





Disclaimer

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without written permission from the author, except for the inclusion of brief quotations in a review.

Introduction

Hello and welcome to the first module in the Pigeon Racing Master's Program! In this module we are going to discuss the loft.

Now before we begin I just want to go over a few things that will make this module much more effective for you. When it comes to the loft many fanciers make this subject much more difficult than it needs to be. Pigeons are pretty resilient and can adapt to almost any situation so as long as your loft provides the fundamentals which we will cover in just a second then you are on your way to having the first piece of a winning season down.

Here are the fundamentals that any winning racing loft needs to provide in order to be successful:

Not Overcrowded

An overcrowded loft increases the chances and growth of diseases as well as lowers the success rate of the birds. It's really just comes down to common sense, an overcrowded loft is uncomfortable and when you're trying to build a winning race team then your birds need to be happy and healthy and overcrowding hinders both. At the end I will go over some good "rules of thumbs" that will help you make sure that you don't run the risk of over-crowding.

Safe, Clean and Dry

Again we are just using simple common sense here but just like humans pigeons want security and a clean and dry environment. The goal to winning with pigeons is to build "the love of the loft" into your birds, this gives them motivation to race back home at lightning speed. Now what do you think would happen if your pigeons didn't feel secure in their home... you guessed it, they wouldn't be in a rush to get back home. Not to mention that when your birds feel secure they will be able to get the much needed rest they need to be able to withstand the rigors of racing. So make sure your loft is secure from threats and predators and you keep up on cleanliness and maintenance. Filth and moisture is an easy way to introduce health concerns into your loft.

Ventilation

Like any other warm-blooded animal, pigeons need air as much as they require food and water. Make sure that the loft has openings where air can enter and escape. The openings can be placed on roof or along the roofline. If air is scarce in the location where the loft is placed, installing exhaust fans should be able to help. Setting up an aviary also gives the pigeons the luxury to enjoy the fresh air at their own leisure. Pigeons need to be intimate with nature; a loft

that allows them that luxury can make it easier for them to develop an attachment to their homes.

Accessibility to Sunlight

Pigeons need and love the sun so make sure that your loft is accessible to the sunlight. Pigeons from time to time want to sunbathe which is why you need to make sure that the aviary gets as much sunlight as possible. Keep in mind though that too much sunlight can be bad, so a small allowance for a shaded area should be designated inside the loft. This gives them the right amount of sunlight and will provide them with Vitamin D needed for strong bones.

So whatever you do make sure that your loft provides these fundamentals because without them you will be dooming yourself right from the start.

Now of course the entire goal of the Pigeon Racing Master's Program is to help you get success and eliminate as much confusion as possible. So we have also provided you with an easy to follow and cheap blueprint that you can use that will ensure that you build a loft that meets all the requirements you need without any guesswork. You can find that blueprint under the "Bonuses" tab in the members area and it is Bonus #2 the Loft Construction Blueprint. The best thing about this blueprint is that you can scale it to be as little or as big as you need, whether you want to house 10 birds or a hundred this blueprint can be scaled to comfortably handle anything you want.

Loft "Rules of Thumbs"

Space

A good rule of thumb to follow when building your loft to prevent overcrowding is you should provide each bird in your loft with at least 2 square feet of space per bird. So for example if you plan on keeping 16 birds then your loft should be a minimum of 32 square feet.

Nest Boxes

A good rule of thumb is that for every one pair of pigeons there should be at least 2 nest boxes for them to choose from (ex. 2 pairs of pigeons = 4 nestboxes minimum) Or 1 nestbox per bird in your loft. Common nestbox dimensions are around 12" tall, 18" wide, and 12" deep.

Perches

A good rule of thumb to follow is that there should be at least 1 ½ perches per bird in your loft (ex. 4 birds = 6 perch minimum) and the perches should be a minimum of 9 inches from each other both up and down and side by side.

So there you have it!

Those tips alone and the loft construction blueprint that we provided will help you build a loft that will be able to compete at any level in this sport. The rest of this module will cover some extra things that will help you manage your loft even better.

So your job now is to take action and go out there and build the loft of your dreams then I'll see you in module 2 where we will discuss how to find winning birds to fill your loft with.

Sunlight and the elevated flight

Irrespective of its geography, shape, size or structure, the loft must provide the pigeons with:

- Sunlight during the day.
- A secure place to rest at night.

Sunlight is a basic requirement for all birds and it is easy to see the positive effect that the sun has on the health and wellbeing of our pigeons. On sunny days the birds look so much brighter and more alert than on overcast or wet days when the birds look depressed and disinterested.

It is known that direct sunlight provides birds with the vitamin D, that is so necessary for bone, feather and reproductive health, but it must have other positive effects on the metabolism and immune system, because the birds look so strong when they have access to direct sunlight. For this reason, it is recommended that every bird in the loft has access to direct sunlight. This is best achieved by an elevated flight.

The elevated flight is ideal for baths, protecting the loft from wetness and the race birds from potentially harmful ground germs associated with free lofting. The elevated flight is usually opened directly to the breeding loft, whereas the flight of the race loft must be closed off at night from the rest of the loft during the race season. The flight quickly becomes a favorite rest and recreation area for both the breeding and race birds, playing an important part in strengthening the loft bonding process of pigeons.

Security and rest at night

The special attention that is given to providing the pigeons with a loft that promotes complete rest at night will reward the fancier with a healthier flock and more consistent race results. Both the breeding and race lofts must protect the birds from moisture, temperature extremes, too little or too much air movement, predators, noise, fumes, light and other disturbances, so that the birds can rest, especially at night. Proper rest is a major pre-requisite for continuing pigeon health and race performance.

The breeding loft

The design requirements of the breeding loft are simple compared to the race loft. The best breeding loft is very open, because breeding takes place during the warmer months. At night the birds usually rest comfortably in their nest boxes and during the day a large open flight provides the adults and babies in the nest with the health benefits of direct sunlight. The open breeding loft improves the circulation of fresh air and promotes a drier loft, which in turn improves the breeding performance. Breeding is far less stressful to the pigeon than racing and

maintaining their health is so much easier, because the birds are not exposed to the outside diseases and hardships of the race basket.

The race loft

The race birds are exposed to many more stresses than the breeders and require much more rest to remain healthy. Consequently, the requirements for a successful race loft are more exacting and complicated than for the breeding loft and must provide the race team with the necessary rest to recover from their strenuous physical exertions. The darkness of night provides the pigeon with the time to rest and the conditions in the loft at night are of the utmost importance if the pigeon is to fully recover from the exertions of the previous day.

The conditions inside the race loft which promote restful sleep at night are:

- No rapid fluctuations of humidity and temperature.
- Good ventilation (i.e. the air circulation is good, the air is fresh, not heavy or stuffy, no drafts and no dust).
- The pigeons numbers are controlled i.e. no overcrowding.
- There is no wetness in the loft.
- The loft is clean.

Temperature and humidity control

To protect the fit racing pigeon from losing form, the temperature in the loft must be above 10 and below 30 degrees Celsius, and the humidity kept below 65%. These are the conditions that favor continuing health and known as the thermo-neutral zone for the pigeon.

In most lofts, it is the humidity, more than the temperature, which determines whether the birds rest or not at night. Humidity measures the amount of moisture in the air, irrespective of the air temperature, but it is the high humidity (greater than 65%) associated with a temperatures below 15 degrees Celsius that most affects the pigeons ability to rest. The pigeon loses form and becomes susceptible to illness when it does not to get adequate rest.

The droppings in the loft are the best indication of the humidity levels. In the healthy loft, a low humidity (less than 55%) gives a consistently nutty brown dropping, whereas a higher humidity (greater than 65%) will produce green watery droppings. At night-time, when the pigeons need to rest, there is always a rise in the humidity, because as the temperature drops the humidity rises. This explains the droppings turning wet and green the morning after a cold humid night, but which then turn nutty brown by the afternoon as the day warms up and the humidity drops. No two lofts, even if they are identical, will have the same humidity levels, because the humidity inside the loft relates directly to the humidity outside the loft. The controlling factor of

humidity is the location (or geography) of the loft. Often fanciers will re-create their previously successful loft design when they move from one house to another but find that they are no longer successful flyers. The only difference is the location of the loft.

High humidity risk lofts:

- Lofts near water (ocean, lakes, rivers, waterways, drainage channels, swim pools).
- Lofts adjacent to large open low lying areas (grassy areas, foggy areas).
- Lofts without sunshine to dry the ground (under trees, in valleys, on the wrong side of the hill and no sun until late in the afternoon).
- Lofts in high rainfall areas.

These lofts require a loft design that stops the outside humidity (moisture) entering the loft.

Insulation is the first step to controlling fluctuating temperatures and high humidity inside the loft. It is the moisture drops of condensation appearing on the inside of uninsulated walls and ceilings that increase the humidity inside the loft to the very high levels that predispose the race birds to restlessness and respiratory illnesses. The insulation of the walls and ceiling will stop this condensation and allow you to control respiratory diseases with the minimal use of medicines.

In high humidity areas, shutting the loft up at night or when it is raining is a good method of controlling the humidity inside the loft (louvres are commonly used), but the air circulation and the air quality inside the loft must not be compromised. Too often the loft is completely shut up with no thought about air circulation. The resulting stale loft makes the race birds lethargic due to lack of oxygen.

Heaters at night are beneficial for the race team. The healthy team remains in top form when the loft is closed at night by keeping it warm and dry. However, it is better to have a very open loft in flocks recovering from respiratory disease to prevent the “respiratory” germs accumulating inside the loft from re-infecting the race birds.

Oil based bar heaters are safe and effective to use when the temperature drops below 12 degrees Celsius and are used to prevent a loss of form by keeping the air and dry.

Dehumidifying machines are also available, but the noise may prevent the birds from full rest.

Hygrometers can be installed to monitor the humidity within the loft, but often the salts in the grit or mineral powder are equally effective in monitoring humidity above 65%. These salts attract moisture. For example, F-vite darkens and becomes granular when the humidity is too high and grits become dark and wet with moisture.

Ventilation

When the air inside the loft is not as fresh as the outside air, then there is a ventilation problem.

The traditional Australian loft is open at the front and gets good race results in areas with low humidity (non-coastal and inland regions, South Australia etc.). Such a loft requires little other ventilation other than vents on the back and side walls of the loft. Place the vents under the perches rather than at the top, so that the air does not pass over the birds resting in the perches. The flow of air over the birds created by incorrectly placed vents is referred to as a draft and causes illness by preventing the birds from resting.

The creation of proper ventilation in enclosed lofts is more difficult to achieve and in dry areas it is often better to avoid enclosed lofts. However, in high humidity and very cold areas the loft must be enclosed at night to maintain the form of the fit race team, although it is opened up as much as possible during the day. The best lofts can be opened up during the day and closed up at night, when it is raining or during cold humid weather.

More ventilation is required in closed lofts than open lofts. Ceiling or wall ventilation fans are often used to improve the circulation inside the loft. Vents placed on the back and side walls near the floor are open during the day and on warm nights and closed when it is wet or cold. Double-check the quality of the air inside an enclosed loft by asking an asthmatic friend to stand inside and pass an opinion as to the freshness of the air.

Pigeon numbers

Overcrowded lofts do not race to their true potential. Overcrowding increases fighting creates restlessness and increases the staleness of the air. Overcrowded lofts have consistently good droppings, although the birds may be healthy. Often healthy nutty droppings return when the numbers are decreased. The best race results occur when the numbers are kept around 25 birds per 6 foot x 6 foot by 6 foot loft. You have to give the birds at least 2 sq. foot per bird, square foot equals height x width.

Wetness in the loft

Waterproofing the loft is a priority, because wet floors endanger the health of the birds. Fit race birds immediately lose form and often succumb to coccidiosis three days after the floor gets wet. Disinfecting or cleaning the loft using water must be reserved for warm days or allowed to dry whilst the birds are out exercising. Concrete slabs hold water and are not recommended for race lofts and must be designed to drain and dry quickly when used beneath elevated flights during the race season.

Clean loft

Pigeon's love a clean loft and rest well when the perches and floor are cleaned free of droppings. Sand on the floor looks good, but is not recommended during the cold months of the racing season. At this time the birds may suddenly over-engage on it and lose form because of the resulting "gut ache". Pigeons love to lie down on straw but it must be perfectly fresh, clean and be free of dust or moisture. Black marks and a musty smell to the straw indicate mold on the straw, which can damage the pigeon's airsacs when inhaled.

The loft is cleaned at least once and even better twice daily during the racing season.

Twice daily cleaning allows the fancier to monitor the health of the race team very closely. A change in the droppings is then recognized very early and the appropriate remedy (rest, water cleanser, medicines, loft heaters etc.) can be quickly and effectively prescribed. The design of the loft must be such that scraping is made as easy as possible. The floor should be perfectly flat and smooth and the perches must be wide enough and brought out from the wall for easy scraping.

Loft position

The best lofts are positioned in the yard to get the most amount of sunlight from the day during the racing season. In Australia, the best direction to face the loft is between North West to North East, because the sun moves northward during the winter months of racing. Lofts need as much sunlight as possible. They also need space to breathe fresh air and are best away from trees, fences and be elevated.

The resting pigeon

The best designed lofts create an environment that is so relaxing that during the day and at night-time the birds lie down on the ground or on the perch with their wings hanging loose. The compartment sizes should not be too large, but small and low enough for the fancier to catch the birds easily without chasing them around the loft. The race team is tamer and more relaxed in a loft with smaller compartments. The best size sections are 6 inches higher than the fancier, 6 feet deep and 5 feet wide.

Loft materials for ceilings, walls and floors

In high humidity areas the ceiling and walls of the pigeon loft must be lined if consistent racing results are to be enjoyed. Masonite and wood are better insulators than metal. The best floor for racing is made of wood (form ply or marine ply) because it is a good insulator, stays warm, and is smooth for effective scraping. It can be unscrewed and replaced with wired floors during the off season if required. Wood floors are harder to disinfect. Concrete floors are not recommended in the race loft because they are cold and retain moisture, but they are good for

the breeding loft and can be used for the race loft if they are centrally heated. In high humidity areas wire floors are not recommended for racing because the droppings beneath the wire accumulate moisture and grow fungus, which causes molding disease. They are acceptable in dry areas and during the breeding season, but must be treated for fungus and insects regularly.

The Pigeon Loft

Pigeons are kept in pigeon lofts. Chickens are kept in a coop, so when we talk about a loft, we mean that it is a house just for pigeons. Pigeon lofts can come in all sizes. They also come in different prices. In place where pigeon racing is “big bucks,” pigeon lofts are quite nice and also quite expensive. Some people enjoy racing pigeons so much and are so good at it, that they make their living by racing pigeons. Some American fliers make an excess of \$200,000 a year racing and selling pigeons. It is not hard to do considering that first prize may be more than \$40,000. Some of these lofts are so nice, that the average person could not afford to buy one for a house, let alone for a pigeon loft. Do not be afraid, the average pigeon fancier's loft does not need to be more expensive than his house. Actually most pigeon lofts are small. They are also not very expensive. The price and size is up to you.

Whether your pigeon loft is small or large, cheap or expensive, it must be well ventilated, dry, free from drafts, well lighted and safe. Remember, this is the home for your pigeons. If you want them to come back, you must provide them with safety and nice living conditions. If you do not, they will eventually leave and find a place that has them.

Make sure that your loft has a good roof. The roof should hang well beyond the walls, because a driving rain will come through any openings that are not covered by the roof. The pigeon loft should be enclosed by three sides. Four walls are better. Pigeons are not like robins and other birds that live in trees they like security. Three or four walls gives them the protection and security from the weather and other animals. Face the loft toward the direction of your nicest weather. Most American lofts face either East or South, but this depends on your own local climate.

Pigeons must be familiar with their surroundings before they take off and fly. If they are forced to fly before they know where home is, they will probably become lost. A pigeon loft has a landing board where the pigeons enter and leave the loft. This landing board allows the pigeons to stand and become familiar with their surroundings. At the end of the landing board should be a flap that covers the traps or “bobs”. When the birds are inside the loft, the flap should be closed. Cats would like nothing more than to enter your loft and have a nice lunch. The “bobs” will not keep cats out. Cats will bend the traps with ease, and then, eat your birds. They will also probably kill a few more than they can eat. Cats are cats. Their instincts are to catch and kill

birds and mice. Cats and pigeons do not mix any better than fire and gasoline. Keep the flap closed when your pigeons are inside.

Some pigeon lofts have a fly cage attached to the loft. This fly cage allows the pigeons to go safely outside and enjoy the fresh air and sunshine. It also gives youngsters the opportunity to look at their surroundings and become familiar with their home and location.

Loft Location

A pigeon loft with pigeons that are allowed to fly outside should be out in the open. It should not be covered by trees. The pigeons need to be able to see their surroundings. They also need to be able to see their loft when they are flying. If you get a choice, do not place your loft near wires. Pigeon's fliers that have lots of wires around their homes have many problems with broken legs and wings.

Loft Direction

Your pigeon loft should be facing the direction of your most pleasant weather. It should be facing away from the bad weather of winter. For most people, the best direction to face heir lofts is to the East or South.

Blocks

The loft should be place on concrete blocks. It you are building your pigeon loft on a concrete floor, the blocks are not needed. Most fanciers have a wooden floor in their lofts. By placing the loft off the ground, you discourage rats, mice, weasels, skunks, and other animals from living under your loft. Most of these animals only spell trouble for you and your pigeons. Your neighbors would not appreciate them either.

Necessary elements of a champion pigeon racing loft.

Traps

For those fanciers that intend to allow their birds to fly outside, traps or bobs are a must. No loft should be without a set. The Belgians have developed a new kind of trap, but most American fliers still use the traditional aluminum bobs. Once the birds have come into the loft, they cannot leave again. Pigeons should either be out exercising, or inside the loft. If they are outside all day, they get into bad habits. As soon as they are finished flying, they should be called into the loft. There are times when you want to allow them the extra time to take a bath or pick on the ground around the loft, but those should not be daily activities. When your birds are out all day, they pick up bad habits such as sitting on other people's houses and telephone wires. They may also leave for a while to feed or mix with common pigeons. All of these are

evils. Neighbors get angry by having pigeons sitting on their property. They do not like the messes the pigeons leave behind. When your birds feed with common pigeons, it exposes them to bad feed or poisons that could make them sick, or even worse, it could kill them. The common pigeons may also carry diseases that your birds do not need or want. If your birds are continually outside all day, you will not be able to catch them for training purposes. If you race your pigeons, they will not come into the loft when they return from a race. They will stay outside, because that's what you taught them by allowing them to stay outside all day long.

Train them at an early age to enter the loft as soon as they are finished flying and you will be happier. If your birds land on your neighbor's house or sit on telephone wires, throw something soft at them, such as a tennis ball. This will teach them that the only place to land is on your own property. Your neighbors will be happier, and the sport of pigeon flying will improve its good name. As we said, they should either be exercising or inside the loft. Traps are an important part in controlling your pigeons. They can be purchased from any pigeon supply company.

There is an exception to the rule of throwing tennis balls at your pigeons when they land on your neighbor's house. Do not throw the ball at your birds until they know where home is. If they land on your neighbor's house on their first few trips outside, you could force them to fly away by throwing the ball at them.

Landing Board

The landing board is placed in front of the traps. This is the landing and taking off pad that the birds use as they enter and leave the loft. It should be large enough for the birds to land and take off easily. If it is too small the birds will not be able to enter the loft easily, and they will not be as willing to come into the loft when you call them. It should also be large enough for your youngsters to sit and look at their surroundings.

Aviaries

An aviary or fly cage can be added to your loft. They are particularly helpful when it comes to caring for birds that are always kept in their loft. The aviary allows the birds to go outside and get some fresh air and sunshine. Some fanciers make the top of the aviary from wood or shingles. This is helpful in keeping droppings from sparrows or starlings out of your loft. These droppings could have some serious diseases that you would not want your pigeons to catch. Other fanciers take the risk and make their aviary top from wire. They feel that the advantage of allowing the pigeons outside in an open top aviary allows rain and sunshine to enter all the parts of the aviary, which makes it possible for the birds to take rain and sun baths.

Paint

Paint is a great tool in being a good Ambassador for the sport of racing pigeons. It's surprising what a pint job does. There is no excuse for having a sloppy looking loft. Paint is not that expensive. It makes the loft look fresh and clean. It impresses people when they look at it. It is good for the sport. At this time it might also be helpful to remind yourself to keep the area around the loft cleaned up. This discourages rats, mice, and other pests. It also helps keep good relations with the neighbors. Take pride in your loft and pigeons. Take pride yourself. Keep your loft painted!

Locks

No pigeon loft should be without a lock. Over the years, a number of American fanciers have had their lofts vandalized. Their pigeons were either stolen or killed. A lock is not very expensive. A lock is a good investment and it should be on every loft.

Perches

There are several types of perches that you can build or buy. They are important parts of your pigeon's lives. This is especially true for youngsters. This is their home inside their home. Once they have selected their perch, they will fight to keep it. They will drive all others from it. If you have more birds than perches, you have trouble. Those birds without perches will feel left out. They will have no sense of worth and no desire to come home. They are often the first to be lost because they do not have the desire to come back to a loft where they are left out. They will go someplace else where they will be happier. That perch is important indeed. It is a magnet that draws pigeons home.

V-Perches

V perches are easy to build. They are also cheap. Cleaning them is very easy. They do have some drawbacks. It is easy for them to soil the pigeons below them if you make them too short. It also makes catching the birds a little more difficult.

Box Perches

Box perches are more difficult to build, and they cost more. They are excellent for controlling pigeons, because the birds cannot jump from one perch to another perch when you want to catch them. It is also harder for them to soil the other birds below with their droppings. Box perches are usually 9" by 9". If they are much larger than that, the pigeons often get their own droppings on their own perches.

Nests

Nests are to old birds as perches are to youngsters. They are a big reason why old birds want to come home. It is their home within a home. Once they select a nest they will fight to keep it. For this very reason, it is very useful to have fronts on your nests. It helps keep other pairs out.

Homing pigeons have nest boxes approximately 1 foot high, 1 foot wide, and 2 feet long. Good nest boxes have fronts that go on or off easily. Since the nests should be cleaned after each round of youngsters, it is helpful to have a good nest front. It makes cleaning the nest easier. A front can also be a big help when it is time to lock up the pairs during the mate selection process at the beginning of the breeding season. Good nest fronts are also helpful in keeping your pairs out of the nests when the breeding season is over.

Pigeon Loft Ventilation

Even if one whole side of your loft was open, you would not have good ventilation. In fact, you would have quite a draft and probably would get sick pigeons. How do you have good ventilation and yet not have drafts blowing on the birds? How can you have good ventilation without allowing your birds to get wet because you had the windows open? Why do you even have to have good ventilation? These are some good questions. They are also very important ones that most people overlook. They are also reasons why many fanciers do not race as well as they could.

First of all, pigeons breathe out carbon dioxide just like you do. They need oxygen to be healthy and filled with energy. They also have their droppings land on the floor. These droppings contain ammonia. In large quantities ammonia will burn the linings of your nose and lungs. It also makes your eyes water. Your body does not want it or like it. Besides, it smells. It is much worse during damp weather because the droppings do not get a chance to dry out.

The carbon dioxide and the ammonia have to go. If they don't, your pigeons will not perform their best. Most fanciers do not understand what good ventilation is. They feel that a window or two will take care of their needs. It is true that a window or two helps. In fact the windows are necessary, but the main purpose of the windows should be to allow light to enter the loft. When the weather is nasty, those windows should be closed. If they are not, rain or snow will enter the loft and will dampen the floor and droppings. The damp floor as well as the damp droppings will soon cause your pigeons to become ill.

Proper ventilation is used in rain or shine. It is used in winter or summer. It is especially useful on days when there is no breeze. Proper ventilation begins either on the roof, or at the top of the highest wall. The pigeons produce body heat. The sun beating down on the loft also produces heat. The warm air rises. As it rises, it leaves from the ventilators in the roof or eaves. The second part of proper ventilators is to speed up the process of getting the warm air out. This is done by replacing it with cooler air. Cooler air is heavier than warm air. The bottom of

the loft should have a ventilator vent on the bottom of the wall. It should be on the same wall as the top ventilator. In this way, cool oxygen filled air enters the loft at the bottom. As it leaves, it takes the carbon dioxide and ammonia with it. Simple isn't it? It is also cheap. The results are wonderful. Your birds will be healthier and perform better. They will also not be in a draft, and the system works every day of the year, regardless of what the weather does. If you want to see if your system is adequate, you can do this test. Take something smelly, like air freshener, into your loft. Come back ten minutes later. If you can still smell the odor, then add another roof ventilator and floor ventilator.

Loft Construction and Design

In order for your race teams to perform well, the construction of your pigeon loft should reflect the type of race management system that you teach in Pigeon School. The following Basic Loft Design is based upon the widowhood system that I teach in my Pigeon School and represents the life cycle of my racing pigeons from hatching through retirement. Young birds are raised in the breeding loft from racers that are retired after they reach an AU championship or some other type of significant performance distinction or merit.

At weaning, the young birds are moved into the Young Cocks and Young Hens sections. The wire nest fronts in the widowhood nest boxes in these two lofts are folded to the back wall which divides the box in half in order to make two box perches out of one widowhood nest box. Twenty four widowhood nest boxes can become 48 box perches. When the final young bird team is selected on or about July 1st, the wire nest fronts are opened to make full widowhood nest boxes again. After the young bird season has concluded, the Young Hens are moved into the Old Hens section and the Young Cocks are moved into the Old Cocks section. These movements vacate the Young Cocks and Young Hens sections for the next young bird season. Old Cocks and Old Hens that achieve some type of champion or performance status are retired into the breeding loft.

A significant component of the loft is the trapping system. All of the pigeons trap into one common foyer or hallway for their entire lives. The breeding loft, the young bird loft and the old bird loft are not three separate buildings. These three lofts are integrated into one compact, efficient and extremely functional loft. Young Birds exercise and trap into their designated sections. Old Birds exercise and trap into their designated sections. Breeders exercise and trap into their designated sections of the loft. I find it cumbersome and inefficient to trap pigeons into three lofts spread all over the yard or garden; as well as retrain young birds to trap into an Old Bird loft and retrain Old Birds to trap into a Breeding loft.

The Basic Loft Design allows champion racing pigeons to live in the same loft for their entire lives. There can be modifications to this basic design that includes a feed and mud room, a

section for extra pigeons, etc. Each loft is divided into sections. The right wing of the racing loft is divided into six 5 foot sections. So is the left wing. The Breeding Loft is divided into four sections not including the two Hens sections. This design is meant to represent a basic loft design. This design can be modified in many functional ways. For instance, since the landing board is about six feet high, the area under the Landing Board can become an aviary, a feed room, a small office area to wait for the race birds to return or a section for extra pigeons.

The nest boxes are all designed exactly alike. As I stated before, in the Young Bird sections of the loft – from February to July 1st – the nest boxes are divided in half to create twice as many box perches as former nest boxes.

A proper loft should be built for the comfort of fanciers as well as the comfort of pigeons. No more than twelve pigeons should inhabit a 5 X 6 ft. loft section. That is usually 6 racers plus 6 widowhood mates or twelve young birds before July 1st.

A fancier's loft design and construction should reflect the race management system that he or she teaches in Pigeon School. A helter-skelter loft reflects a helter-skelter race management system. A loft that is scabbed together with little or no thought and planning generally reflects a very poor race management system and poor or sporadic race results. A well-built well-organized loft usually reflects an organized well-planned race management system. There is a reason that most Belgian lofts are relatively nice looking and well organized. Most Belgian fanciers know how to properly teach and train their pigeons. While not all of them are wealthy enough to afford a picturesque loft built out of beautiful brick or stone; most of their lofts are very well-organized. Why? Because most Belgian fanciers know the basics of how to race pigeons motivated by a well-executed race management system that is reflected in their loft design. It's the only way to successfully compete in the Antwerp Union or the entire country.

Health in the Loft; Yours, Not the Pigeons.

The subject of this article is your health and how to keep it.

Chest radiograph showing bilateral interstitial reticular shadowing with loss of lung volume.

You will hear the condition of interest called many things including Pigeon Fanciers' Lung (PFL), Pigeon Breeders' Lung (PBL), Bird Fanciers Lung (BFL) and Bird Breeders' Lung (BBL), Pigeon Breeders' Disease (PBD). PFL is the most accurate when dealing exclusively with pigeons. PBL implies that only breeders are affected, which is clearly not the case. Many pigeon fanciers have indicated that they experience typical symptoms in circumstances such as shows, an activity that has nothing to do with breeding 1.

PFL is a form of Extrinsic Allergic Alveolitis (EAA). The Americans call it Hypersensitivity Pneumonitis. EAA also affects people who keep other types of birds, particularly budgerigars in the house. Another form of EAA is "Farmers Lung".

SYMPTOMS:

There are two distinct but overlapping phases of EAA, "acute" and "chronic".

The acute phase is the most common in pigeon fanciers. Typically sufferers experience intense flu-like symptoms of fever, chills, muscle ache, cough and/or breathlessness four to eight hours after high level exposure to pigeons such as occurs when cleaning the loft or basketing pigeons. A medical practitioner may be able to detect lung abnormalities using a stethoscope and X-rays. Blood tests may reveal high levels of antibodies to pigeon proteins. The symptoms usually pass within 48 hours but may persist for a week or more. Although the attack itself will probably pass without treatment it is important to visit the doctor whilst symptoms are still present, preferably on the day of onset, as if you delay there may be no symptoms for the doctor to discover. It is important that sufferers are identified as early as possible to prevent progression to the more serious chronic stage of PFL. If detected and appropriate measures taken early enough, acute PFL is reversible.

Make sure you inform the doctor that you keep pigeons and exactly how long passed between exposure to pigeons and the onset of symptoms.

If not detected or ignored the acute phase may be followed by the chronic phase which is characterized by a type of irreversible lung damage the doctors call "pulmonary fibrosis". This is very serious and in extreme cases may be fatal. The major symptoms detectable by the layman are breathlessness on exertion, cough and weight loss, which can be considerable.

If you think you might be affected do not panic. Seek medical advice. The doctor should order a number of tests to determine what the problem is. Remember that there are many other possible causes for your symptoms besides your pigeons. Make sure that your doctor has considered the alternatives as well. Do not be afraid to ask for a second opinion.

CAUSES:

It was not until 1965 that Pigeon Fanciers' Lung was first described in the scientific literature. Since then considerable research has been done into this and other forms of "Bird-Breeders' Lung" and new material continues to be published.

There are several schools of thought in the scientific community about the precise disease mechanisms. None of them have been conclusively proved. There is however general agreement that pigeon fanciers are a high risk group and that inhaling pigeon materials causes

PFL to develop in some susceptible individuals. Other fanciers with similar exposure to pigeons do not develop the disease. There is no reliable method to predict who will be affected and who will not. Hopefully the scientists will eventually develop a reliable method but so far they have not. Until they do everyone exposed to pigeons should consider themselves at risk and take precautions to minimize the amount of pigeon materials they breathe in.

Exactly which pigeon materials cause the disease has not yet been proved. The leading contenders are droppings and feather bloom, but whatever the cause, the most important characteristic is that the particles must be small enough for a high proportion of them to reach and be deposited in the gas exchanging region of the lungs. For this to happen they must be less than 5 microns in diameter. A micron is one thousandth of a millimeter. For practical purposes this means that the particles with the potential to cause problems cannot be seen with the naked eye. Bloom particle size has been measured at approximately 1 micron ³.

Every flyer has his or her own management methods. This paper cannot discuss them all. As you read this guideline consider what you do that puts you in a position where you may be breathing in pigeon materials.

COMMON RISK SITUATIONS:

Loft Cleaning: Do not allow droppings to build up. Remember that it is the particles you can't see that are the most dangerous. The best way to remove dust is with a vacuum cleaner. It may be necessary to fit a filter over the cleaner's air exhaust to prevent dust simply passing through the machine and being pumped back into the loft. Wash the inside of the loft out periodically with a hose (after removing the birds). Do this first thing in the morning on a fine day so that it has time to dry. Don't forget the stock loft.

Handling Pigeons: Anyone who has handled pigeons, particularly racing homers, is familiar with what Colin Osman ⁴ calls "the dust which soils waistcoats". This is particularly noticeable on race basketing days at the club when birds have been individually examined at home and then again at the club. This material on clothing and hands is readily transferred to the breathing zone and then inhaled. See the section on protective clothing.

Releasing Birds for Exercise: Each downbeat of a bird's wings creates a powerful downdraught of air, consequently spreading dust. A recently published study ⁵ has found that when the flock is liberated for exercise the combined beating of all those wings as they leave their perches and strain for altitude stirs up any dust in the loft and it does not return to normal levels for ten to fifteen minutes.

The implications of this finding are that you should:

leave the immediate area of the loft as soon as you release the birds, not return until the dust has settled, wear a mask if you have to go into the loft for any reason in this period.

Feather Sheath Particles:

In breeding lofts where fast growing youngsters are located, and in all lofts during the annual moult, feather sheath particles occur in large quantities significantly increasing the amount of material in the loft environment.

Transport of Pigeons:

Inhalation of pigeon materials must be avoided wherever they occur. However, many flyers who keep their lofts scrupulously clean will sit in a closed car for hours with dozens of pigeons when going for a toss.

In an ideal world we would all have special vehicles for our pigeons. A utility where the humans and pigeons ride in completely separate compartments of the vehicle is ideal. However in the real world most of us have to make do with the same vehicle we use every day. Nevertheless there are steps which can be taken to minimize exposure when tossing:

Keep crates clean. Do not allow dust and feathers to build up. Periodically wash them out with water. Put the birds in the car just before you leave and remove the empty crates from the car as soon as you return home. Keep to an absolute minimum the time that birds are in the car. When birds are in the car maximize ventilation. Arrange airflow to carry pigeon materials away from your breathing zone. The best way to achieve this will depend on your vehicle. As a guide the following has been found to work well in the author's station wagon when carrying just the driver and birds. The driver's side windows are closed and both passenger's side windows partly opened. Dashboard air vents, which draw fresh air directly from outside the vehicle are aimed into the driver's breathing zone and the fan turned to its highest setting. Do not allow dust to build up. Vacuum the vehicle interior immediately following the transportation of birds. Use low dust fillings in the crates (see "Loft Litter" below). Individuals who have had previous acute attacks of PFL it may find it necessary wear a mask when transporting pigeons in their car.

Loft Litter:

The same recently published study referred to above 5 found that lofts using the deep litter method had significantly higher levels of pigeon materials than lofts cleaned regularly (usually daily). Litters used in the studied lofts included hay, woodchips, sawdust or sand to which lime may have been added. Further testing was done in a purpose built experimental loft using sand, sand and lime, woodchips, woodchips and lime, hay and sepolite. Highest counts were observed for sepolite, lowest for wood/lime as litters.

Other Hazards:

Be aware that other materials in the loft environment can also cause respiratory problems. Nesting material, shavings and grain dust to name just a few can cause problems just as serious as pigeon materials and need to be controlled or protected against.

HOW TO MINIMISE YOUR EXPOSURE:

Loft Design: Health and Safety professionals employ personal protective equipment to prevent ill health only as a last resort. Before resorting to respiratory protection devices you should consider if you can adopt “engineering” solutions to solve the problem. Designing lofts to minimize the amount of pigeon materials in the fancier’s breathing zone should be the first strategy employed to minimize the problem.

Many flyers spend a great deal of time and money devising means of improving airflow for the birds. Unfortunately, the classical solution as to what is good for the pigeons, stale air being vented at ceiling level, fresh air being introduced at floor level, is probably not that good for the flyer. The air is drawn in past the droppings, past the birds, through the flier’s breathing zone, and then expelled from the loft. Ideally the fresh air should pass through the flier’s breathing zone before coming into contact with any pigeon materials, including of course the birds themselves. Some form of artificial direction of airflow would be necessary to achieve this. Fresh air, if necessary drawn through ducting from ground level, would have to be forced into the loft at ceiling level by mechanical means. Stale air should be extracted from the loft, taking as much dust as possible with it, at ground level. These exhaust vents should not be located anywhere near the intake vents.

The ease of implementing this will vary according the nature of your loft and the depth of your pocket. In warm climates where lofts usually have at least one wall that consists mostly of wire mesh or dowelling, ventilation engineering is difficult (but not impossible). In colder climates where the loft is frequently entirely enclosed ventilation control is much easier.

Self-cleaning systems are now in use in some lofts. They range in sophistication (and price) from elaborate automatic machinery to the now increasingly common wire floored loft. The author is not aware of any research done in this area but they appear attractive both from the health viewpoint as well as a significant time saving device. You need to remember that any system is only as good as its maintenance. The droppings etc. eventually wind up somewhere however they are removed from the loft. Make sure that you are not just shifting the problem from one area to another instead of solving it.

Lofts should be designed so that there are no areas where dust can become trapped and build up. In particular ensure that perches are not fitted flush to the wall. Leave sufficient space so that any pigeon materials deposited at the rear of the perch can drop to the floor.

Personal Protective Equipment:

Respiratory Protection (Masks): A small scale study (six subjects) published in 1981⁶ indicated that respirators “can offer substantial, and in most cases, complete protection against single exposures to environmental dusts that may provoke EAA.” This study is encouraging but needs to be verified and extended by a larger scale study.

Masks come in a variety of shapes, sizes and types. It is vital that you get the correct type and that it fits you exactly. Even small leaks around a mask can result in exposure. For this reason the masks need to fit snugly. There is no point in wearing an ill-fitting mask. Masks are designed to protect the wearer from specific hazards. Ensure that the one selected for use with pigeons is designed to protect the wearer against “dust”. A mask designed to protect against other hazards will not protect against the inhalation of pigeon materials.

Unfortunately there are a number of sub-standard devices on the market which look good but do not offer adequate protection. The best way of checking that you have the correct type is to ensure that the mask chosen is designed for protection against “dust” as defined in Australian /New Zealand Standard 1715-1994⁷ or international equivalent (Editor’s note: As this document will be viewed worldwide, we cannot provide the equivalent standard for each country. To be safe please follow Mr. Gleeson’s advice. The safety supply dealer who sells you the mask should be able to provide the appropriate information)

Storage of respirators is important. They must be kept in a location where there is no possibility of them being contaminated. A large dose of contaminant can be inhaled if the inside of the mask is unclean. It is pointless to wear a mask as protection from materials that are inside the mask.

Beards and moustaches can create difficulties in achieving a proper fit. If you have one it may be necessary to wear a different type of device. Under these circumstances it is advisable to go to a reputable supplier of industrial safety equipment and be personally fitted.

Masks however have the disadvantage of being uncomfortable and of not being worn. Even with the best intentions it is difficult to remember to put the mask on every time the loft is visited. This is especially true if it is intended to be there for a few minutes to attend to a particular chore, or as frequently happens, one just arrives at the loft with no conscious forethought. Thus, whilst it is relatively simple to protect yourself with a mask when you know in advance that you will be exposed to large doses of antigen (e.g. during cleaning) this is not a

viable long term strategy for protection against small but frequent exposures if it is not worn on each and every occasion.

Protective Clothing:

Family members can be at risk from pigeon materials brought into the house on flyers' clothing. There are recorded instances in the scientific literature of a flier's wife contracting PFL even though she had nothing to do with the pigeons 8. The most likely explanation is that contamination by pigeon materials brought into the house on the flier's clothing is sufficient to affect another person exposed to the clothing.

The answer to this is to wear an extra layer of protective clothing (overalls or a dust coat) when in the loft or handling pigeons and remove the clothing before entering the house. The contaminated clothes should be placed in a sealed container when not in use. Special easily removed footwear should also be used to visit the loft (e.g. a pair of thongs left outside the back door of the house).

The only time this protective clothing is taken into the house should be for washing. It should be taken direct to the laundry and washed immediately. Do not allow it to contaminate other clothing.

Personal Hygiene:

Pigeon materials also build up on the skin. You should wash your hands with soap and water after handling birds and shower after cleaning the loft.

Pigeon Behavior:

The activities of the birds themselves can be a problem as they fly about inside the loft. Each downbeat of a bird's wings creates a powerful downdraught of air, consequently spreading dust. Lofts should be designed so that as far as possible pigeons must walk rather than fly when moving about internally and cannot escape when you wish to catch them. Training pigeons to accept your presence in the loft can also substantially reduce this flying about. A bonus is that you will find that this training has a positive effect on their racing performance.

The flock instinct makes wild behavior spread rapidly through the loft. The occasional idiot that flies madly about whenever you enter the loft should be eliminated.

Frequent Baths:

Provide baths as frequently as possible, preferably outside of the loft. This can substantially reduce the amount of atmospheric bloom in the loft. You cannot give the birds too many baths. They will regulate this themselves. There is one exception to this rule. Birds should not be

permitted to bathe within three days of racing as they will not have sufficient wax in their wings to protect them should it rain.

