Pigeon school involves high quality education - education during which capable, caring, and informed fanciers teach wild yet domesticated pigeons the basic tenets of a humanly constructed game of which they know nothing about. Racing pigeons are not typically hatched in the wild on a building ledge or under a bridge. They are hatched in lofts whose design was constructed by fanciers that they do not know, understand or naturally relate. Although young birds instantly bond with their parents, everything else in their world is learned. They learn where the floor is relative to their nest. They learn where food and water are located. After they leave the nest, they look for another spot (box or perch) to claim for their own territory. If there is nothing available, pigeons will claim a spot on the floor for their own.

If young birds are weaned in a different loft from the loft in which they were hatched, they will once again seek to discover the food, water, supplements and a place to claim for their own territory. When they can use their wings, they will look for a place to escape the loft in order to stretch their wings and learn to fly.

Rather than let young birds randomly try to discover the basic elements of their new world strictly by modeling the behavior of their parents or by trial and error, Racing Pigeon School imposes an educational system that specifically teaches the young birds each of the critical tasks that they must learn during the first few weeks and months of their lives – and continues as long as the pigeon remains in the loft.

Racing Pigeon School is a basic component of the racing pigeon game. Racing Pigeon School requires teachers. Teachers possess certain personal attributes. Regrettably, many fanciers are not teachers nor do they have teaching skills. Many fanciers do not know how to teach nor do they want to learn how to teach. Even knowledgeable fanciers with years of experience playing the game often do not know how to teach their pigeons.

In addition, I often receive emails from new fanciers that lament that the established fanciers in their area will not teach them the fundamentals about the game. Sometimes they confide that they have developed an animosity between themselves and older fanciers over this problem. My answer to this problem is that many fanciers are not teachers and do not believe that education is important or even relevant to the racing pigeon game. If you have run into this problem with other fanciers, you might consider the possibility that older fanciers are not withholding information because they are trying to keep secrets and don't want you to reveal their vast knowledge to you. Perhaps the problem is that these fanciers don't know how to teach their pigeons the basic aspects of the racing pigeon game. Consequently, they can't communicate this information to you because they don't know it or understand its relevance in the game. Many fanciers do not know how to teach their young birds the fundamentals of the

game because they do not have a system – they do not have goals – they do not have benchmarks for achieving their goals – they do not understand or appreciate the idea of Racing Pigeon School. Racing Pigeon School is a universal program in Belgium. Although fanciers have unique characteristics to each of their lofts, each fancier uses the same basic fundamental system to play the game. This system requires that fanciers teach a few well-bred racing pigeons how to compete in a game that is played according to the organization and rules of a national institution – the KBDB. Teaching is fundamental to the success of competitive Belgian fanciers. Did you know that Ad Schaerlaeckens and Filip Herbots are retired school teachers? Although he was a diamond cutter by trade, Antoine Jacops is one of the finest teachers that I have ever met. So is Mike Ganus.

Playing the game at the top of the race sheet involves teaching. Although I use the metaphor of Racing Pigeon School to describe the educational process, one of the primary components of racing at the top of the sheet involves teaching and education. For those of you who currently have three week old youngsters or weanlings in the breeding loft, it is time to teach. In fact, it is past time to teach. If you want to play the game well, start teaching your young birds now. Repeat the same lessons day after day until they respond correctly and quickly.

Foundation Stock

In order to be successful in breeding you must start with good birds. The birds that you build your loft upon are called the foundation stock. This is because the birds you begin with are the foundation of how dominant your team has the potential to be. When beginning in the pigeon racing sport and hobby it is essential to start with the best quality birds that your budget will allow. This will help you build a winning race team as well as saving you much frustration later on down the road.

When acquiring your foundation stock make sure to buy your birds from fanciers who consistently win themselves this is a good sign of a successful bloodline. Once you find a feather merchant with a consistent winning racing record, buy the young of the breeding pairs that have had the most success, or if the merchant will part with them buy the actual birds themselves that have shown success. This is your best shot at getting high quality birds with proven pasts.

Breed From Leaders

Like people, most of our racing pigeons become followers instead of leaders and independent thinkers. It is a very dangerous and fatal mistake for a fancier, and his breeding program for success in racing, to place these followers in a breeding loft.

Followers are the birds that lack the mental ability to find their own way home. They follow a group of birds, and if they are lucky enough to select the right group, they home safely for that race. If they follow the leaders of that race, they may very well score in the high prizes. What

about the next race? Can these followers be lucky again and have a good performance next week? Will these types of birds be able to be lucky 7 weeks in a row to complete a race series? We know that they have the physical ability to race with the leaders and to perform and succeed in one race. But can they find their own way home?

These followers are bred and created in certain parts of the world because of the style of racing and land conditions they must fly over in short races. The birds fly in a so called "bowling alley": Large numbers of birds, close together on narrow courses or valleys following each other. These birds do not have to think or navigate home. They just stay straight, and the fastest ones win the prizes. They cannot get lost because there is only one way to fly, and the distances are short (50-100 MILES). Speed is the only quality that they must possess to win. These followers can build very impressive race results against thousands of birds in a race season, especially when they fly 2 races a week at 50 miles.

It is easy to breed this type of bird. We breed speed to speed, and with strict selection standards, we can produce the desired physical qualities needed to breed champions for this style of racing. In their own country these birds are of great value and have made their owners famous and rich.

However, the honest truth is that they are of "NO VALUE" to the fancier and his breeding program. A champion pigeon must think and navigate for himself for several hours to home safely. He must possess the individual thinking skills of a leader not a follower. The real truth is that these mental capabilities are more important than the physical qualities many fanciers look for in their breeders or birds to purchase. Without the correct mental skills, no pigeon can ever be a leader. Even if it has all the physical qualities to be a champion racer, without the compass, homing instinct and navigation skills the bird is worthless.

The difference between followers and leaders is not in the physical qualities of the birds, but the mental ability to "home", and thus repeat week after week, a necessary qualification in racing.

Champion lofts seem to produce champions on a regular bases in their own countries. WHY? The legendary and famous fanciers past and present all have one thing in common: They purchased and developed a family of birds that would fit their area and style of racing. They selected their breeders for these desired results, and with some knowledge and a little luck, have become famous in their own countries and many others around the world.

It is no secret fanciers need tough, intelligent birds with the distance qualities, such as endurance, to be competitive in a race series, and have the chance to win the large prizes. That is why I continue to recommend a family of birds with successful bloodlines and years of success with these traits as your best chance of success. We must find the best birds with these qualities and breed them together. The chance of producing the birds we desire is greater by

breeding the same qualities we seek together. That is why a family of birds is important, because it has been proven and selected for years to produce the same superior qualities we look to establish in our own birds.

Breeding two families with the same qualities is OK, but breeding two families with different qualities together is not! The "MASTERS" ALWAYS BRED SPEED TO SPEED AND DISTANCE TO DISTANCE. TOUGHNESS AT ANY SPEED AND DISTANCE IS ALSO IMPORTANT, AND ANY BREEDING LOFT MUST CONSIDER THEM.

That is why we need more than one race to determine a bird's mental toughness, and we need races at distances of 300 miles or longer to see if we have leader or follower qualities. To breed from a bird, or its bloodlines, that is a one time winner of a large prize in a big race with a large number of birds at less than 250 miles is a big mistake. "ANY BIRD CAN GET LUCKY ONCE". We want proof of several races at longer distances before we breed from such a bird or its bloodlines. A good example is the race record of AU-88-JBM-1038 "MULLIGAN'S PLACE. EXAMPLE #1 AU REGISTERED CHAMPION #0737: COMPETED IN 4 ONE BIRD DERBIES AND 2 THREE BIRD DERBIES 5 TIMES AT 487 MILES; SEVERAL TOUGH RACES AS A YEARLING AND SPEEDS RANGING FROM 1110 YPM TO 1578 YPM. DEFINITELY A LEADER.

Breeding is a "Numbers" Game

Breeding is a numbers game. If we find a bird and his ancestries are full of leaders and champions, the chances greatly improve the possibility that its children will possess these same qualities. You always have a better chance of success to breed from a bird with an outstanding performance pedigree and family, rather than a champion bird from a poor background with no other champions in his family.

You can tell right away if a breeder can pass these leadership and intelligences traits to its children by single tossing their young during training tosses. These single tosses force the bird to think on its own, and not to rely on other birds to follow home. This is the first step to bring out the independence, confidence and leadership qualities the bird needs to navigate successfully during a race. When we train at short distances such as 5, 10 or 20 miles, you can make these single tosses 2 or 3 times in a day. The true leaders will navigate and home safely, the followers will not.

Beside excellent health, single tossing your birds is the best way to create and teach mental maturity, intelligence and to evaluate your breeders. If young are lost frequently from certain breeders in these single tosses, cull the breeder. It is of no value to you.

Many times the trainer or breeder spends all his time to develop and search for the physical qualities in his birds he feels are important, and he overlooks or neglects the most important traits of intelligence, confidence and independent thinking that the birds need to lead and navigate for themselves.

In other articles, I REFER TO PERFORMANCE PEDIGREES TO BE OF GREAT VALUE TO THE BREEDER. Every pigeon has a pedigree; father, mother and grandparents. Look for these leadership qualities in the first 3 generations. (REMEMBER A PEDIGREE IS ONLY AS ACCURATE AND HONEST AS THE FANCIER THAT PROVIDES IT.) ALWAYS REQUIRE PROOF BEFORE YOU MAKE ANY PURCHASE.

Building Consistency in your Birds

One of the most important aspects of putting together a family of pigeons that will perform to the strictest standards is starting with good stock. You can't expect to build a great family of birds using inferior stock.

You would spend years trying to compensate for flaws in the gene pool by mating birds in a manner to compensate for weakness. You are fooling yourself to believe that this would come quickly. It is only wishful thinking at best.

So, to start we must find top quality stock. It is worth the price if the birds are truly top quality. The quality may be found through paying a lot or it just as easily may be found from a gift of a friend in the sport. Some of the best pigeons I have ever owned came from a gift and were the basis for my strain.

It is rare you will find someone that truly knows his line of pigeons and is willing to give up a great prospect to a stranger, even for a price unless he has plenty to spare. You will more likely get his second best. The only time it goes the other way is if the breeder has plenty of great birds and can spare one. I have seen some that got through because the owner didn't really know what he had also.

Most guys that get started in racers will begin with substandard pigeons and spend several years learning the difference. All is not lost since much can be learned from such experiences.

You will be extremely lucky to find two truly top pigeons but this is the basis for a foundation. The best pigeons will be bred by you in your own loft providing you stick to the plan, pay attention to details and have the tenacity of a wood pecker. I was once asked which animal was my favorite in the animal kingdom. I answered it would have to be the wood pecker. When asked why I would choose a woodpecker from such a wide variety of animals I said because a wood pecker can peck a hole in a tree with his nose.

This takes great determination and steady pecking. I now use this in my business to motivate and focus, steady pecking will win the day.

Identifying "The Ones"

To identify which pigeons are the ones to surround your program around you must breed many youngsters from them and fly them out. I have never been one to coddle my young up and coming pigeons. My best stock birds and proven champions get my respect and are given the best, but they must earn it. I don't give any preference to youngsters off of "big name" in the

sport pigeons or imports. They are flown just like the rest. They have to prove to me they are worthy of any attention.

It is best to keep notes. I keep a notebook handy so I can write down what I observe. I used to use my memory for everything but realized that writing things down keep it very realistic. You cannot be sentimental about the birds that are in the process of proving themselves if you truly want to build top quality pigeons. I am now sentimental toward some of my champions and best proven stock birds but they earned it and after all we do keep pigeons because we enjoy having them.

There are many things to look for with the building process. One of the major things not to look at is physical appearance. Beginners to the sport will begin listening to all the old secrets of champions. There are no secrets. If there was a secret it would be this, "do the work".

I would advise against looking at wing length, structure, keels, eyes, feather etc until you understand what it is that gets the job done. A pigeon may look like someone poured the feathers on and they are truly beautiful but the bird could be a hopeless cull.

Learn what a true champion looks like then you might begin to pay a little attention to the physical characteristics. The most important aspect of a great pigeon is what he has to commend himself in the smarts and intuition department.

You can always make a pigeon with excellent character and tenacity more beautiful through selective breeding but you cannot make a beautiful pigeon smart by using just beautiful pigeons in the stock loft.

For myself personally I prefer the look of a true champion above any others and until proven I am highly suspicious of the pretty ones.

Once we have a few proven champions we keep the parents and discard all of the other breeders that did not make the cut. Culling the stock loft is more important than culling the flyers. The flyers will cull themselves but you and you alone are responsible for what goes in the stock loft.

When you have several proven champions from the air you will want to try them at breeding. There are countless methods of breeding but none have ever out matched the pretzel breeding method. I ran across it by accident really. When I was a boy my father and grandfather advised against breeding too close. There was a lot of apprehension associated with breeding close relatives. Since then I have bred them very close and tried every kind of mating you can imagine and using the very best of stock. Having tried inbreeding, line breeding and just plain old out crossing I can tell you, the best method has proven itself over and over again to be the pretzel breeding method.

The Pretzel breeding method is simply trying to keep your best three or four pigeons blood at the forefront of your breeding program in heavy concentration without breeding brother/sister or mother/son or father daughter mating. It is geared toward mating uncle / niece or aunt / nephew or cousins. Double cousins is a favorite of mine. It is not good enough to just mate double cousins and expect excellent results. They must be all proven pigeons and this takes time. They have to be flown out to prove themselves worthy of a shot in the breeding loft. Then they must prove themselves as stock birds. They must reproduce as good as themselves or better and in good percentages.

A Consistant Family

So, now that we understand the basic principles of Pretzel breeding we can begin. The best proven racers you have may not be good producers. It is best of they come from a consistent family. A consistent family would be made up of birds that win on a regular basis and carry many common genes in the flock. You can rely on pigeons like these far more than any other. You can make them consistent yourself but it takes time.

Try to get as far up the ladder as you can when starting buy obtaining good stock. This way it takes you less time to reach the upper rungs.

Mate the champions together in every possible combination that you can. In other words, mate every champion hen to every champion cock that you own.

Fly the youngsters in competition if possible to really test them. They should be flown out to at least 400 miles as youngsters to really test them, 300 miles being the minimum.

Keep records of every pigeon that does well and who it is out of. Give a check mark to each individual parent that produced a winner. Don't worry about the pairs just yet, just look at each individual parent to see how many good ones they produced with each mate.

I would look for pigeons that compete in the top 20% most of the time.

It won't be long until you can clearly see which cocks and hens are your best producers. You may find a nick pair in the group also. This is a pair that produces several good ones when mated together but not as much mated to others.

A truly top producer will produce good ones with all mates providing they are of some quality. These are the best pigeons for our purposes and to be valued the highest.

In several years you will have a family of pigeons surrounding the best producers and you will learn what is missing from the equation. Don't bring in lots of pigeons until you know what you need to complete the flock, at least during the building phase. It may be toughness or it may be speed.

Some pigeons come home like they were shot out of cannon. Others come home at a slower pace. Some are good for the distance and some are good for sprint racing. I personally like all around pigeons that do well from 150-450 miles.

It Takes Good Pigeons to Win

When racing with a club on a regular basis there will be a smash race sooner or later. This is a race where many pigeons are lost. It may be due to bad weather, a break down of the hauler and let out from an odd location behind mountains or just an odd circumstance, maybe even falcon attacks. This is when you really learn something about the pigeons you are working with. You may lose some of the faster ones. I have lost birds that have built themselves good reputations as young birds only to be lost on a smash race.

Some of the "perceived to be" lesser birds that hang around in the top 20% from first place may show themselves to be the sharpest and toughest pigeons in the group.

In 2008 I sent pigeons to the World Ace Challenge, the Vegas Classic and flew them locally. I bred three brothers from one pair that flew in all three. One flew local; one flew in the WAC and one in Vegas. The one in the WAC placed 12th in the 300 mile race. He also placed 60th in the 400 I believe. He never won top honors but was always there and one of only 160 plus pigeon left at the end of the competition. I had them mail him home to me. The other brother flew in Vegas and the results were similar. The last brother flew local and to my surprise had the same results. I sent other full brothers to all three and the results were similar too. That was a good lesson and well worth the price of admission.

It takes good pigeons to win, plain and simple. I flew the youngest brother in old birds locally. He had an equal first trapping behind his loft mate, a hen, and placed respectable in the others as well.

The next race was a 500. The hauler broke down at 400 miles and released the birds on the side of the freeway. They were behind a 16,000 foot elevation mountain range in Colorado. Many of the club members were calling wanting to know if I had received any pigeons as happens in a smash race. I was worried because I hadn't flown in the 300 due to work schedule and my pigeons hadn't been out that far since young birds, in fact I hadn't had time to road train them at all. Out of 8 pigeons I got back four. The first one home and in respectable time was the third brother.

After talking to the guys in our club everyone had heavy losses with a couple of guys getting none back. This is something to consider keeping in the line of pigeons, toughness, tenacity and good intuition.

I had a champion hen in the breeding loft in an individual pen for a couple of months. I sent her as well. It was her first race of the season, a 400. She came in second for us. One faster diploma winner and a National Ace hen never made it back. So, speed is good but it isn't everything.

After you have all the important ingredients built into the family it is a matter of maintaining and enhancing it.

Conclusion

It is advisable to maintain about 4 lines within the family; even five or six lines are good if you have the room but four works fine. You keep these lines separate and maintain them through flying and breeding. You can use these lines to cross to one another when needed.

You can maintain a line pretty well with four legs for 15-20 years without too much complication. After that you may need to add some blood to spark up the genes again. When looking for new blood, remember it took you a long time to get where you are so bringing in inferior blood would not be an acceptable option.

Find someone that has built a loft of consistent birds that match your philosophy on what constitutes a great racer. They may not click the first mating. Sometimes they click right from the start and sometimes it may be the grandchildren that kick it in high gear.

Remember also that in the beginning it is like casting a net for fish. You may not get anything worth keeping on the first few tosses. You try many times and only keep the best. After the family is established your main attention should be in your family and not chasing rainbows by continuing to buy pigeons from different families. You will never gain the true satisfaction of building a family of consistent pigeons unless you stay the course.

Every time you bring in new birds you bring in a whole host of new genetic material to weed through. The more of this type of weeding through process you have, the less serious time you give to your line. There is nothing wrong with trying a lot of pigeons on the start to find out what suites you but after that move forward with your line. If you continue to purchase pigeons and play the addiction to acquiring new blood game you will be destined to fly other peoples work. This is fine for some but not for a true stock man.

Many will tell stories of brothers to the champ being the best producer. This is a sign that the family is not established. In an established family the champions will produce the best. This is evidence of a family built from top class proven champions. Once you learn what a champ looks like you begin to recognize some of the traits. You can see confidence in the expression of the bird. Nothing beats a real air proven warrior.

Pairing

Once you have acquired the best birds your budget will allow you are ready to begin planning the pairing process. Remember the main goal to breeding is to try to produce the best youngsters possible and this is why the pairing process becomes so important. When you are actually ready to pair up your birds a good guideline to follow when deciding mates, is to envision the desired youngster as being better in physical qualities than either of its parents. But always keep in mind, even though this technique sounds easy it is also just as easy to end

up with the exact opposite of your vision. The combination of the parents DNA is extremely unpredictable and can result in both a good or bad result.

However there are a few things to keep in mind that will put the odds of a good result in your favor, the secret is to improve less than perfect physical characteristics in the partners.

Selecting A Quality Breeding Pair

The chances of breeding a winner are increased when it is bred from a winner.

We all realise, that even from the best breeding stock in the world, only a very small percentage of the pigeons produced become champions.

To increase the chances of breeding champions we must first and foremost use quality stock. Quality stock are inbred, line-bred or mixed families that have bred winners or have been bred from several generations of winners.

The quality of the breeding bird can only be tested by the race results of its offspring and more than one test pairing may be necessary to achieve the combination of genes that works. The art of the master breeder is the selection of the correct pairs to ensure an aerodynamically efficient body type plus the character and brains of the champion racing pigeon.

How do we assess the quality of the untested racing or breeding pigeon?

The racing potential of the pigeon depends upon the quality of its parents. However, there is no single gene determining the racing performance of the pigeon and we must look to the physical, physiological and psychological features which make a champion pigeon.

- The physical features (structure, feather, wing).
- The physiology (fitness parameters).
- Psychology (attitude and will to win).

Some fanciers are able to assess both the racing and breeding potential of a pigeon in the hand.

The best fanciers agree that although there are certain physical characteristics common to the best racing birds, the race basket still remains the truest measure of the racing qualities of the pigeon. The physical qualities (bone structure, feather quality and wing) that we assess, when handling a racing pigeon, determine its aerodynamic efficiency. Although the aerodynamic soundness of the pigeon is paramount to its ability to race successfully and without it the pigeon will never be a champion, it alone does not make a champion pigeon. Many pigeons are aerodynamically perfect, but it is the physiological qualities (fitness metabolism, homing ability and racing attitude) that make the bird with the perfect physique a champion and the physiological potential can only be determined in the race basket and not "in the hand".

The only way to test the abilities of the breeding birds is to race test their progeny, but the selection of breeding birds is not always based on race performance. In many cases stock birds are selected on bloodlines and/or known family characteristics. The physical qualities required

for successful breeding birds are the same as those for the race bird, namely the physical requirements for efficient flight. The physiological qualities of the stock bird can be predicted to a certain degree by its bloodlines, but in the end the breeding performance of the stock birds can only be measured by the race performance of their children or grandchildren.

How to Pair Your Breeders

Fanciers start looking back at their old and young bird racing seasons in November and start to look at bringing in new birds to their lofts. If they didn't do well in the short races, they're going to be looking for speed birds. If the long races were a problem, they'll be searching for distance birds. You can investigate, search out good birds, buy them at live auctions where you can see them and handle them, or through online auctions which are becoming quite popular. You can do it all right, but remember that luck still plays a big part in getting the right birds to do the job for you.

One of the things that I've found to be the most successful is to get youngsters from very successful pairs. Highly successful pairs have proven that their gene combinations work, and will continue to work past the first generation behind them. I like to find pairs that are super successful, the more successful the better. The more pigeons that have come out of a pair and raced well, the better I like it.

As far as pairing the birds is concerned, I like to breed birds of the same type, unless I see that there's a deficiency in a certain type. For example, if I am working with a short distance family that is becoming incapable of clocking at anything beyond 150 miles, or only on easy races, I feel that a deficiency has developed that needs to be addressed. In the U.S. this is not really good enough, because we fly a regimen that includes 350-mile to 400-mile races in young birds. In some combines, you don't even start combine competition until you get to a distance of 150 to 200 miles.

You can improve that distance performance in a short distance family by bringing in a little bit of distance blood. And you can do this without necessarily sacrificing the speed. You'd bring in a distance bird whose family has proven it can also win at some of the shorter and faster races. Breed that bird into the speed family, and race the youngsters thoroughly. Then breed one of the best of these youngsters back to the speed family.

You can also go about this the other way, breeding speed into a distance family. Breed that cross back into to the distance family to introduce a bit of speed. One of the best known lofts that has done this successfully was the VanHee lofts. The Motta line of distance birds were found to be getting too slow for the races in Europe, so they bought direct Janssen pigeons. They introduced the Janssens one time as a cross, and then they took those half Janssen and half VanHee birds and they bred them back to the VanHee side, coming up with a $\frac{3}{4}$ VanHee, $\frac{1}{4}$ Janssen bird. They produced many national winners with this combination of bloodlines.

I like to pair my birds so that there's always a genetic link between two pigeons. The studies I've done on the subject really back this up. I've spent countless hours studying genetic percentages. I've found that there seems to be a common denominator between 28% and 37% common blood and a high degree of success in racing, and also in breeding. Especially linebred pigeons kept at a linebred coefficient of between 28% and 34%, or sometimes higher, seem to have more consistency in winning races than either outcrosses or birds that are inbred or linebred closer than that.

I try to find a dominant gene pigeon, a bird that has proven itself to be a super breeder or racer, and I prefer a super breeder that was also a super racer. Line breed at about a 31% ratio to that particular pigeon. This is the exact ratio of my bird that won 6th place at the Snowbird race and was also the 6th overall best pigeon in the Snowbird race and Snowbird futurity combined last year. It's also the same percentage that was successful for me in some of the local futurities and the New Orleans Open Classic. It's proven itself in my loft over many years of racing and keeping these records. In comparing it to outcross birds, in other words, those with no common ancestry within 6 generations, it is much more successful.

Often, outcrossing is just a shot in the dark. You can sometimes have fantastic success, but also a much higher degree of uncertainty or of complete failure with outcrossing. Why do people do complete outcrossing then? Because of the hybrid vigor that can sometimes result. If you pair two inbred pigeons that have no relation at all, you can sometimes get a boost called hybrid vigor. The percentage for success is around 17% or between one in five and one in six, according to the Europeans. A fabulous exception to this is finding a "nick pair" that gives you a much higher percentage of success. But generally, two complete opposites will give you between one in five or one in six success with a good bird.

With linebred pigeons from a good origin, the percentages go up to anywhere from one in four to one in three. So you have much higher odds for success with steady pigeons through linebred pairings. In some situations, a complete outcross pigeon will become a superstar, because it has not only the hybrid vigor but also the combination of genes that allows it to be a steady racer. And the hybrid vigor allows it to be a steady, great racer. So sometimes the outcross is a worthwhile effort. We do this to some extent every year, especially if we want to introduce one of the outcrosses back into one of the existing families later.

Using outcrosses that have a known probability of nicking is one way to reduce the uncertainty of combining two families. An example of one of these combinations is the pairing of Huyskens Van Riels with the Haveniths, which is done quite a bit in New Jersey. Many people know that Janssens have proven to be great crosses with many families. The Stoces with Grondelaers is another natural nick. One of the best natural nick pairs is the Golden Couple from Meulemans with Van Den Bosche blood crossed with Janssen blood. That produced an entire family of great birds based on an outcross pairing.

So there can be great value in pairing complete outcrosses with one another, but you increase your chances of success if you have some idea of the crosses that have been done and proven with success before. Some families of birds crossed with others have no success at all. The average combination seems to be no better than one in five or one in six.

We like to do a majority of our pairings linebred, but when we have a very inbred bird, in other words where we've made a combination of father-daughter or mother-son and produced a very inbred progeny, we like to cross that progeny to a completely different family. We do the father-daughter, mother-son pairings because we have found that when we take a very successful racer out of a super breeder and pair that successful racer back to its parent, we often get above average and sometimes even great breeders. If it's a successful cock, we like to pair it back to its mother. If it's a successful hen, we like to pair it back to its father. We try to race their young ones, and we don't ask those young ones to be as successful in the races as we would expect an outcross to be, because those babies don't have the advantage of having hybrid vigor.

We set a different standard and set of goals for the inbreds than for the linebreds and outcrosses. If they meet these goals, which are basically to be a good homing pigeon, be a steady racer, show some intelligence in coming home in a decent time (not necessarily win the race or even score a diploma, but come close) then we would consider that an indicator that this bird has ability and intelligence and should be given a chance as a breeder. We cross these to other families that we've done the same thing to, one that we already know would be a good nick with the first family.

In 1998, we took our best Horemans hen and bred her to her son. From that pair we raised four babies and raced all of them. Two did fairly well, never winning but coming in good time. We bred from three of them in 2000. The ones that did OK in the races have both produced excellent clock birds for us. The one that did not race well has not. It's something we've always done and will continue to do. We've had a great deal of success with it. Now we've found two future breeders for our loft, and they're young, only '98s, so we know that we've got a young breeder that we can go with for a long time to give us a percentage of good pigeons every year.

So to summarize, we look to pair genetically linked pigeons, or we look for a complete outcross if we're dealing with two fairly inbred birds. If we're not dealing with an inbred pigeon, we prefer to line breed them because chances of success are greater. We'd outcross a bird that is heavily inbred. We'd line breed a bird that is not so heavily inbred or not inbred at all.

How are the inbreeding coefficients calculated? If you look at a 5-generation pedigree, the father and mother are considered to be equally responsible for the gene pool of the young one, so the pigeon in question gets 50% of its gene pool from the father and 50% of its gene pool from the mother. The offspring also gets 25% of its gene pool from each of its grandparents. 12.5% each from its great-grandparents, 6.25% from its great-great-grandparents, and 3.125%

from its great-great-great-grandparents. This is as far as you need to go to figure out the genetic linkage.

I take the common genetic link between the father and the mother to figure out a bird's genetic coefficient. If a bird is from inbred pigeons on only one side of its pedigree, its inbreeding coefficient is zero. But if it has common ancestors in the father's and mother's sides, or top and bottom of the pedigree, it has an inbreeding coefficient. How high that coefficient is, is just a matter of adding up the percentages.

Sexing and Courtship

Successfully determining the sex of your pigeons will take practice and experience and is a common problem for beginner fanciers, even experienced fanciers can still make a mistake from time to time when determining the sex of their pigeons. However, a fancier gets to know his family of pigeons individually and usually if the fancier is an owner for some years can easily sort out their sexes. The difficulty comes with sexing birds which the fancier is unaccustomed to. Sexing birds is difficult because there are no guaranteed characteristics for determining sexes. Just like most birds there are no visible sex organs and unlike other types of birds there are no gender specific colors between the sexes, color differences are only the product of inheritance and not gender.

There are however a few general characteristics that may help you when determining the sexes of your birds. For example the cock is usually larger than the hen and the size difference are usually noticeable from the moment of hatching. Also, a cock bird has a bolder looking head with the crown higher above eye level; in retrospect the hen's head has a less pronounced crown which makes the eye appear to be set higher in the head. In general the hen's appearance seems altogether more sweet and attractive while the cock has a more aggressive look.

Another way of determining sexes is through the courtship acts themselves. By paying close attention to the courtship rituals of the pigeons that will give you the best guides to the sexes. Also keep in mind that these gender specific courtship behaviors are not confined specifically to the mating and breeding season. Even when birds are parted if they can see each other will display signs of courtship.

The cock bird will blow out his crop and turn round in front of the hen bird whose attention he wants to attract, the hen will often coo and inflate her neck a little as well but she will very seldom if ever spin round in a circle like the cock. Hens also walk slowly and somewhat seductively to lead the cock on while the cock moves more quickly rather like strutting and bob their heads up and down while turning in a complete circle. As courtship progresses the pigeons will begin "beaking" or "billing" as many fanciers call it, this is when the hen puts her beak inside the cock's. They then ring beaks with an action similar to that of regurgitating food to feed their young. When the hen is aroused she will follow the cock around the loft and when

the cock is still and resting will stroke the back of his neck. This leads to the final stage in the mating process called "treading" this is when copulation takes place. The hen will crouch down and open her wings slightly and the cock will mount her, this action is very quick. Other cocks will try to prevent copulation if possible and may be successful if the cock is inexperienced or old. Some fanciers will let their breeding pairs out one at a time so that mating can be accomplished.

When to Pair

Old birds are usually mated in the late winter or early spring, one week prior to mating let the cocks choose their nest boxes if they haven't done so already. When you begin pairing your birds it is good practice to use a mesh divider of sorts in the nest box for one or two days to keep the hen and cock birds separate from one another, this way the hen and cock can meet but will insure that aggressive cocks cannot harm the hens.

In preparation of the breeding season there are several things we should consider every year. The birds should be good and rested and should have gone through a good moult.

A few weeks before pairing, I suggest vaccinating for PMV and paratyphoid. Also treat for worms, coccidia, and trichomonas. Preventive antibiotics is counterproductive and not recommended.

Antibiotics have no preventive properties, only therapeutic, so if theres nothing to treat, dont treat it. Indiscriminate use of antibiotics encourages resistant strains and may, indeed, make the birds more susceptible to infection by disturbing the normal flora of the gut.

Give the birds time to recover from the treatments and vaccinations we put them through, and you will notice a rebound effect, where they ascend to a higher level of health than before the intervention.

The vaccinations peak their immunity; and these higher levels of immune globulins are then passed to the offspring via the yolk and crop milk, resulting in more vigorous offspring.

The treatments we give for trichomonas, cocci, and worms may not all be necessary. Usually the trichomonas treatment is needed, but if a fecal examination shows no worms or just a low lever of coccidia, then these treatments can be omitted. If no fecal examination is done, then treat to be safe.

The Breeding Loft

Winning is the result of breeding, training, nutrition, consistency, stamina, heart, superior intelligence and homing ability. In pigeon racing, there is no substitute for any of the above qualities. Only excellent race results, generation after generation in the best of competition, should be the goal of any breeding loft.

Always keep in mind that your end product can only be as good as the foundation it is built on. We consider the pedigree (bloodlines) to be a “genetic blueprint” of any given bird’s potential. The BLOODLINE is far more important than personal preferences for a certain “eye sign, wing type, body shape, color, etc.”

No pigeon breeder can guarantee that every bird he breeds and sells will be a champion flyer or breeder. The best breeding pairs in the loft produce a certain percentage of birds that do not have the qualities of a champion.

However, like all successful breeding lofts, we strive to keep the number of such inferior birds to a minimum. We are able offer quality offspring each year by breeding from only those birds whose pedigrees indicate that their ancestors’ bloodlines, both immediate and remote, produced champion racers or breeders.

Such bloodlines indicate that our youngsters should have more good genes present for competitive racing than bad ones, thereby increasing their potential to become great racers, breeders or both.

We strongly believe that all behavior is influenced by both genetic and environmental factors. We, as pigeon breeders, should know which behaviors, good and bad, are inherited. Our breeding program concentrates on the qualities that are genetically inherited and that are necessary to race and breed competitively.

Also, we recognize that the environments that fanciers create for their birds are vastly different and unique to each individual loft. We have no control over other fanciers’ lofts. Those that are overcrowded, with poor health maintenance programs, inferior diet and nutrition, and lack of sufficient training, place their birds under severe stress and do not allow them to reach their true potential as either racers or breeders. Performance is affected when there is any type of imbalance in the birds’ environment and diet. These conditions are the direct responsibility of the fancier. They are “man made”, not genetic.

But the actual measuring stick or test, is the race itself, and its level of competition.

The Nest

Although many times it is overlooked the nest is actually an essential part to your breeding success. The nest helps in the incubation process of the eggs, keeping the young warm and contained and also helps in preventing handicaps like “straddle legs”.

The best nesting material can be any type of dry, small diameter sticks, twigs and stems about 6 inches or so in length.

Popular nesting materials include,

- Tobacco leaf stems
- Alfalfa straw

- Tree twigs
- Pine needles
- Straw
- Nest bowls

When adding the nesting material to the loft put a small amount of nesting material in the nest boxes then put plenty on the floor of the loft. A good rule of thumb to remember is there should be enough nesting material in the loft so each breeding pair in the loft are able to build a nest about 3 inches high. This will ensure that the breeding pairs do not run out of nesting material and will be able to fly back and fourth to collect more material.

Breeding Nutrition

As your breeding pairs have been mated and the hatching of eggs comes closer you should have your pigeons on a high nutritional plane. Most experienced pigeon flyers like to feed their breeders a ration of protein in the range of 16-18%. If the mix available to you carries a protein level of 14% lets say then it is recommended to add supplemental peas to the ration. The levels fed would be approximately 1/5 peas and 4/5 mix in this example. The rapidly growing youngsters place huge demands on the breeding pairs so it is important that they be on full feed, meaning they have access to feed at all times during the daylight hours.

When the youngsters reach about 18 to 21 days of age, many pigeon fanciers place small containers of breeding mix in the nest box. This serves as a supplemental feed source for the parents and also eases some of the demand placed on them. Even more important this practice helps the young to learn to eat grain on their own, thus reducing the stress that weaning places on them.

Pellets, which are grain parts that are compressed, are a very popular option with many pigeon fanciers, especially for breeding. Feed manufactures are able to provide a balanced diet right out of the bag. This seems to have a greater payoff in the rapid development of young in the nest. The downside of using pellets is in looser droppings.

Your breeding pairs, as with all pigeons in your loft, must have access at all times to clean, fresh water and fresh grit. Pigeon grit contains additional supplements including calcium, oyster shell, salt and minerals. Pigeon grit also aids in the digestion of feed.

Rations for Breeding, Rearing and Moulting

Three to four weeks ahead of pairing birds, increase the percentage of legumes (peas, beans, lentils, ect.), plus a high -protein pellet (18-28% protein) which also contains a broad range of vitamins and minerals. A non-medicated pellet, such as an 18% protein finisher pellet prepared for broiler chickens, or a 28% protein turkey pellet are examples of useful pellets. I use a 28% protein pellet called Milk Plus produced by Cargill (Nutrena Feeds). Aim for a final protein level of 17-18% which is ideal for fertility, hatchability, growth and development of youngsters.

The reason for the 3-4 week interval before pairing the birds is to ensure that the systems of both sexes are well fortified with all of the nutrients that are important for high fertility, ect., as just mentioned. Too often, in my experience, before the breeding season fanciers don't change from a relatively bland off-season diet to one higher in a range of important nutrients, until after the eggs are laid. One problem with this can be clear eggs, or at hatching, weak or dead-in-shell youngsters. To avoid this situation, improve the diet ahead of the breeding season, much as sheep breeders do when they "flush" their breeding animals by putting them on a higher plane of nutrition, e.g., higher levels of protein, plus vitamins and minerals ahead of the breeding season.)Note that black eggs, or dead-in-shell or weak youngsters can be the result of bacterial infections in the egg,, i.e., E. coli and paratyphoid infections, ect., If this is a persistent problem, be sure to take some of these eggs or youngsters to your veterinarian for bacterial culture.)

One suggested breeding ration mix that will provide between 17-18% protein:

30-35% peas (green, white or yellow peas, or combinations of these), but only 5% maple peas which contain high levels of substances that interfere with the digestion of protein). Peanuts, sunflower seeds, ect., for their high protein and fat content can be included here, as well. 15% livestock/poultry pellets (18-28% protein) 20-25% wheat 25-30% corn 10% safflower

Other grains/seeds can be added as you see fit-rice, millet, milo, flax etc., Obviously, the total percentage of all grains used must be 100.

Because young birds continue to grow and develop for many months, I believe that they should be maintained on the ration on which they were reared, or on one similar to it. As they begin to train and race, they can have more grains high in carbohydrate and fat for the energy they provide.

Similarly, I believe that next year's races are won, in part, during the current moult in which nutritional demands are very high to complete the annual change of feathers. For this reason, the diet should be one that supports the high demand for the quality of protein needed for the growth of quality feathering. Proteins are comprised of smaller units called amino acids, of which there are some 22. Those amino acids containing sulfur, especially methionine, are key to good development and growth of feathers. A very good short article from Melvyn John of Vydex Animal Health in the British Homing World weekly for October 6/00, explains the need for high quality protein during the moult. The author feels that ordinary grains in pigeon rations will not supply enough of the much needed methionine, and so recommends supplementation on a daily basis. Commercially available amino acid solutions can help, but also, supplements containing fish meal, for example, in pelleted feeds, can be useful here. The author also recommends vitamin (especially vitamin C) and mineral supplementation during the moult.

Rearing Youngsters Correctly

The novice must realize at the outset that young racing pigeons which do not leave the nest properly reared are a waste of time and effort.

There is a lot of truth in the old saying that most of the long hard races are won or lost in the nest, and the beginner should do his best to ensure that his squeakers are a sound and healthy lot.

Youngsters which leave the nest in poor feather and weed body, have either been under nourished or suffered a setback due to illness.

They should not be allowed entry to the racing loft. The feather is probably the best indication that all is not well. Any check suffered in the normal growth is indicated by a mark across the tail and flight feathers.

If the newcomer is not certain what to look for, most old hands will be please to point out the defect. It must also be remembered that all small birds are not weeds. If their feather is good and their body plump, they are in good condition.

To rear sound young, the loft should be free of mites and lice, and the parent birds serene and vigorous. The breeders should have a constant supply of food and water and the food must be high protein content, about 20%.

A mixture of at least 90% peas is ideal for rearing and various small seeds and pellets manufactured for the purpose can be used as a tidbit to advantage. Grit is essential and this can be obtained ready mixed from various grain and fodder stores.

Greens such as silver beet and lettuce or finely chopped young grass fed once weekly will also assist in gaining the desired result.

It is also a good idea to keep the floor covered with fresh shell grit (shell grit is a source of calcium and not true grit, but gravel grit is essential for the gizzard).

The poorly reared youngster may win a short race, but it has no potential as a long distance winner and definitely no place in the breeding loft as a future stud proposition.

FEED BARLEY NOW

Barley should be fed just prior to, and during the moult, if the desired silky plumage is to results in your pigeons.

Amino acid cystine, about 9% as found in feathers, is essential in the diet at this time and barley is the best source of intake of the common grains.

Barley contains about 2.5% cystine, wheat does not provide it at all, maize and oats give less than 2% and peas less than 1%. Barley is a cheap part of the diet, and in most cases it can be obtained free of long tails.

Peas and wheat give an ample supply of the other nine essential amino acids, although maize is richer in threonine, leucine and valine. If the novice feeds a mixture of 50% barley, 25% peas and 25% wheat for the next eight to ten weeks he will be certain his birds are not missing out. The addition of linseed, richer in amino acid tryptophan than wheat and peas, will also assist if used as a tidbit. Linseed is high in protein 24%, and fat 36%, but low in carbohydrates 28% in comparison with other popular grains.

If the beginner takes notice he will find that a good knowledge of the composition of grains will help him to feed the right mixture at the proper time. For instance, youngsters until they leave the nest require a higher protein content diet than they need later in the racing season. 20% to 25% is necessary to build the youngster into the healthy potential winner, but 14% to 18% protein is ample in a racing mixture. Knowing what to feed, when to feed, is a vital part of good management. Protein is a repairer of muscle and the novice will find that the bird which returns from a long, hard race, flown down to the wafer in body weight, will recover much sooner if it is rested and fed all peas than it will if fed all wheat. However, once it has regained its weight and is eager to get back into the air again, the protein intake must be cut down and a diet high in fat should replace the one of all peas. Fat burns into 2.5 times as much energy as either protein or carbohydrate.

The storage capacity in muscle and liver is filled faster if a diet rich in fat is used. A mixture of rapeseed, linseed and hempseed fed for two or three days prior to receiving the usual racing mixture will make certain the birds are back in top racing condition without waste of time. Essential minerals compose 6% of the bird's body and ample sources of these are found in the common grains and grit mixtures. Calcium and phosphorus are two which provide no worries. Salt, added in the grit mix, is a source of sodium and chlorine. Potassium is so abundant in ordinary pigeon food that it is of no concern. Iron is found in grains grown in iron rich soils. One drop of iodine to each gallon of drinking water every now and then will be sufficient supply of this necessity needed for thyroid health and normal growth. Sulphur is found in ample quantities in barley, wheat, maize and peas. It is good management if pigeons are fed the correct mixtures.

Hatching

After the birds have been paired, nests have been made and mating has commenced it is time for the breeding pair to lay their eggs and wait for them to hatch. This is a very exciting time during the breeding period because a new champion may be in the making.

The hen should lay her first egg about 10 days after mating and the 2nd egg about two days after that. The hen will actually wait to sit on the eggs until both eggs have been laid this way both eggs can be cared for equally and will hatch together. The hen and cock will take turns caring for the eggs with the hen taking the largest part; this enables the free partner to get food, water and exercise. About 17 days after the pair began sitting on the eggs the eggs should

begin to hatch. While the pair are sitting on the eggs a cream like substance known as “pigeon milk” forms in and adheres to the wall of the crop by both parents this food substance will be used to feed the youngsters for the first three or four days of hatching. Pigeon milk is composed mainly of protein and fat which the youngsters need for their rapid growth.

Once hatched the baby pigeons also known as squeakers will be fed pigeon milk by both of the parents until they are about 10 days old, after which the parents will begin feeding them grains. Newly hatched pigeons do not have any feathers but are covered with a small amount of yellow down. Young pigeons grow very quickly and will double their size at about 5 days old and will soon begin growing their feathers.

When the young are about 14 to 16 days old the hen will usually lay the first egg of her second clutch which again will be followed by the second egg approximately 2 days later. Some fanciers will replace the second clutch eggs with fake ones this way the pigeons will not be subject to the strain of rearing again, this will allow the birds to build up and reserve their strength for racing later on in the year. You may even take the second clutch eggs and pass them on to your stock pigeons to hatch and rear.

Weaning

During day six or seven the young birds will begin to take different food, again with both parents taking part in the feeding. The cock and hen will fill their crops with corn and grain and will regurgitate the food into the young birds. At about 14 days old the young birds will be almost fully feathered and around 20 days old the young birds will begin moving about the nest box, shortly after this the young birds will begin picking up grain themselves if it is available.

Whenever the young birds begin to pick up food on their own they are ready to be weaned from their parents, this usually takes place anywhere from 18 to 28 days of age. Once this happens the young birds are ready to be taken to the next stage of their development; the young bird section

The earlier a youngster can be weaned the better, there are a few reasons why, for starters the regurgitating of food for the youngsters depletes a great deal of energy from the parents so the sooner you can relieve this stress the better, for this reason youngsters should not stay with their parents any later than 28 days of age. Early weaning also protects young birds from being injured or even killed by the older birds in the loft. Cocks in particular will harm or even kill young birds that wander into the wrong nest box. Most importantly young birds tend to make better progress in general when weaned early. However do not rush weaning your young birds from their parents, just keep a close eye on them so you notice when they begin trying to feed from the feed pots themselves, this is the sign when they should be weaned and placed in the young bird section of the loft.

Breeding Techniques

There are three basic types of breeding pairings in-breeding, line-breeding and out-crossing, The object to breeding is to intensify the good qualities and fix the flaws of a family of racing pigeons; however breeding could go either way, because of this when breeding it is essential to closely monitor your birds to make sure that the good qualities you are looking for are still there and that no flaws are creeping in. If you do begin to see some flaws in your offspring it may be time to introduce new blood into your breeding program.

Just remember there is no one rule for breeding, each fancier makes his or her own decisions on how to breed and rear their pigeons. In the end performance is all that counts and will reveal itself on race day.

In Breeding

This is the closest type of breeding relationship, and is a breeding of direct family members for example brother to sister. This type of breeding could result in either an excellent bird with very few flaws or the total opposite a very flawed bird with few potential good qualities. As with any animal, breeding too closely can result in very flawed animals; however some experts recommend occasional inbreeding to bring purity back into the bloodline.

a system used to concentrate desirable genes in a family. This system uses matings as follows: father to daughter, mother to son, brother to sister. Never start in-breeding with anything but the very best stock. Do not expect to take mediocre birds and improve their quality by using this system. In-breeding quickly shows up all the good qualities, by allowing the best association of genes, but it also shows up the faults.

If you are not good at culling don't start in-breeding because strict culling is a given in this system.

Line Breeding

Similar to inbreeding, line breeding also involves pairing related birds however not as closely for example father to daughter or mother to son. This type of breeding has a good history of carrying on positive traits and breeding winning birds.

somewhat the same as in-breeding but it takes longer to establish purity. For most fanciers it is less risky and less-expensive. It could involve the following matings: grandfather to granddaughter; grandmother to grandson; cousin to cousin.

Out Crossing or Cross Breeding

This is the practice of pairing a winning pigeon with an unrelated winning pigeon. The history of both winning pedigrees can result in a spectacular bird. Unfortunately if you breed the young of the pedigreed birds with non related young of another bird, you'll lose the qualities that you originally bred for. The solution to this problem is to inbreed the next generation to return the qualities to the bloodline.

the mating of birds with no relationship within the previous five generations. That is what the experts say, but we could say unrelated birds. This is the simplest system and the one used by a lot of fanciers. You avoid some of the hazards of in-breeding.

Common-sense pigeon breeding rules

The most valuable birds in your loft are the good breeders. Once a bird shows promise as a breeder you should not risk it in any races. The bird may continue to win, but you may lose it and it is more valuable as a breeder of future racers. You sometimes hear fanciers saying "everything in my loft must race." The smart fanciers don't race their good breeders.

It is very easy to tell which are your good breeders, those birds which consistently produce winning offspring. This does not mean just one winning bird a year it means several, depending on how many you raise. An essential feature of a good breeding system is adequate record keeping. I keep extensive records and it is time consuming, but without good records you have to rely on your memory. If your memory is like mine then you are in trouble.

I read through my records often and make analyses of the various birds. You must have good records of all the progeny from a pair, not just the successful ones. If a stock bird breeds two winners out of twelve it may not necessarily be a good stock bird. It depends on the objectives you have set for it. Once you have detected your good breeders you can start building your own family around them and that will increase your interest in the sport.

However, once you decide to build your own family there is a problem. Which system do you use? Cross breeding, line breeding, in-breeding or system XYZ?

Pedigrees

Accurate, honest pedigrees can give you valuable information about the background of a family of birds. If the pedigrees give ALL details of wins and breeding performance they are worthwhile. The pedigrees that give nothing but a string of band numbers are of questionable value. Check all pedigrees carefully for genetic impossibilities such as a red cock bred from two blue parents. Later I will deal with what might appear to be a red cock from two blue parents. (Watch for the opal factor.)

Even well-known fanciers are sometimes guilty of making pedigree errors. If you obtain pedigrees from a fancier which show errors, how can you be sure about the whole breeding program? There are very few fanciers who house their breeders in individual breeding pens and this is the only way to be absolutely sure about parentage. Our pigeons can be very fickle and a whole series of undetected chance matings can change a family completely. I once obtained some birds from a well-known fancier and found that the pedigrees contained errors. I asked about the errors but I never heard from him again. Needless to say, those birds did not remain in my loft.

Some fanciers start out on an in-breeding program but give up due to the number of culls that crop up. This should be welcomed. By getting rid of the culls you are making progress. You must persevere with the program and not make an outcross. An outcross produces variability and in-breeding is done to reduce variability, although in the beginning in-breeding would appear to heighten variability, that is until you have removed the undesirables.

With stock that is judged on outward characteristics, such as show-type birds, culling is easier. However our racing birds have many characteristics that are not easy to determine, such as homing instinct and constitution.

Careful records of factors like fertility, hatchability and rearability must be kept in order to avoid fixing any undesirable characteristics in the family. I have stressed good record keeping before and I will do it again here, you cannot be successful with in-breeding without good records.

Breeding Program for Success

Keep all breeders on a protein diet of 20-22%, plus electrolytes, vitamins, minerals in the water two times a week 365 days a year. Keep your breeders on a regular schedule for feed time and feed at least three times a day when raising young. Change the water at least three times a day and sanitize the feed and water containers regularly. Keep feed, grit and water in the loft at all times when raising young. At no time should the breeders be without feed or water. Because of the warm climate, our breeders do not go through a moult like birds that have an extreme change in temperature; therefore our birds are breeding and moulting almost all year. This is a very stressful time and the birds must be feed properly. Many studies have proven that pigeons will be HEALTHIER and RACE / BRED BETTER when on a FIXED SCHEDULE.

- 1.The first priority is selecting breeding stock for health and vitality. Choose only the strongest and healthiest birds for the breeding loft.
- 2.Along with good health, breed from birds that have a good COMPASS or HOMING INSTINCT and NAVIGATION SKILLS. Without both health and homing instinct, you are wasting your time and money.
- 3.The most valuable birds in your loft are the good breeders. The basic rule in breeding is that the value of a pigeon is judged by the quality of its off-spring, but only after a fair number of young birds has been produced and raced.
- 4.The quality of each breeder can only be tested and measured by the race performance of their children and grandchildren. More than one tested pairing maybe necessary to achieve results. The training basket and race results are the real judge in who owns the "GOLDEN BREEDING PAIR".

5. Our only goal is to breed and develop early maturing, tough endurance racing pigeons with strong navigation skills that will fly at all speeds, conditions and distances.
6. With accurate record keeping, fanciers have found certain matings give consistently better race results. The term "HIT PAIR or NICKING" has been used to describe these great results. It is based entirely on the racing and breeding performance of the past. It works on the idea that history tends to repeat itself in terms of both PROVEN and FAILED RESULTS. This is not a crystal ball, but it can give you an accurate picture of the past. Select for excellent health, homing ability, navigating skills, racing toughness, early maturity and easily motivated birds with proven race results.
7. Good pigeons will adjust over time to any type of conditions. The bloodlines from birds that have already proven themselves to be successful in Taiwan are the only birds we should be breeding. The birds that have "ADAPTED THROUGH NATURAL SELECTION AND SURVIVED THE RACE CONDITIONS GENERATION AFTER GENERATION".
8. Bloodlines from proven breeders and champion racers should be in the 1st or 2nd generation of the pedigree. We must develop a breeding program one generation at a time. There is no genetic influence past the 3rd generation, and the possibility of going past the 4th generation without proven success is a WASTE OF TIME AND MONEY.
9. IMPORTANT – We want only race birds and proven breeders bloodlines 1st and 2nd generation from birds that have had success in Taiwan racing.
10. You must destroy or cull all poor quality birds and keep only the very best for breeding. The theory "Likes produce Likes" can be very true. Both good and bad hereditary traits are present in every bird. There are only two kinds of birds: GOOD ONES that can help you improve and BAD ONES that will cost you time, money and aggravation with poor results. When deciding to cull, forget all about names, fancy pedigrees, strains, costs, feelings (yours or others) and just look at the results. IF THE BIRD CAN HELP YOU MOVE AHEAD AND IMPROVE YOUR RESULTS, KEEP IT, IF NOT, GET RID OF IT. NO EXCUSES OR SECOND CHANCES, CULL IT.
11. One or two pair of proven breeders and their closely related bloodlines (brothers / sisters, etc.) can bring great honor to a fancier for many years. The 3 season young bird race series requires careful planning for the fancier to have his best pairs on young at band sale time.
12. Give a bird a 3 race series or 4-6 young birds to prove its breeding ability. Good results and it stays, bad results and it goes. If the bird cannot help you to improve your results in the breeding loft, it is of no value to you and you should cull it.
13. "CULL" means regardless of bloodlines, strains, costs, or origin, you must you must eliminate all birds from the breeding loft that are giving you bad results and preventing you from improving. Here are some examples:

A.Cull any birds that are not of superior health and any breeders that do not produce strong healthy young.

B.Cull any breeders if their young are hard to manage or settle.

C.Cull any breeders if their young will not loft fly and train easily.

D.Cull any breeders if their young cannot keep up with the rest of the race team and appear to have no excuse for being late and lazy.

E.Cull any pair in which you have heavy losses and poor homing ability before the race series starts.

F.Cull any birds whose young have not had any success over water (birds that are lost first time over water).

G.Cull any breeders that produce young birds that have poor recovery periods. Birds that take several days to recover from a difficult race are easily lost in the next race.

H.Cull any breeders that produce young that do not possess toughness. This is a trait that fanciers sometimes ignore in their breeding program "TOUGH WEATHER BIRDS" / versatility to adjust to various difficult conditions during a race and to recovery quickly from a tough race.

14.Fanciers must understand that a bird's ability and potential is influenced by both genetic and environmental factors. We must select birds that have the genetic qualities we need and look for in Taiwan racing (intelligence, vigor, early maturity, navigating ability, compass, homing instinct, motivation, determination, desire, heart and good health). Environmental factors are "man made", not genetic. Fanciers must recognize that the environment they create for their birds is vastly different and unique to each individual loft. The lofts that are overcrowded, with poor health maintenance programs, inferior diet and nutrition, and lack of sufficient training, place their birds under severe stress and do not allow them to reach their true potential as either racers or breeders. Performance is affected when there is any type of imbalance in the birds' environment and diet.

15.Like all successful breeding lofts, we must pay close attention to our "BREEDING HENS". Every bird is an individual and must be treated like one. Pay close attention to each hen's diet. It is important to have the eggs well formed and smooth. A medication program for all breeders is important, and the fancier who always studies his pigeons and pays close attention to health 365 days a year shall increase his chances for success.

The past several years, several American and European fanciers have all turned to specializing in certain types of races and distances. This seems to be true in the modern world and especially in the pigeon sport. In the past we could find pigeons that were fast at short distances, strength at the middle distances and have endurance for the daylong races. Taiwan fanciers must look for the birds that can fly 100-500 miles in bad weather conditions, extreme

heat, temperature changes, difficult land /sea courses and hard changing winds. This is NOT the new modern pigeon of today in America and Europe that specializes at certain distances. Many famous fanciers and strains are known for specific performance. The fancier has developed his birds to adapt to his style of training, conditions in his area, and distances in which they wish to compete (SPECIALTY BIRDS). The pigeon sport has been for many years a commercial sport. Each year there are many pigeons sold and most of them are worth nothing. Today the "COMMERCIAL BEEDERS" breed for sales appeal instead of racing ability. Most of them are only selling feathers with beautiful pedigrees, not quality birds that can handle the tough style of racing in Taiwan. These feather merchants have taken advantage of many and caused a big disaster in the breeding of quality racers. Most of the time, their large advertising campaigns are 100% better than the birds they offer.

It should be the fancier's choice to breed from a bird that flies the race series, or a major part of it, and shows its ability to handle the conditions of the race course, in hopes that it will pass on the same desirable qualities to next generation. AVOID THE COMMERCIAL BREEDER BIRDS! To breed this type of unproven bird is always a big risk, with little success. Always select your breeders from bloodlines of families that have already proven themselves to be successful in Taiwan's tough style of racing, especially in the area in which you race (North, Central, or South Taiwan). Genetics have proven that "Likes Breed Likes".

Culling

Culling is a procedure that is easy for some, hard for others and impossible for many fanciers. Each fancier must identify the goals for his loft that he wishes to achieve before he knows which birds he needs to save and which he needs to eliminate or cull. Also, these goals will help him to decide what type of new blood he needs to introduce into the breeding program for improvement.

I wrote this article for the performance minded fancier who is looking to improve the quality of his flyers and breeding stock each year, therefore becoming more competitive and consistent in both race results and the quality of young birds that he breeds.

Below are a few goals a fancier may select for himself and his birds. This is a small list, but may serve as a general idea of what he may want to achieve (goals) and improve upon each year.

1. Competitive in young bird races and futurities only,
2. Competitive in old bird races, 100-600 miles,
3. Competitive in all average speed races, both old and young birds,
4. To Specialize in short / sprint races or long distance races,
5. To Fly only futurity races, both local and out of area; and
6. To Start his own breeding station to sell birds for flying / breeding potential.

As you can see there are many choices and combinations of goals one can set for himself and his loft. If you are a serious fancier, you must identify and focus on your goals and select and cull accordingly.

To improve the quality of your flying / breeding loft requires an accurate record keeping system or program. This record keeping requires that you record the band numbers of all the offspring from each pair of breeders. Hopefully, you will have 4-6 young birds from each pair to evaluate each year. I use the phrase accurate record keeping, but if you are not breeding in individual breeding compartments, then you really do not have 100% knowledge of both parents. You can always guarantee the hen, but occasionally the cock maybe suspicious.

Regardless of how you set up your breeding loft, you must record band numbers as accurately as possible in your own situation. You will need to refer to these numbers occasionally for evaluation when you need to save or cull your birds.

BREEDING LOFT - Breed only from birds with performance backgrounds that meet your own goals that you have selected for you and your loft. They must be healthy and produce healthy young birds at the time of the year that you want to breed. Breed at least 4-6 birds from each pair. Give the pair 2 years to prove its breeding ability. In 2 years you should have 8-12 birds from each pair to evaluate.

WHAT DO WE LOOK FOR IN THE OFFSPRING? - Good health, there can be no sound foundation without it. If the young are not strong and healthy then look no further. **CULL** the pair and their children! Do the children train easily, loft fly freely and are easy to settle and manage? If the answer is no, you must take a long hard objective look at the parents. Can they help you to improve? If the answer is no, cull the pair. How many races have the young from each pair flown in 2 years, and what were the results in race competition? The birds must be able to race each week if necessary, and consistently be in the top 10% of the birds competing. If the 8-12 young raised from this pair have only flown a few races with no positive results in the last 2 years, then you know the answer, cull the pair. How many birds do you have left after 2 years? If you raised 8-12 from a pair and only have 1 or 2 left, with several being lost at a very early age and during training, then take a very good look at which are left and their results. Along with good health, breed from birds that have a good **COMPASS OR HOMING INSTINCT AND NAVIGATION SKILLS**. Without both health and homing instinct, you are wasting your time and money. Is it worth raising 8-12 young from a pair only to have 1-2 left after 2 years? I will let you answer that question for yourself, but I say cull the pair.

I have always felt that a fancier is at a distinct disadvantage if he has a large number of breeders and 100 plus young birds on the race team. **WHY?** The large number of breeders makes it difficult to raise 4-6 young from each pair and to evaluate them properly. Trying to train and race 100 plus birds is very difficult, and it is almost impossible to determine the true worth and quality of the birds. I recommend to single or double toss the birds when you train

to evaluate their homing instinct and to teach them to think for themselves and break away from the flock. However, with a large number of birds, this would take all day, not to mention the difficulty of placing the birds in actual races or racing conditions to evaluate their abilities. Most clubs have a 15-20 bird shipping limit. With large numbers, you must consider the extra time, increased cost, overcrowding and health factors. Most times these extra birds prevent a fancier from finding out the true worth of his breeders and flyers, which to save and which to cull.

Take a good look at the top flyers and breeders in your club and combine. Most will not have a large number of birds, unless they also advertise and sell birds. It has been proven many times over, a fancier with a small team of quality stock, 30-40 young birds and 20-30 old birds, can fly very competitively in combines with 100-400 lofts against 1000-6000 birds each week.

In both the racing and breeding loft the true value of a pigeon will be found only by actual results (good and bad), either by flying or by the quality of the young it produces. If a bird cannot help you to improve your results in the flying or breeding loft, it is of no value to you and you should cull it.

Remember, you must stay focused on your goals. There are only two kinds of birds: GOOD ONES that can help you improve and BAD ONES that will cost you time, money and aggravation with negative results. When deciding to cull or cut back, forget all about names, fancy pedigrees, strains, cost, feelings (yours or others); just look at the results. IF THE BIRD CAN HELP YOU MOVE AHEAD AND IMPROVE YOUR RESULTS, IT STAYS, IF NOT IT GOES. NO EXCUSES OR SECOND CHANCES, CULL IT.

I know there will be an occasional bird that you will cull that could of helped you, but believe me you will cull 99 bad ones for every 1 you should have kept if you cull hard based strictly on results.

To purchase flying kits or potential breeders always seek out lofts with the same goals as yours and recent good results. Request birds with the types of qualities you are looking for to improve your own loft. Many famous fanciers and strains are known for specific performance, such as short distance specialists, middle distances, long distances, etc. These fanciers have developed their birds to adapt to their style of training, conditions in their area, and distances in which they wish to compete, whether it is old birds, young birds or both. These birds are specialty birds that excel at specific distances and conditions. They can be a great help to improve your loft in ares where you are not having success.

Remember, if you are looking for long distance bloodlines to improve your race results, you do not buy a family of birds famous for its sprint or short distance ability. I know this sounds silly and foolish to mention, but many times fanciers buy birds because of their popularity and fame,

not their known proven ability. This leaves them with little chance to improve their own birds if they introduce the wrong birds into their lofts.

I have always believed in the basic principles of genetics, "Heredity is handed down from one generation to the next", and "Likes breed likes". Thus, to breed for speed birds you should breed speed to speed. If you are looking for long distance birds, you breed distance birds to distance bloodlines. However, there is one other factor, quality or trait that seems to be very noticeable in racing pigeons that fanciers sometimes ignore in their breeding program, that being "TOUGH WEATHER BIRDS". Whether the races are short or long, some birds possess the ability to fly successfully in all kinds of conditions and weather. Others are only successful when conditions are perfect and fast. This toughness quality is a very important characteristic that you should look for and breed for at any distance when selecting breeders. Cull those birds that do not possess this toughness or produce it in their children.

BRIEF SUMMARY: CULL MEANS REGARDLESS OF BLOODLINES, STRAINS, COST OR ORIGIN, YOU MUST ELIMINATE ALL BIRDS FROM THE RACE TEAM OR BREEDING LOFT THAT ARE GIVING YOU BAD RESULTS AND PREVENTING YOU FROM IMPROVING.

Cull any birds that are not of superior health and any breeders that do not produce strong, healthy young. Cull any birds if they are hard to settle and manage. Cull any birds that do not loft fly and train easily. Cull any birds that cannot keep up with the rest of the team and appear to have no excuse for being late. Check your records, if this is a common problem with several birds from a particular pair, then they must go. Cull any pair in which you have heavy losses each year or poor homing ability. Cull any flyers that after 2 years have not finished consistently in the top 10% of their races. Cull any pair that has not produced good racers even though their young are not lost. Cull all birds that cannot handle the tough races, regardless of the distance. Cull all birds with poor recovery periods that cannot race over 50% of the race schedule.

As you cull and eliminate birds, you look to keep and breed from the best. Three or four pair of proven stock birds can take a fancier a long way in a race season and many through years to come. THE OLD SAYING "QUALITY IS BETTER THEN QUANTITY" IS DEFINITELY TRUE WITH RACING PIGEONS. The only way to achieve the quality and results you need is to set your goals, stay focused on those goals and cull all birds that cannot help you attain your goals and desired results.

Fostering

This is our method to raise an all white round, then a race team, using fosters and 'natural parents'....

Put the pairs together, and let everyone lay a round of eggs. Most pairs will lay within 7-10 days of each other.

Throw away all the eggs from all the pairs on the same day.

Approximately 7-10 days later, everyone will lay a second set of eggs, usually within 3-4 days of each other.

Now the hard part — keeping track of who you are fostering whose eggs under.... LOL Good record keeping is ESSENTIAL here.

Remove the eggs from Pair A — and carefully put the eggs from Pair B under them. (Pair A is the pair you are NOT raising babies from at this time). Record on the nest card that Pair A has Pair B's eggs.....

Pair A will incubate and raise Pair B's babies. In the meantime, about a week later, Pair B will lay again — and then are allowed to keep/hatch these eggs. This way, you have now got 4 babies from Pair B, within 7-10 days of each other in age.

In our loft, this of course would be repeated with Pair C and D, E and F, etc.

Once the first set of babies has been weaned, the process is repeated. Although by then, we usually do not have to throw out a round of eggs — there are enough pairs laying within the same time frame, to swap eggs — so Pair B will not necessarily raise Pair A's — etc. (confused yet? LOL)

Again, good record keeping is essential — otherwise, you end up not knowing whose babies are whose

We also have a few birds who just don't produce good babies on their own — so whenever possible, they are used to foster "good" producing pairs babies.

Emergency Fostering

Sometimes one of a pair is lost — or the parents aren't good parents (common with Young Birds), and you find yourself in a dilemma. Do you hand raise a baby (difficult), or is there another pair in the loft that could help out?

Sometimes, one baby is much smaller than the other — and the larger one keeps pushing the weaker one away at feeding time — and the weaker one is in danger of dying of hunger....

In the first case — you have some choices.

1/ If the babies aren't fully feathered yet — and you have a pair or two who have a single baby of similar size/age — you can put the babies in with the 'singles' to be raised. Hopefully, you've already banded and recorded the parentage of the orphan babies — so you don't mix up whose baby is whose.

In a pinch — a pair COULD raise three babies — but watch carefully that all babies are getting properly fed. You might have to supplement one or two of them from time to time.

2/ If you have two orphan babies – and only one other pair that could foster for you – and they have two of their own — you can try putting one baby in with the pair – and keep one in the house to hand feed. Again, watch that all three in the nest are adequately fed. You could also swap the babies every other day – hand feeding one, while the other spends a day getting “bird fed”. LOL

3/ If the orphans are from a pair of birds that are really important to you – and you have another pair of breeders who are on 12-14 day eggs, that you are willing to sacrifice — you can put babies up to 5 days of age into that nest, removing the eggs of course. The “foster” parents will have a very strange surprised look on their faces, when their eggs suddenly turn into rather largish babies.... but they will take to them like they are their own.

Case Two.....

Sometimes, one chick just doesn't grow as quickly as the other. Could be there is something wrong with it – or could be, it's just not as strong. The larger of the two might take all the food – and the little one just will never do well, and could starve to death, even under it's own parents....

In this case – if you have more than one nest with a similar mix – one baby smaller than the other – you can put the two larger babies in the same nest under one pair – and the two smaller babies together under the other pair.

Or – if you have a large/small set of babies – and a pair of parents who have a single baby that is similar in size to EITHER of the 'mix' sized babies – put the two similar sizes ones in the same nest. (it's preferable, if possible, to leave the smaller baby with it's parents – where it is now an “only” – and will get fed more, without any sibling rivalry.... lol)

Of course, if necessary, if there are no foster parents available – you can try supplementing the smaller baby by hand feeding it once or twice a day -then putting it back in the nest with it's parents/sibling. This way, it should catch up in size to the larger baby – and you won't have to supplement any more.

“HOLDING” Eggs.....

This is worth a small note – we've tried this, and raised babies from the same cock bird with 3 different hens – all within the same breeding period....

Pair A lays eggs. As soon as the first egg is laid – gently remove it from the nest, and put it in an egg carton in a safe place, at room temperature. Turn the egg GENTLY once a day. Do the same as soon as the 2nd eggs is laid. Make sure the eggs are at room temp (68-70 deg), and they are turned once a day. It is imperative that you remove the eggs BEFORE the hen starts incubating. Once incubation/growth has started, removing the eggs will kill the baby growing inside...

Now, this hinges on you having another pair ready to foster – you know they are going to lay eggs within 3-4 days of Pair A. Anything more than 3-4 days, and you might not have any success....

After Pair B (the foster pair) has laid their second egg – remove the eggs, and put the Pair A eggs you've been 'holding' under them.

With luck, 18 days or so ... you'll have 2 lovely hatches!

btw — we did this using what is called the “bull” system. One cock bird in a 'room' with 3 hens (we actually had four – but the cock bird didn't like the fourth one for some reason... lol). He paired with the 3 hens – they built three separate nests – and we fostered the first two hens' eggs by 'holding' them – and let the cock bird raise a round with the 3rd hen (moved the other hens out into a different area, once they'd laid their eggs). We got six babies from the same cock bird – all hatched within 7 days of each other.

Using 'natural' breeding, it would have taken 4-5 months to have achieved the same result (6 babies from one cock bird).

One more note on fostering.....

You can 'switch' eggs up to about 4-5 days, max. After that, you run into trouble...

For Example — Pair A has laid eggs. Pair B lays 4-5 days later. You can still put Pair B's eggs under Pair A with success.

If Pair A's eggs are older than 4-5 days – and you try to foster Pair B's eggs under them – they might abandon the eggs before they hatch. Some pairs will sit the nest only as long as the regular incubation period is – and if the eggs don't hatch within a day or so of the 'due date' they expect – they give up and leave the next.

Of course, we've had pairs that will sit on eggs for almost a month before giving up.....

Holding and Switching Eggs

There are often times, at least for some breeders to switch eggs under foster parents for one reason or another.

This is easily done, but the timing of incubation with both pairs needs to be similar. Usually, if the sets of eggs are laid within 3 days of each other, the switch goes uneventfully.

If the babies hatch too early, the foster parents will not have sufficient crop milk, and the babies will perish or develop poorly. If they hatch too late, the foster parents may desert the eggs or already be on the downside of crop milk production.

To achieve the proper timing, eggs frequently need to be “held” before the foster parents have eggs of their own. I have heard many ways of successfully doing this, but what I am going to relate here is what I have experienced personally.

A few years ago I did a lot of egg switching as I rotated hens on the breeding cocks. A cadre of “pumpers” was kept. I always attempted to get the eggs to time out correctly, but often they did not. This results, usually, in holding eggs until a pumper pair lays.

Eggs can be easily held for 3 to 5 days at room temperature, before incubation has started, and placed under foster parents when the timing is right. When held, the eggs should be turned at least twice daily.

Success can be achieved holding up to 10 days but success rate diminishes after 3 to 5 days of holding. Eggs held in the hydrator drawer of a refrigerator can be held somewhat longer.

Some people claim higher success holding the eggs after incubation has proceeded for several days. I have had poorer success doing this.

The developing embryo is very fragile at this time and just a little shaking can cause it's death. Also it is more sensitive to chill, in my experience. Eggs that have never been incubated usually give the best results when held.

The thing to remember is to stay as close to nature as possible. The natural “window” can be stretched to fit into our manipulation of things. Remember that the longer we stretch it, or the more we manipulate, the less we can expect to succeed.

Fostering Tricks

Trick 1:

If you have a pair where the hen has stopped laying eggs due to any kind of reason, know that you can use this pair as foster parents. A pair which has been trying to get some babies of their own, and never managed to, would be extremely happy to find some eggs in their bowl. To be on the safe side, give the pair two plastic eggs, and soon enough both parents will be incubating, then after a day or two, replace the plastic eggs with real eggs. The parents will produce pigeon milk, and raise the young successfully. I have done this quite some times with two hens who stopped laying eggs.

Note: I have also successfully made these pairs foster babies. The way I did this was to give them plastic eggs for two days, then replace the eggs with 6 days old babies. These pairs accepted the babies and raised them successfully.

Pairs who are not able to have any babies of their own can be very useful in case of emergency. For example if a parent is lost, you can in most cases move the babies to the foster pair.

Trick 2:

If you would like to foster the babies of a super pair, but no foster parents have laid any eggs yet, you can try a different approach. Let the pair incubate their babies themselves, then move these babies to the foster parents when they are ready. The way its done is like this:

1. Pair A lays eggs, but pair B has still not laid.
2. Pair A has now 10 days old eggs, but pair B has still no eggs.
3. Pair A now has 12 days old eggs, and finally pair B lays too.
4. Now replace the eggs of pair B with plastic eggs.
5. Six days after pair B laid their eggs, Pair A has already hatched two babies.
6. Wait till the babies are 5-6 days old and the parents are no longer feeding them pigeon milk, but instead giving them normal grains.
7. Now replace the plastic eggs of pair B, with the babies, and watch carefully. (A good time to do this is about an hour before feeding time)
8. The pair will look confused for a while, but soon accept the babies as their own, they might even feed the babies right away.
9. Now feed your breeders, and the new parents (Pair B) will hopefully eat and go feed the babies just like all the other pairs are doing.

This way you can still save some time, as pair A will start on another round as soon as you move the babies. I have fostered babies to pairs who were sitting on only two days old eggs, as long as both foster parents have had at least one turn on the eggs, they will accept the babies.

Trick 3:

Experienced pairs, especially hens (Experienced – have fostered some rounds of babies in their life) can be given other eggs to foster even if they don't have any eggs of their own. Let's say we have an old pair, and we just paired them up again, two days later our super pair A lays two eggs, but pair B has still not laid. You can give your Pair A eggs to pair B, and the hen will accept them as her own. If she has still not started to produce her own eggs, she might not even lay eggs of her own, but to be on the safer side it's better to mark the eggs from Pair A, so that even if the hen from pair B does lay, you can throw them away.

These tricks require you to be a bit careful, and know what you are doing. You have to be careful the first few days, to make sure the babies are being fed, and that the pairs are sitting on the eggs. That's why it's best to do this when you know that you are going to be around and will be watching the birds for a few hours. If a hen sits on the eggs for an hour or two without moving away, you can be pretty sure that she accepted them. You can also test by removing the hen from the nest, and let the cock sit for a while.

The same thing applies to babies, be sure you are there to see the parents feed the babies at least once before you consider things to be safe.

I have tested all these methods, and know that they work. Hope they are helpful to you.

Problems During Breeding

Over Breeding

Over-breeding is a big problem amongst greedy fanciers and will prove fatal to your longevity in the pigeon racing sport. Over-breeding becomes a problem when fanciers try to get the highest yields possible from their breeding pairs without their breeding pair's health and well being in mind.

Some problems that occur from over breeding are,

- Low quality youngsters
- Fatigue
- Unhealthy birds
- Birds are more likely to be subject to disease

To help prevent over-breeding here are a few rules of thumb to remember,

- Hens and cocks mate for life or until you change their mate or they are separated.
- The hen will usually lay another round of eggs within 3 weeks after the first round has hatched
- The old birds should not be allowed to raise more than 4 rounds of young birds.
- When you are satisfied with the number of birds raised the hens and cocks should be separated until the next breeding season. This will insure that the hens and cocks moult properly.
- Most fanciers stop raising young birds after June.

Eggbound Pigeons

Egg binding, or the obstruction of the uterus or oviduct by an egg, is a common problem seen in female birds. Since it can occur in a female bird, even if a mate is not present, unmated pet birds can also experience this problem. Egg binding can be life-threatening, especially in the smaller species such as finches, budgies, lovebirds and cockatiels.

Most companion birds lay eggs every 24 – 48 hours during their laying cycle, but variability in egg transit time can make it difficult to know when a problem is occurring.

A variety of things may cause egg binding. One of the most common causes of egg binding is an all-seed diet because it is very low in calcium as well as other essential vitamins and minerals. Other causes include obesity, lack of exercise, oversized or mal-formed eggs, excessive egg laying, oviduct infection or damage, heredity and senility are all causes of egg binding.

Egg formation takes approximately 24-25 hours. If an egg remains in the oviduct for an abnormal length of time, a number of problems may result. These problems tend to be most severe in the smaller species. If an egg remains lodged in the pelvic canal, it can interfere with blood circulation in the pelvis and to the kidneys. The egg can interfere with urination and

defecation, leading to metabolic disturbances. The egg can press against the wall of the oviduct, causing it to die and rupture.

Clinical Signs

Presenting clinical signs vary with the individual bird. A hen may appear depressed, have an abnormally wide stance, and make repeated straining motions. Some birds may be puffed yet perching, while others may be found on the bottom of the cage. Some birds may even be found dead on the floor of the cage or aviary without any previous warning. Droppings may be larger than normal or no droppings may be passed and the vent may be dilated and swollen.

Diagnosis of Egg Binding

Many birds have a history of prolonged egg laying, while others may have never laid an egg before. If you suspect that a bird is egg bound, it should be examined by an avian veterinarian immediately. In some birds, gentle examination of the abdomen reveals the presence of an egg. It is often necessary to radiograph the bird to determine the size, position and number of eggs present. If the egg shell is not present, ultrasound may be necessary to reveal the presence of an egg.

Treatment of Egg Binding

Egg binding should be considered an emergency. Medical treatment is initiated to stabilize the bird. The bird may be given fluids intravenously or subcutaneously as well as antibiotics, steroids and calcium. It is placed in an incubator at 85-95 degrees F with moistened air. If the egg is not passed within a few hours, additional calcium as well as certain drugs to stimulate contraction and expulsion of the egg may be administered. Sometimes it is necessary to sedate the bird with isoflurane and manually pass the egg. If this is not possible due to the large size of the egg, oocentesis or aspiration of the egg's contents, followed by collapse of the egg and removal of the shell may be necessary.

Long term management of birds recovering from egg binding should involve dietary and environmental changes. If the bird is on a seed diet it should be switched to a more balanced diet, including pellets. Ample calcium should be present in the form of natural vegetables. If a supplement is required, oyster shells or neocalglucagan can be used. In addition to an appropriate diet, exercise is necessary to prevent obesity. Hormones and other drugs may be administered to try to temporarily stop egg laying, but a hysterectomy may be necessary for those birds that have repeat occurrences of egg binding.

If an egg breaks inside the female, yolk peritonitis, a life threatening situation may result. This is why it is important for a veterinarian to remove the egg and not the owner.

If an egg is visible and not encased in membranes, but stuck to the bird, the owner may be able to apply warm water or KY Jelly as a lubricant and gently remove the egg. However, if the egg is protruding, but appears encased in tissues, the oviduct or cloaca may also be involved and may

have prolapsed. The bird should be taken to a veterinarian immediately, while being kept in a warm, humid environment.

As we move through the breeding season, there is increased discussion of the problem of egg binding. What is egg binding? Egg binding is the inability of a hen to pass a developed or partially developed egg. A partially developed egg can have either a soft shell or no shell. Many cases of egg binding occur when a hen is trying to pass what appears to be a "normal" egg. The inability to pass the egg quickly results in the death of the hen.

What causes egg binding.

Many consider cool temperatures to be the deciding factor. I find this a very questionable theory. Birds in the wild often breed early in the spring while temperatures are still very cool and yet do not suffer from egg binding. I personally have Goulds successfully breeding in my outdoor flights when temperatures are down in the low to mid 40s. Despite raising hundreds of birds in cool conditions, I have not had a hen experience egg binding.

Another common theory is that the hen is too young. In parrots and budgies, where the bird continues to grow in size for 2 or more years, this may often be the case. The poor hen has just not grown sufficiently to allow the easy passage of the developed egg. Finches and canaries, however, grow and mature very quickly. Most have reached full adult size by the time they reach 4 months of age. In the wild, Goulds have often been observed raising chicks before they have even molted into their adult colors. I have observed this same phenomenon in my own flights when I have been a bit slow in separating my maturing juveniles.

Let me be quick to point out that I am not advocating breeding very young birds. The offspring of early breeding are not of the same quality as later breedings. It is best, I believe, to allow our birds to become older before attempting breeding. My point is only that early breeding does not, in my experience, result in egg binding.

Another common theory is that egg binding is the result of lack of calcium in the diet. Most of us offer a variety of calcium sources to our birds (egg shell, cuttlebone, oyster shell) and yet hens still die from egg binding.

I do believe nutrition is at the root of this problem. Most bird breeders are careful to offer a variety of calcium sources. Rather, I believe, the problem is the inability of the bird to metabolize the calcium that is readily available in the diet. The other major cause is poor condition of the mucus membranes in the vent area. Let's look at each of these issues separately.

Calcium is used by the body to not only form the shell of the developing egg and maintain strong bones, but is also crucial in the proper functioning of the muscles. While it does take a large amount of calcium to form an egg shell, the hen also needs calcium for the muscle action needed to expel the egg.

Vitamin d3 is crucial in the absorption of calcium. Without it, all that good calcium we offer our birds passes right through the body without being absorbed. In outdoor flights, our birds are able to produce d3 via a chemical reaction to sunlight. In indoor flights, they are unable to do this. Sunlight through a window is not sufficient. The ultraviolet light needed does not pass through window glass. Full spectrum lights can help but some studies have shown that the ultraviolet is only at sufficient levels at less than one foot from the light source. For inside birds, a d3 supplement is almost always helpful.

An excess of phosphorous, can also interfere with the absorption of calcium. According to Robert Black, plant materials (like all those wonderful seeds we feed our birds, contain an abundance of phosphorous. Animal products like egg foods, insect foods and mealworm, contain an abundance of calcium. By serving both plant and animal products to our birds, we are able to keep the calcium/phosphorous ratio in balance.

Some of those yummy greens we offer can also interfere with calcium absorption. Oxalic acid found in spinach, beet greens, chard and rhubarb reacts with the calcium so that it can not be absorbed. While these greens are rich in a number of nutrients, it is important to feed them in small amounts and provide extra calcium when doing so.

In order to pass a developed egg, the mucus membranes around the vent must be soft and flexible. It is the fat based vitamins that are primarily responsible for this condition, most notably linoleic acid (Vitamin F) and Vitamin A. Without these essential nutrients, the oviduct becomes dry and hard. Most avian vitamins do not include the fat based vitamins, so it is important to supply a separate source for these vital nutrients. These essential fatty vitamins can be found in many of the oily seeds such as safflower seed, sunflower seed, and niger seed. I have found niger seed the easiest for finches to accept.

If you do have a finch suffering from egg binding there are some things you can do.

First and foremost, a warm, quiet environment will allow the bird to focus it's reserves on passing the egg rather than keeping warm.

An immediate increase in calcium will do nothing to harden the shell of an already formed egg but will do wonders in improving the muscle action needed to expel the egg. Calcivet by Vetafarm, provides not only the calcium, but also the d3 needed to absorb the calcium. It can be served in the drinking water or sprouted seed if the bird is still eating and drinking. If the bird has stopped eating and drinking, it can be administered directly into the crop.

Massaging a small amount of vegetable oil around the vent will help soften the mucus membranes around the vent and help the hen pass the egg.

Once the egg has passed, the bird will appear to have made a complete recovery. It is now time to assess the nutritional problems that caused this problem in the first place. It is dangerous to attempt to breed this hen again until the nutritional deficiencies have been addressed.

Abandoned Eggs and Youngsters

We all know that sometimes things don't proceed as smoothly as we might like. An abandoned egg or youngster can be a particularly frustrating experience for a fancier, particularly if it is from one of the more important pairs. For many of us, the only available option to try and save the youngster is to foster it under another pair. To have any real chance of success, however, there should be no more than 48 hours, and preferably 24 hours, difference in the reproductive cycle between the foster pair and donor egg or youngster. Of course, such a pair is not always available. This situation need not necessarily mean that the youngster will be lost.

In the past, if a foster pair was not available for an incubated egg or a young nestling, it was not considered practical to raise the chick independently. However, with the availability of relatively inexpensive incubators and nutritious artificial hand-raising diets, it really becomes the fancier's choice as to whether or not he wants to save the youngster by taking over the role of egg incubation or rearing of the chick.

The situation is eased somewhat if the egg has not been incubated. If development has not started, the egg does not need to be kept warm to remain viable. Eggs can be stored for several days waiting for a foster pair to lay. Eggs should be stored in a cool, dry place with the pointed end up at approximately a 45° angle and turned at least twice daily (alternating left and right). Once the foster pair lays, the stored egg can be placed under them and development will commence.

If no foster pair is available, artificial incubation should be considered. A number of 'hobby' incubators are available (with readily available brands being Brinsea, Novital, Multiquip and Masalles) through a number of outlets. Prices vary depending on the amount of automation but it is possible for between AUD\$500 and AUD\$1000 to buy one that not only maintains the correct temperature and humidity but also turns the egg. The temperature and humidity parameters used for chickens work well in pigeons (and indeed most bird species).

Temperatures of 37.2 – 37.5°C and humidity levels of 55 – 60% are suggested. Automatic turning devices will turn the egg up to 25 times per day. Incubation procedures for the bulk of the incubation period are relatively straightforward and rely only on regular turning and the maintenance of adequate temperature and humidity levels. This routine only changes 2 – 3 days before hatching when the egg should no longer be turned and the humidity is raised to 70 – 75% (either by increasing the exposed surface of water or by decreasing the ventilation in the incubator). Humidity is usually measured with a hygrometer. Incubators can sometimes be used as a useful stop-gap measure until a foster pair has been organized or alternatively their use can continue until hatching.

Once successful hatching has been achieved, if no foster is available to raise the chick, then both warmth and food must be provided artificially.

Heat can be provided by a converted incubator, a pet heating pad or a container (even a cardboard box is fine) with an incandescent bulb. If using a bulb, the heat can be altered by changing the height of the bulb above the chick, the wattage (strength) of the globe or using a thermostat. A temperature between 32°C and 37°C should be maintained. Newly hatched chicks do better at the higher end of the scale. Humidity is best supplied by providing a source of water near the heat source such as a small jar of water. Chicks that are too cold will become poorly responsive and feel cold to the touch, and when very cold start to display a reflex involving repeated opening of the beak. Hot youngsters also become poorly responsive and become a bright pink colour. Youngsters older than 7 days will also pant.

To feed the chick, an artificial beak needs to be created. This can easily be done by cutting off the needle attachment on the end of a syringe. Different syringe sizes are used as the chick grows. The regurgitation of the parents is mimicked by depressing the syringe plunger as the chick eats, as shown in the diagram. The diameter of the opening should be such that the chick's beak is able to fit inside the tube opening and open up inside the tube body. The chick will then drink the hand-rearing formula in which its beak is submerged.

For purposes of feeding, the growth period in the nest can be divided into four stages. Initially the hand-rearing formula must mimic 'pigeon milk'. Pigeon milk is high in protein and fat, with high water content. Carbohydrates are virtually absent. As the chick grows, the diet becomes progressively more similar to the adult diet. Gradually, the level of protein and fat decreases while carbohydrate and solid matter levels increase. A number of diets are commercially available. A commonly used brand is Roudybush (Dr Roudybush is an American vet who established and runs a bird food manufacturing company). Two suitable formulas are Roudybush Squab Handfeeding Formula (which is essentially a pigeon milk substitute) and Roudybush Formula 3. These and other similar diets can be purchased from specialist bird outlets.

The four stages are:

Stage 1:

- Hatching to 4 days
- Roudybush Squab Handfeeding Formula.
- Diluted 2.2 parts water : 1 part formula by volume
- Feed five to six times daily

Note: Some hatched chicks can survive off the resorbing yolk sac for 24 hours. Some people prefer to give an initial feed of either saline or Hartmann's solution (available from vets or a pharmacist), particularly if the chick appears dehydrated (deep red and poorly responsive, more likely to occur with a prolonged hatching).

Stage 2:

- Early growth, 5 – 7 days
- Roudybush Squab Handfeeding Formula.
- Diluted 1.5 parts water : 1 part formula by volume
- Feed four to five times daily

Stage 3:

- Late growth, 8 – 14 days
- Roudybush Squab Handfeeding Formula.
- Dilute 1 part water : 1 part formula by volume
- Feed three times daily

Stage 4:

- Fledgling, 15 days – weaning (28 – 30 days)
- Roudybush Formula 3
- Initially dilute at the rate of 1.2 parts water : 1 part formula by volume and reduce the amount of water as the chick ages.
- Feed from 3 times daily down to once daily and start to provide normal adult seed mix.

Through all stages, it is a good idea to add a probiotic (eg Probac) to the dilution water for at least one feed per day.

And so, is it all worthwhile? From personal experience, it is a lot of work and the youngsters at weaning do tend to be slightly less robust than those that are parent-reared. Once weaned, however, and eating independently, they do quickly compensate and catch up and are certainly quite raceable. This procedure is, however, best reserved for those special youngsters. I guess it all depends on the value placed on that particular youngster by the fancier. It is nice to know, however, that the options of incubating and hand-raising are now practical ones.

Young Dying in Egg or Nest

There are many reasons for young to die in the nest. The obvious ones of being trampled, chilled, etc. occur only occasionally.

Trichomonas can overwhelm a squab but this is not epidemic in most cases. When it occurs in extraordinary numbers, it is usually symptomatic of a septicemic (bodywide, being spread via the blood stream) infection caused by bacteria.

The infection can be started before hatching, the egg being contaminated before being laid or through bacteria penetrating the shell (this usually when conditions are damp and fecal contamination present. Most often it happens immediately after hatching.

A correlation which I have just figured out is the use of nest pads. Nest pads have been the common denominator in all the cases that I have been involved with this season.

Granted, nest pads are commonly used with good results, but for some reason I believe that they become a good place for bacteria to increase in numbers. These bacteria serve to infect the babies as they hatch, probably invading through the umbilicus before it dries.

All babies are exposed to some bacteria, as they are never in very aseptic condition at hatching. It takes an infective dose of bacteria to begin an infection, the numbers depending on many variables.

The more bacteria that are present, the easier it is for them to infect. If nest pads are used (either commercial varieties or homemade from carpet, etc.), they should be disinfected and dried thoroughly before use, and should be replaced just before the babies hatch to discourage this from happening.

This is recommended for lofts having this problem. For those who use them with no problems, it may be something to consider. A Clorox solution, or Nolvasan solution can be used to disinfect, but remember to wash away as much organic material before soaking. Soaking time of an hour or so should be adequate. They should be thoroughly dry and aired before reuse.

It is possible that I am making an inaccurate assumption, but I feel it is my duty to share what I suspect to hopefully help as many fanciers prevent problems.

In cases where no pads are used, it is still wise to change nest material with each new clutch and just before eggs hatch. Culturing a fresh dead baby may also help understand this syndrome.

Babies dying early on occurs occasionally but when this becomes epidemic, nest pads should be at the top of the rule-out list.

I receive regular calls from fanciers that fertile eggs are failing to hatch i.e. that the embryos these eggs contain are dying through the incubation time. Many fanciers immediately think of Salmonella when they see this, when in fact all infections together including Salmonella account for less than 5% of all dead in-shell youngsters.

And so just why do these youngsters die? Most youngsters that die in the egg usually die either in the first few days of incubation, or alternatively the last few days of incubation. In the first few days embryo death is usually due to either inadequate incubation leading to too low a temperature to keep the chick alive, excessive jarring of the egg that either fatally damages the chick or yolk, or alternatively, a genetic problem affecting the chick which is incompatible with life.

Towards the end of incubation, chicks usually die as a result of problems associated with hatching. As incubation ends the chick has to shift from getting its oxygen through the membranes that surround it, to breathing air and also re-absorb its yolk sac (which supplies it

with both food and immunity). If the temperature or humidity is incorrect at this time these processes fail to occur correctly and the chick can die.

Between the beginning and end of incubation the chick is essentially just growing and it is here that nutrition and infection become more important. If the young chick is lacking a nutrient it needs for growth or becomes infected it dies.

This year has been a particularly good breeding season for me in that I have not failed to wean a single fertile egg i.e. every egg that was fertile has hatched and been weaned. I have now weaned 50 youngsters. Although pleasing this situation is unusual despite the best of care. I did however, have one fancier mention to me last week that he had had 30% of all fertile eggs fail to hatch. He did not seem overly concerned and appeared to think that nothing could be done. This is far from the truth. An embryo fatality of 5% could be regarded as normal. Anything more than this should arouse suspicions of a problem.

For those of you having a problem with dead-in-the-shell youngsters, let's have a look at the potential problems that can arise with each of these periods of incubation in more detail, so that hopefully the problem can be solved.

Embryonic Death At The Start Of Incubation

Deaths early in incubation can be detected by opening the egg and seeing that it is in fact fertile, but that the embryo is only poorly developed. As mentioned earlier, the usual cause is poor incubation leading to the egg becoming cold after development has started. Possible causes include improper nesting material, over interference by the fancier, inadequate control of nest bowl mites or pigeon flies, failure to provide second nest bowl for next pair of eggs, too many birds in a section, older arthritic birds, poor nest box design, competition with other birds within the loft, poor parenting, nest box too hot or too cold or poorly ventilated, disturbance outside loft etc. Also as mentioned earlier, eggs are very vulnerable to vibration type injuries early in incubation. Shaking or jarring can kill the developing embryo either directly or by rupturing the yolk. This is of particular relevance when eggs are being transferred for fostering. The effect of thunderstorms is a total myth. Embryos that are unlucky enough to have genetic abnormalities usually also die early in incubation. Genetic problems are more likely to occur with in-breeding.

Deaths From Day 4 To Day14 Of Incubation

This is the longest period through incubation and yet is the time when least deaths occur. The embryo is simply growing. The growing chick receives its nutrition from the yolk and deaths here can reflect nutritional problems in the hen. Hens that are correctly fed produce nutritious yolks that support healthy embryos. The effect of stock bird nutrition is very underrated. By simply feeding a blend of 2-3 grains and grit it is not possible to prepare the stock hens well for breeding. Fanciers who believe they can do this often accept an elevated embryo death rate or several weak chicks in the nest, as normal.

Although embryos can die of infection at any time through incubation, it is at this time of growth that they are most vulnerable. Certainly there are some infections that can be carried by the hen such as Chlamydia and Salmonella, that can infect the ovary. These can be incorporated into the egg at the time of its formation, and subsequently infect and kill the embryo as it grows. Infection can also pass through the oviduct wall into the egg. These types of infections, that enter the egg prior to laying, are in the minority however. Most infections that embryos develop are caught after hatching in the nest. Nests that are dirty, poorly ventilated or excessively humid lead to egg- shell contamination and movement of infectious agents into the egg. Egg quality is also important here. Cracked, thin, mis-shapen, rough eggs allow easier entry of infection and are more subject to trauma. Poor eggs can be due to oviduct disease, but are more often associated with a nutritional deficiency in particular calcium deficiency. Some fanciers will have noticed eggs with translucent clear lines running around the outside of the egg, showing the eggs rotations, as it was passing down the oviduct. These thin areas can be an early sign of calcium deficiency.

Embryonic Deaths At The End Of Incubation

Through incubation a membrane called the chorioallantois develops around the chick. The chorioallantois acts a bit like a human placenta, in that it delivers air to the embryo after it diffuses through the shell. At the end of incubation the chick must swap from a chorioallantoic respiration to breathing air. It does this in two stages. First it internally pips. This involves cutting a small hole into the air chamber at the end of the egg and starting to breath the air it contains. At this stage vibrations can be felt in the egg and chick will sometimes vocalize. After another 12-24 hours the chick then cracks the shell and breaths external air. While this is happening the last of the yolk sac (the chicks nutrition during incubation) is drawn into the navel (and eventually ends up as a tiny sac in the wall of the small intestine called Merckels diverticulum which lasts the whole life of the bird). Interestingly, during this time, the chick also drinks the clear fluid around it called the amniotic fluid. This amniotic fluid, and also the yolk sac contain the antibodies that protect the chick from infection in the first few weeks of life.

While all this complex physiology is going on the chick is vulnerable to problems. Too high or low temperature or humidity during this time will adversely affect the chick. The usual problem, is however, too high a temperature, or too low a humidity. This combination causes the shell and shell membrane to become hard and dry. This can lead to even a healthy chick becoming exhausted. In addition to this, the chick quickly becomes dehydrated. I am sure many of you, myself included, have helped these chicks hatch only to find them dead later. These chicks die because they are dehydrated. Such chicks if given small drops of water will often suck them down greedily and survive. These dehydrated chicks are called sticky chicks because of the way they stick to the dry shell membranes. They are often found dead after hatching $\frac{1}{4}$ to $\frac{1}{2}$ the way. If removed from the shell they often have unabsorbed yolk sacs and there is often dry, gummy albumen still in the egg. For consistently high hatch rates, it is vital the stock birds have

access to either rain or a bath around this time. If not possible the underside of the hen and also the eggs can be lightly misted with water from a spray bottle. Ideally the nest box should have a temperature of 20-25 degrees celsius, and a humidity of 70%. If unsure, a thermometer and hygrometer can be placed in the nest box.

In summary, in most lofts hatchability can be dramatically improved by three simple steps:

Improving stock bird nutrition in the months prior to breeding.

A fresh nest bowl for every round, and ongoing nest box hygiene.

Access to rain or a bath around hatching.

If attending to these matters does not help, your avian veterinarian will usually want to test the hen for infection, or alternatively do an egg autopsy.

Common Difficulties with Eggs and Babies

This time of the year when many of us are expecting our first round of youngsters to hatch, we are disappointed with some aspect of our breeding success. The most common problems being clear eggs; eggs which die before hatching; and babies which perish in the first few days of life.

Clear eggs tend to be the most prevalent in the first round or two. These are the eggs which never begin development because of being infertile. The testicle in the cocks get quiescent during the shorter daylight periods. Breeding activity reawakens them and they begin producing sperm and testosterone at a higher level.

While this process is under way, there is often a low sperm count and a lower sex drive in cocks. Frequently the breeding vigor and frequency is decreased as well as there being diminished sperm in the ejaculate.

All these can produce infertile eggs. One or both eggs being infertile in the first round is a frequent finding sometimes running as high as 50% or more of the eggs. The weather plays some role in this. Colder, darker periods accentuate the problem.

Eggs which begin developing but fail to fully develop and die in the shell can be the result of several things. Poor incubation can cause embryo death. Here the parent(s) may fail to keep the eggs warm for even a short period during very cold weather.

Eggs getting jarred excessively at critical points of development may also perish. Infection in the egg is probably the most common cause. The infection may be incorporated in the egg by hens having an oviduct infection. Infection more frequently occurs through the shell.

This can happen during laying as they often become contaminated with feces during this process. It can also happen by fecal contamination after laying, frequently from parents defecating in the nest or tracking feces in the nest on their feet.

During damp periods, nesting material often gets high numbers of bacteria in it from parents tracking feces and the dampness and warmth of the sitting parents encourage bacterial growth. The higher the numbers of bacteria around the eggs the easier it is to have penetration of the shell and subsequent infection of the embryo.

Babies dying in the first few days of life occurs when they are infected either in the egg, resulting in weak hatchlings, or they become infected after hatching. After hatching they can become infected from the crop milk from either parent or from the nesting material.

During damp periods it is often helpful to change the nesting material just prior to the eggs hatching as infection enters the squabs easiest just after hatching through the umbilical area which is yet unsealed.

When certain parents experience repeated deaths in newly hatched babies, they should be separated and treated with a broad spectrum antibiotic for about 10 days, and for trichomonas, then remated. Pay attention to the condition of the nesting material during the times mentioned above and provide clean dry nesting material as indicated.

There are other factors which may cause the problems discussed here. Only the most frequent caused were discussed here.

Babies which die in the egg (as long as the shell remains intact) and babies which die soon after hatching are often valuable specimens for culture. A culture can be very revealing as to cause of death and possible course of action to prevent future deaths.

Record Keeping

To become a master breeder and to produce those sought after champion birds every breeder needs to keep good breeding records. Record keeping allows you to find your best breeders or if you have a stellar breeding season proper record keeping will help you to duplicate it the next season. The only way to test different breeding strategies against each other is with good records from each attempt. Your breeding records are also imperative to making each birds pedigree.

Your most valuable birds are ones which are good breeders. These birds should not be used for racing. Although they may be winners you could lose them and also your future winners.

Good record keeping is key to early recognition of which the good breeding birds are. It is time consuming but will enable you to make the right decisions as to which birds to race.

Check your records often to make analyses of your birds. Keep records of all the progeny from a pair. Once you have found a good pair of breeding birds which have produced several winners build your own family around them.

There are a number of systems available which can be used in breeding. These include cross breeding, line breeding and in-breeding.

Records of the pedigrees are important when buying birds and should show that winners were produced and that impossible gene patterns did not occur which would suggest mistaken or false records or possibly matings have occurred with other birds.

It is easiest to cross breed birds whilst in breeding needs more care. Cross breeding is the mating of birds which have no relationship with the other for 5 generations or more.

Line breeding is said to occur when a pair are mated from different generations of the same line.

In breeding is used to concentrate desirable genes in a family. This system uses matings between closely related birds ie. father to daughter, mother to son, brother to sister. For inbreeding you need very good stock. The concentration of genes can also strengthen poor qualities if they exist as well as the good traits.

When inbreeding the systematic culling of weaker birds is used to remove poorer gene characteristics and strengthen the line, again the keeping of good records is important to identify weaker birds which lack speed or may have a less reliable homing instinct.

The strategy of inbreeding is to remove weaker variables from the line so the temptation to outcross should be resisted as this may introduce some unpredictable elements.

Rules to Remember

I suppose we never learn it all and, if the truth were to be known, I suspect most of us forget some of the most important lessons before we even take advantage of them. Listed here will be the ten most important lessons that I think I have learned. Come check it out from time to time because I am sure it will undergo updates as I keep trying to figure out this sport! I will be adding a new one every few days until I get the whole list published.

Birds can not compete if they are not healthy.

Just about everyone knows this. It is the details around this point that took me awhile to really understand.

First of all, birds that are not healthy do not always look ill. In fact they can look and feel perfect and still not be healthy. I suspect that a good percentage of the birds that are lost fit into this category. In the absence of significant stress, the symptoms of their disease(s) are subtle or not evident. Flying for a few hours in good air, at comfortable temperatures and without winds is not really very stressful for a well conditioned and exercised pigeon. Such a pigeon may return from the shorter and/or easier races in a time that is not that far back from the winners. Put that same bird though in a tough race or one in which it gets lost and the stress brings the

effects of the disease(s) to the forefront. When this happens the bird is not capable of maintaining a competitive race speed and can even be lost all together. Combine this with the fact that a flying team consists of a group of birds which often have a similar health status and these conditions can lead to large losses. Large losses or not, you can be sure that the winners of large competitive races are in either perfect or nearly perfect health.

Secondly, good health is not merely the absence of illness. It includes among other things an intestinal flora that is balanced and which consists predominantly of "friendly" or beneficial bacteria. The cells of the tissues and organs must be well nourished reflecting a steady diet that is not only balanced with the right amounts of proteins, carbohydrates and fats but also contains sufficient amounts of required vitamins and minerals (which are not always available in useful forms in grains). There are other factors contributing to the state of good health, but these two are probably the two most often mismanaged by many flyers.

Don't Overcrowd!!!

This has to be the number one mistake most people make. I like 25 cubic feet per bird (a little less if there are no babies). That may be a overly generous, but it gives you an idea of what I consider not to be over crowding. You can get away with a higher density if you have excellent ventilation, but even then I still prefer to stick to this number as the ideal.

DO NOT OVER CROWD YOUR LOFT (Racing or Breeding). Quantity offers only cost and wasted time. Quality is profitable and rewarding. Once you learn the advantage of quality above quantity, put it into practice.

People are creatures of habit. The easiest thing to do is repeat the same past mistakes. Those fanciers who raise and train 100-200 squeakers every year with the hope of getting one or two good pigeons in their lofts take the longest and most costly road to success. Many times there is quality in an overcrowded loft, but because the birds are overcrowded, their health and performance is poor. What qualities do we look for in a good pigeon?

The 1% Rule

The numbers will vary depending upon your gene pool and your breeding program, but the rule is essentially the same for everyone - the vast majority of the birds we raise are not good enough to be retained for breeding. And, the vast majority of the birds we put into the breeding loft are not going to prove out as good enough to be kept for breeding.

Just to keep myself in the right frame of reference, I look at every crop of youngsters expecting, at most, only one in a hundred will make it to the breeding unit. I think of every pair as unproven until I can be convinced otherwise. Of course you can error on either side of this "1% Rule", but most people are far too lenient. Failing to set and keep to a high mark will drastically slow your genetic progress.

Stay With the Plan

I see this all the time in pigeon racing. People jump from fad to fad faster than the fashion industry. Sometimes it is a particular bird or family that gets everyone's attention. Other times it is a particular technique or a new "magic" concoction. Decide on what system you will use and stay the course. Learn how it works and master it before you even think about evolving it or scuttling it for the "latest". In general, if you haven't spent at least 3 years executing your plan (be that a family of birds, a flying system or even a health plan), you probably haven't mastered it and you may not even understand it. If you thought through it enough in the first place to go down that path, do yourself a favor and give it a fair shot.

Take time and observe!

Your birds will tell you everything if you will listen. Try it. When was the last time you took a stool and a few cans of your favorite beverage and just sat in the loft watching?

Its all about the genes.

As flyers and breeders we can mess it up, but if we do our job, it comes down to the genetic abilities of the birds. As a geneticist, I know this, probably better than most. Yet, every year, I am surprised at how much more important genetics is than I had thought.

Make your own mistakes!

Birdkeeping of any kind is by definition a hands-on activity. Do not be afraid to make errors. It's O.K.! You only really learn by doing. However, you must learn to recognize your errors, learn from them, and do not repeat them. How often have you heard someone say, "But so-and-so has had and been in pigeons for thirty years, and he does it like this or that"?

How this blindness infuriates me, as the truth really is that so-and-so who does it like this and that has not had pigeons for thirty years but rather for one year thirty times over. He has learned nothing, and never will, because he neither recognizes nor acknowledges his errors-another case of the blind leading the blind.

Read everything, study everything, but do so critically!

Yes, by all means read the old favourites like Old Hand, Violet, and countless others. But do not delude yourself that these dinosaurs have anything of value to offer you. Read these to develop your instinct for misinformation in order to provide a perspective against which to make informed judgments. We have come so far since these extinct fossils paraded assumptions and opinions as facts. Also remember that new modern charlatans are on the sidelines just waiting to move into center field.

Read and study everything everywhere and use only what truly makes sense and can be supported not by opinion or assumption but by fact. In our sport as well as many others-animal

and human-MDs and DVMs are reporting studies in all areas from genetics to performance. Read them all!

Learn and apply knowledge of genetics!

If you wish to learn and apply knowledge of genetics, then read and study all you can get your hands on. Most material written by pigeon enthusiasts for pigeon enthusiasts is rubbish, absolute quackery with little or no basis in reality! How often would you, a reasonable human being, go to a janitor to have a triple bypass or to an auto body or collision person to recommend the use of pharmaceuticals? What a question! "Never," you say! Yet I see this every day! You may in fact be able to expertly fix a fender, but can you spell the word genetics let alone apply its principles or even vaguely understand what these principles are or mean? Yet I watch people listen intently to these charlatans and disregard confirmed knowledge of genetics that has been applied to the fields of poultry, cattle, horses, dogs, and so on. So you say, "But Silvio, a pigeon is not a chicken, is not a cow or horse or dog." And I repeat a fender fixer is not a geneticist and cannot claim knowledge that he does not and never will have! By insisting that you can learn nothing from those who have rightfully made tremendous progress in these other related stock areas is to wear your ignorance on your lapel!

Believe in Heredity

I believe in the simple principle of genetics, "Heredity is handed down from one generation to the next." No one can start with mediocre pigeons and castoffs from several different fanciers, and hope to come up with anything that is close to an established family of pigeons that will pass on the needed quality genes and traits. Therefore, select from a family of pigeons that has bred continuous winners over a long period of time, at least 10 years in tough competition.

If you are not breeding from winners or children of winners, you are in trouble! This is where it all starts. All the time and money spent for care and training throughout the year can amount to hours of frustration, disappointment and expense. Pairing the best with the best does not necessarily guarantee success, but it definitely increases the chances of it.

In both the racing and breeding lofts, the true value of a pigeon will be found only by actual tests, either by flying or by the quality of young it produces. The true tests of a quality breeder are the performance and breeding success of its offspring, not its own race record. If a bird cannot reproduce itself or better, it is no good as a breeder and should be culled. Remember results will not be seen in one year. It will take 2 years to see any real evidence.

Stock sense is essential!

There are some people who really do have a gift with animals. This gift of recognizing quality in animals is called stock sense. If you were a successful dog breeder or cattle, pig, sheep, or horse breeder, then you probably have this stock sense. This usually cannot be taught; you usually have an aptitude for it or not.

No matter what you breed, the principles are and always remain the same. Once you come to know what does or does not constitute a quality animal, you are well on your way. Good stock sense stacks the probability of potential success much more in your favour than in that of someone with no such sense. You can quickly see this in how one handles and relates to his stock. Most people don't have it!

Two pigeons in one!

Do not be fooled-and almost everyone is-when handling and evaluating a pigeon. Most people pick up a pigeon, pull its beak, (I'd like to pull your nose and see what I can conclude from this); force open its mouth (yes, I have confirmed the existence of a tongue and throat); open its wings (recognize nothing and close them knowingly); and comment on its weak vents (yet I have never seen vents not up to their purpose) and/or weak back (not knowing that the back is actually between the birds shoulders). These real experts look at a pigeon's eye or eyes (in reality all they can do is confirm that yes it has two), and then either proceed to have an orgasm or declare that they have better.

The reality is that no one can conclude anything from the physical makeup of two equally well-constructed pigeons. If you are honest, you can, in reality, only confirm to someone your own personal subjective preferences. Not all opinions are of equal importance or value, all by definition are subjective; but the corollary of this is not that all opinions are of equal value because the truth is that they are not (see stock sense).

Now in each pigeon there are actually two pigeons: the one physically that you see, and the hidden bird that you have no way of seeing, and therefore no way of judging.

When you evaluate a bird, you must of necessity evaluate both what you see in front of you and what is in the bird and you cannot see. In horses this is often called heart. If you misjudge this you lose your chance to own the champion.

For example, in 1960, a small horse was born in Oshawa, Ontario. As a yearling, he was offered for sale for \$25,000 (Canadian) and there were no takers. His owner retained him, trained, and raced him. In 1963, Northern Dancer won the Kentucky Derby and Preakness went on to become the most prepotent sire in all history. I watched at a yearling sale as his sons and daughters sold for between \$1.5 and \$3 million (U.S.) each. E.P. Taylor would eventually refuse \$40 million (U.S.) for the Dancer. He founded a dynasty worldwide and single-handedly created a horse

My point is that all of the experts and fender fixers evaluated the horse that they saw, and not the one that they couldn't, and they were all wrong: Most pigeon enthusiasts are all wrong!

Nature is not on your side!

If you wish to breed good pigeons, or good animals of any kind, you must come to truly understand this simple truth. What truth? Well, the simple truth is that Nature abhors order. Nature is the great equalizer; Nature does not willingly admit of extremes. Left to herself, Nature reverts to the common form. Nature never progresses from less order to greater order, but always from order to disorder if left to her designs.

Most current livestock survive in the form in which they exist because they are beneficial to man in that form. They exist in that form because expert herdsmen (or geneticists, scientists, and others) have applied known genetic principles to common stock so as to modify them to their own ends, i.e., more milk, more meat, more eggs, faster horse, and so on. If man took himself out of the equation, the result would be a reversion or extinction of the form.

What does this mean? This means that once the prepotent sire or dam is actually discovered—usually by accident—or uncovered, then you must at all costs develop a line around this specific bird. You must not dilute him because you will eventually lose the quality that makes him great. You must perpetuate as many offspring in as many combinations as possible. Inbreeding is your tool! If your sire or dam doesn't put up with it, then he or she is not the prepotent specimen you believe him or her to be! If this is the case, you must look to uncover another! You can learn much of breeding by studying the theories of Chaos and Relativity!

Truly prepotent sires or dams are the rarest of the rare!

They are to be cherished, and unlike diamonds, they will not last forever. Use them wisely! To find one is truly like panning for gold. You go through tons and tons of rock and dirt to find only a grain—a nugget—of real gold. That is why it has value, because it is rare! Yet once found they are never appreciated nor properly used. This is because people ignorantly believe, "Oh, well, I'll find or breed another." Well, good luck because the reality is you rarely will.

So, Silvio, why do you say this? Well, here is why. Let us say, for arguments sake, that a pigeon only had 25 pairs of genes. If this was the case, then each pair of pigeons would produce approximately 33,500,000 different genotypes. You must admit that this is an incredible number. But how many genes does a pigeon really have? Well he/she has 6,000 pairs, which really means that if each pair was heterozygous they would in fact produce 3 to the 3,000th power different genotypes. Do you understand just how big this number is?

So what becomes only too clear is not that variations occur—because this is the norm—but rather that offspring of a prepotent sire or dam can be so consistent! This is why prepotent pigeons are so rare and valuable. Go back to Rule 6 and reread it—Nature dislikes order! Only through a well-defined, well-thought-out and executed plan can you seek to thwart Nature's law. Most people lose. Once the sire or dam is gone, so is their, and their human owner's supposed, ability as a great breeder. You see, it had nothing to do with them or their ability; it had to do with chance and blind luck. So it is with so many self-proclaimed master breeders with many, many

all-American accolades. Were they really master breeders or just extremely fortunate to have a long-lived prepotent sire?

Cross inbred lines!

Once you have identified your prepotent sire, as defined above, and have proceeded to develop a truly inbred line of pigeons, then what? Well, what we seek is always to improve! We wish to objectively improve our stock while maintaining longevity. Always look, never be content! Always seek to modify and manipulate Nature's odds in your favour.

You must develop a rapport or friendship with other like-minded and multi-talented pigeon enthusiasts who have also produced inbred lines. Cooperate with each other to further develop each other's families. What I mean is that when two or more inbred lines of pigeons, or livestock of any kind, are crossed, and we then breed the crossbred females back to either side, we should immediately see very big improvements in everything from fertility to livability.

All of the advances made in breeding commercial animals over the past fifty years have been based on this one principle. This principle is referred to as heterosis. So what am I saying? Well, Horst Hackemer, remember that red inbred Mueleman hen, sister to the "Patriot", and that blue Hofkens hen-both wonderful pigeons with great flesh. We should breed those hens to my inbred Spanjaards and share the progeny! Cooperate and we both win! Shall I call you or will you fax me?

Introduce only what you absolutely know to be fact!

Never use a pigeon in your program, no matter how good or how great a performance, unless you know exactly his genetic origin. Why do I say this? Well, you could destroy twenty years work in just a few years. If your family means anything to you, never risk it!

Look for Evidence of Homing and Navigational Qualities

Breed from birds that have the "Compass" or "Homing Instinct." If a pigeon can't home, how can you expect it to win?

There is still no consensus on how a bird homes and navigates. It is a matter upon which we can only speculate. It is important to recognize that a racing pigeon must and does navigate. The bird must have the ability to orient itself and to maintain its course. The intelligent pigeons apparently have no trouble finding the most direct route home, and they are able to adjust to different types of conditions (weather). Therefore, place high value on a bird that has come home time after time after hard races, when there are no day birds nor birds home in normal race times.

You cannot measure this quality by a few races or tosses, and it cannot be found by fliers who constantly hold birds out of races for minor reasons. Look for evidence of "Homing Instinct" over a long period of time.

You cannot evaluate a bird's intelligence in the short, fast races. You must go the distance. When the same pigeons show up, they possess that quality from which you can breed to improve your loft.

Breed for Internal Qualities NOT External Appearance

Some fanciers have pigeons which seem to have everything one could desire in a bird's appearance: wing, back, build, eyes, feather, etc. However, these pigeons have never earned the feed that it cost to raise them nor the money it cost to buy them.

When a fancier selects pigeons in his or another loft, the pigeons' appearance will almost entirely guide him. The pigeons that have a nice appearance are the ones that he will always select. Yet, so many times when the birds are counted at the end of a series of races, the pigeons which did not look the best are on the perches, and the birds which had every appearance of being fine pigeons are not home or lost.

Outwardly many pigeons seem to look good, but it is what is on the inside that counts on race day: intelligence, orientation and navigating ability, motivation, determination, desire, heart and health. Appearance, fancy pedigrees, and popular names are all equal, until the basket or race day arrives.

I consistently breed generation after generation from pigeons which possess these internal qualities. I intensify and fix these characteristics in my birds so they will reproduce themselves in my youngsters year after year.

Breeding Success Demands Knowledge

Some of you will know that I am an avid reader. I read anything and everything. I read things that interest me greatly, things of only passing interest, and things of no possible use or interest to me (things herein defined as articles, books, scholarly papers in written, audio, and visual forms).

One of my authors, a very successful Canadian, the chairman of a large Winnipeg private corporation, a philosopher, entrepreneur, jazz musician, artist, and consummate budgerigar and psittacine breeder, put it like this:

"In addition to dedication, persistence and optimism, success demands knowledge, and it is here that many traps lie in waiting for the unwary. You read books, magazines, journals, scholarly articles.. everything, and then you talk to experienced breeders of birds. You are inundated with dogma, good articles, opinions and facts. AH! Those facts! Therein lies the problem: so much expert advice is contradictory. The problem will always be with us."

Experts and charlatans alike parade assumptions and opinions as facts and propound immutable rules for your birds to live by."

Success demands knowledge! Even so you would be correct in protesting, "But bird keeping is an art, not a science." In spite of these comments, your only hope is to keep reading. You must develop-this is absolutely imperative if you are to have any hope of success-an instinct for those things that make sense.

"To develop an instinct for those things that make sense requires ingesting masses of information (and misinformation) in order to provide a perspective against which to make informed judgments. But read with an open critical mine."

In the immortal words of John Doole's Irish grandmother-in-law, "If you believe everything you read, you will eat everything you see!"

Now, dear reader, that applies as much to this, my article, as to all other books, articles, and journals you will ever pick up!

Beware of the Blind Leading the Blind

You have therefore been duly warned, I sincerely hope you actually learn something, however, my detailed knowledge of pigeon folk does not give one much optimism. This minor point notwithstanding, I am now too far along to stop!

It is my position that in life-and that necessarily also includes successful pigeon breeding-that the only thing of real or lasting importance is truth. Without it there is neither hope nor possible future happiness! If you as a pigeon fancier hope to ever be successful and ever want to attain future happiness in your breeding and racing program, then truth from all sides is absolutely imperative!

So the inevitable question is, "What is truth?" My Webster's New World Dictionary defines truth as follows: 1) the quality or state of being true; 2) conformity with fact; 3) reality, actual existence; 4) correctness; 5) agreement with a standard rule; 6) that which is true

Now that we know what truth is, it is important to define one final word for the pigeon enthusiast before we continue, and that is the word blind. Now again referring to my Webster's New World Dictionary, we find the definitions of blind as follows: 1) sightless person; 2) lacking insight or understanding; 3) done without adequate direction or knowledge; 4) closed at one end; 5) not controlled by intelligence or reason; 6) to deprive of the power of insight or judgment; 7) anything that keeps out the light

Over twenty years ago, as a young man completing my masters degree, I had a wonderful professor at the University of Waterloo in Canada. His name was Dr. Eddie Evans. Dr. Evans was a close personal friend with degrees in Pedagogy. His favourite saying-I will never forget and it sums up most adequately the status of the majority of pigeon enthusiasts-was, "The blind leading the blind!"

So upon carefully studying our definitions above, the realization begins to dawn that the truth (that which is true) of the pigeon sport and pigeon enthusiasts in general seems to be that the blind are leading the blind (done without adequate knowledge and direction and is neither controlled by intelligence or reason) right into a dead end. We are therefore deprived of the power of insight and judgment. We therefore never progress, never succeed, never really win.

For those of you who may have lost my drift, Karl Winterstein might put it to you like this, "What do you wish, the steak or the sizzle?" The answer being, most never get past the sizzle!

The truth is that most pigeon enthusiasts will never see a champion let alone recognize, breed or own one!

Champions are rare! Prepotent champions are the rarest of the rare. They are rarely recognized by anyone regardless of his confidence, experience, selecting abilities, or manifold self-proclaimed studies. How often have I been called by novice and expert alike and had described to me in minutest detail the results of selection processes that proclaim so-and -so's loft to have an above average number of world class pigeons? Imagine an absolute plethora of world class pigeons in one loft alone! The novice and old pro alike are delighted, they have been stroked, their egos inflated, they have a loft full of world class pigeons. They have just been deprived of reason, judgment, insight, direction, and knowledge. They have walked into a closed-ended trap and the light was turned off. They have accepted and filled their nostrils to overflowing with the sizzle and will never taste the steak, let alone digest it! This happens continuously-the blind deluding the blind.

If you truly wish to ever achieve any level of competence you must come to the realization that true mentors are exceedingly few and far between. So forget your mentor-all his teachings and preachings, all his hang-ups and delusions.

In conclusion no one can ever hope to breed consistent high quality racing pigeons unless he thoroughly researches and understands the background of his pigeons. Anything short of this is self-delusion and self-deceit and cannot hope to succeed over a long period of time! The blind leading the blind. All I seek is the truth!