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The Belgian Carrier Pigeon and its practical treatment

By Louis VERMEYEN.

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Author of the chronicles in the great Antwerp Pigeon Journal
"DE DUIF"
and Champion of Antwerp.

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P R E F A C E.

It is with great pleasure that I offer this edition of my book to English and American pigeon fanciers.

I hope that this English edition will meet with the same success that the original book enjoyed.

For the beginner it will be a sure guide; it will counsel him to learn to know his pigeons and to attach more importance to practice than to theory.

To the experienced fancier its message is that more than one road leads to success.

THE AUTHOR.
THE PIGEON LOFT.

Situation.

For those who have a large garden the ideal would be an Aviary; the pigeons would live, so to speak, in the open air.

It should be built at some distance from the ground: ventilation underneath will obviate dampness to a great extent. I prefer the floor to be six feet from the ground, so as to have a small space for storage, for the hampers, food-bin, etc., or even for a reserve loft or for an hospital for sick birds.

In the building of an aviary precautions should be taken against the neighbours' cats, and the mice and rats who come to pilfer if the grain bin should not be overlooked.

Those who allow their birds the freedom of the garden should take care that they do not wander too much. My experience is that pigeons make themselves ill with substances they pick up in the garden, especially in the small gardens in town; for instance injurious plants, such as ivy and wild vine; or again certain kinds of moss that grows on the damp flagstones, but more especially earthworm excrement: pigeons are very partial to the latter in spite of the fact that it is injurious, pigeons that are let to swallow this excrement will speedily get out of form.

The greatest advantage of an aviary is that the fancier is always round about and in view of his birds and they get to know him.

In the majority of cases, however, necessity compels the fancier to keep his pigeons in the roof of the house, which nevertheless by no means prevents their winning prizes equally as well as those who have the advantage of the garden. As a matter of fact those who use the upper part of a building can easily convert it into a sort of aviary: it is only necessary to leave the front wide open, taking care to have a shutter for use when the weather is bad.
Site.

Care must be taken to have the opening of the pigeon house facing South East. From this direction there is no danger of damp winds. The sun’s rays enter from early morning, which is a great factor in the health of the birds.

I would not however, absolutely lay it down that the entrance must face the South East. At one time, we, ourselves, had our loft to open to the West, which did not stop our being champions of the society. One of our friends, again, had his to open on the North, and his pigeons were unbeatable over all distances.

However, wen it can be managed, always choose the South East as this is the best.

Above all the entrance should never be made in the direction whence the damp winds come; Dampness is a sure cause of failure; the pigeons at once lose form and are subject to all sorts of illnesses, among others Catarrh and Wing Disease.

If circumstances forbid the building of the loft as one would wish it, certain precautions have to be taken in order that the pigeons may not be exposed to damp winds. The following sketch shews a good arrangement to protect the loft against injurious winds.
a-b is a glass panel which protects the pigeons inside against damp winds.

With a few panes of glass or glass tiles all the light desired can be obtained.

**Lighting - Ventilation**

The pigeon loft must be lightsome. It is an established fact that light has a salutary effect on the development of living beings. The more light there is the less trouble there will be through insects and vermin.

The sun’s rays are the best remedy against all kinds of microbes.

For this reason it is eminently desirable to have the aviary so constructed that the health giving rays of the sun can freely enter.

The lighting of the loft should not present any difficulty: a few panes of glass or glass tiles are sufficient. The best way is to put in one or two good skylights that can be opened when desired.

Take care, however, that the windows do not turn your loft into a greenhouse: it would be much too hot in summer.
Do not forget that stuffy heat is a prolific cause of much failure. For this reason ventilation must be looked to.

Pigeons can never have too much air. The more fresh pure air they get, the more they will be able to resist illness, because their blood will be richer.

Does not pure air favour the development of the red corpuscles of the blood, increases their number, and so hinders the injurious activities of microbes?

In order that plenty of pure air can enter and also to get rid of the used up air, sufficient ventilation should be provided. This can be accomplished by means of ventilators (small chimneys) or simply by grooved tiles.

A slight draught need not be feared so long as the pigeons are kept away from it.

The best material for the roof is tiles that do not absorb moisture. Zinc or slates render the loft too warm, unless ventilation holes are provided. It is advisable to have good loose fitting tiles and to place between each small pieces of wood in summer. In this manner excellent ventilation is obtained, in fact this is the best system that I know.

I have on occasion seen lofts where the air entered between every tile — you could see through the roof everywhere — but the pigeons glowed with health and strength, and they brought home many first prizes.

I much prefer these humble lofts to the more pretentious aviaries whose roof is tightly closed so as to allow no ventilation.

Lack of ventilation is always the cause of vitiated air, hence Catarrh, interference with the breathing organs, weakness, and even poisoning.
GESTUIKten — 1902

Stock cock. Sire and grandsire of all the birds in the loft
L. Vermeijen, Borgerhout.
Has won more than 100 prizes.
Sire of the « Old Blue 1904 »
Sire of the « Louis d'Or 1905 » E. Taverniers, Ghistel.
Grandsire of the « Velo » Th. Van de Velde, Oudenburg.
External Construction of the Loft.

The opening, the trap, the landing board are situated, then, as far as this is possible, facing South East.

I do not care to have the opening just above the level of the floor, as in this case one has to stoop to take hold of the pigeons as they return from a race. It is better to be able to remain upright when catching them.

The best position for the trap, in my opinion, will be in the front of the loft, a yard or so under the guttering.

![Diagram](image)

It is surprising with such an arrangement as here described how easily the pigeons come in.

As they drop they have in front of them the wall face and also the roof, which tends to prevent them from rising again to flutter around the house.

More or less the same result can be obtained by putting the landing board on the gutter itself (fig. 4)
If the opening, however, is placed too high, say close to the apex of the roof, it makes it too easy for the pigeons to fly up again when they should drop and come in.

Is a landing board really necessary? It can be dispensed with easily: a simple opening in the wall is sufficient: through this opening the pigeons come down right into the house: In order that they may not escape when they are being taken hold of, a curtain or a trap door arrangement can be fixed up.

I prefer, however, a fairly large board, even if it is only for the first outing of the young birds, so that they can take a good view of the surroundings.
A: pigeon loft.

A.B. : front of pigeon loft furnished with trellis through which the air can freely pass.

C.D.: board on which food is spread and on which the birds are taken on their return from a race.

E F: board.

G.H.: window pane which can be raised so that the sunshine can enter freely into the loft.

I: ventilators or air tubes.

The pigeons as they drop on the board must pass through the trap door and come on to the inner board

The great advantage of the above system is the following:

The pigeons are accustomed to find food on this board at the same time that their master stands in front of the entrance; consequently he does not need conceal himself.

When the pigeons return from a race they see their companions on the feeding table, pecking at a few grains that have been strewn there.
This familiar scene induces the returned pigeons to enter immediately: they drop in the middle of the group, and can then be caught without being scared. Their entrance can be facilitated by rounding off the inside of the board by means of a zinc band.

The trap can be easily substituted by a simple apparatus in the shape of a comb of wood or of zinc wire, the teeth with a distance apart of 4 to 4 1/4 inches.

If such a comb is used it will be necessary to have a good distance between the floor and the landing board (at least 20 inches) so that the pigeons cannot get through the openings.

A good system is the following:
Here are two sets of trap doors which can be raised by pulling a cord A.B — C.D.

A.B. is raised, C.D. is lowered when the pigeon arrives: the bird passes freely as far as C: then A.B. is lowered and at the same time C.D. is raised.

The pigeon enters, therefore, without having to pass any obstacle.
The pigeons soon get accustomed to this manoeuvre. If they dawdle on the board, they can be caught, as they cannot escape, the trap A.B. having been lowered noiselessly behind them.

It is advisable to accustom the pigeons to go out through an opening other than the one they come in by.

An entrance can be made above the entrance or simply by means of a hollow tile at the side of the entrance.

One end of the board should be reserved for a small loft in lattice work to serve as a decoy cage, when pigeons are to be broken to a new loft.
The pigeons for breaking should be allowed to enter freely and get accustomed to their new dwelling before being released.

It would be wise to furnish the board with a bell so that the fancier can be warned of the entrance of one of his pigeons.

<table>
<thead>
<tr>
<th>Board</th>
<th>a</th>
<th>b</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Feeding table</td>
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</table>

In order to get in the pigeons should pass over a movable board, A.B. which falls to B with the weight of the bird: this makes a contact at B which operates the electric bell.

So that pigeons may not loiter on or fall down chimney pots, these latter should be protected by a cage of lattice work built round them.

Be careful that your pigeons do not get poisoned in the gutters: The gutters should be well, cleaned and boards fixed over them to prevent the birds drinking out of them.

**Interior of the Loft.**

I have already mentioned the feeding table. This should be sufficiently large to afford ample room for the majority of the pigeons to feed there. A drinking fountain should also be provided. The sight of the drinking fountain induces them more readily to come in, as after a race they are almost always very thirsty.

This feeding table should be so placed that one can stand upright when giving food or taking hold of the pigeons. It should be about 8 to 10 inches from the
entrance, and be of such a size that there will always be room for pigeons coming in from a race to get on to it. A pigeon that does not see a place to drop re-
 mains on the board outside.

The Nests.

The construction and the size depends on the space at disposal. However, it is advisable to make them in accordance with the following measurements.

Front (section).
A B: resting board width 10"
C D: partition between nests width 10"

I advise therefore that they be fairly large. I like the pigeons to have a fair amount of room in their nests, especially at mating time.

Many sterile eggs are solely due to pigeons not having enough room to move their wings in their nests.

I give the above height so that a board can be placed in the nest on which the cock can rest during the night.

A partition should also be placed between in the centre of the nests so that the latter are divided into two equal compartments: this is a useful precaution to prevent the squeakers from going into the nest while the parents are sitting on the eggs.
Side section:

E F small board in front of nest on which the pigeons drop in order to enter the nest.

In front of the nests is placed a movable lattice in which there is an opening about 8" x 8" for an entrance. This opening can be closed by a small sliding or swinging door.

Front of the nest.

A B C D: Opening that can be closed at will: these bars should be close enough together to prevent the pigeons getting their heads through.
777921 - 20

A typical short-faced cock of the loft Vermeijen.
The following style, frequently seen, is equally to be recommended.

Each couple has thus two compartments completely separated by a partition in wood or lattice.

The pigeons have their youngsters in one of these compartments, and in the other they sit: in this way there need be no fear that the youngsters will break the eggs. Some birds like to make their nests in dark corners. To humour them the front of the nest can be made half wood, half lattice.
In any case, I prefer if possible that the light does not shine directly into the nests. To this end, I recommend that the following plan be followed in building the loft.

<table>
<thead>
<tr>
<th>Nests</th>
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<tbody>
<tr>
<td>Entrance for Pigeons</td>
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<td></td>
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</tbody>
</table>

I do not know of a better system than this. The size of corridor between the nests depends on the space available. However, it should not be so wide as to allow the pigeons to fly about too much. A pigeon loft that is too big produces wild pigeons.

The entrance door for the fancier will thus be on the opposite side to the entrance board for the pigeons. This is to be recommended if only on the score of ventilation. With the door closed there can be no draught.

It would be best to have two rows of nests at each side. That would mean a height of 4′8″ to 5′4″. Counting that the distance between the floor and the first row of nests is 10″ the total height would be at least 5′4″. This is the most desirable height for a loft, unless the owner happens to be 6′ tall.

Do not let the pigeons hatch on the floor — it is much too awkward: the fancier would have to stoop too much to pick up the birds, and it would be too easy for the squeakers to get out of the nests and follow their parents about.
The most important point is that the pigeons should have plenty of pure air in the abode. To try to install 30 couples when there is only room for 20 is a very inadvisable proceeding indeed: overcrowding is a certain cause of failure.

If the nests are made to measure 32" x 24" x 24" with transversal partition inside, there is no need at all to put in perches.

If the compartments are made smaller, 1' for example, care should be taken that the cocks have a place of their own to rest during the night. Small wooden partitions should be put in dividing the nest into compartments of 1' x 1' x 1', or failing this, perches, taking care that the pigeons cannot soil one another.
A B C D 2 rows of small resting compartments.

If a perch is put in, it should be wide enough to give a good foothold: the pigeons should be able to keep their balance easily.

The corners of the perch should be rounded off (width, about 2").

Whatever shape of loft is chosen, it is necessary not only that the pigeons are comfortable, but also that the fancier be able to work at his ease during the time he is attending to his pigeons.

We have always found it advisable to keep several nets available just large enough for one pair of pigeons. These are simply large compartments 30" x 24" x 24" which instead of being in the large loft like the other nests, have their opening directly on the landing board: the pigeons drop on the board and go directly into their compartment, where they find their food and drink.

A simple hollow tile can serve the purpose of an entrance.

This system recommends itself more especially to fanciers who specialise in speed races.

Loft for young Pigeons.

Old-fashioned fanciers preferred to leave the young birds in the same loft with the parent birds: it is more natural.

Notwithstanding this, it is a great advantage to separate the young from their parents when the former are 25 days old and to put them in a special loft. This need have no nests in it, but should be provided with perches or small wooden shelves to serve as resting places for the birds.
Having a special loft for the young birds, it is all the easier to teach them the habit of coming in promptly, which, of course, is of great importance at race times: there will also be less casualties as the youngsters will not be persecuted by the older birds. If, however, a special home cannot be provided, sufficient perches and rest boxes should be kept apart so that the young birds have places to rest.

At all costs, the loft must be so constructed that the males and females can be separated during December and January. They should be separated so that the cocks and hens cannot see one another.

The following plan shews the ideal system:

![Diagram of loft layout]

E.E. entrance boards (which can be joined to form one sole board).

Between B.D. can be placed a pane of blue glass so that the pigeons' movements can be kept under observation.
It is not advisable that the pigeons be allowed to get too near the roof. It is either too hot, too cold, or too damp (when there are defective tiles). Much better to have the roof on the high side, so as to have a good space between it and the pigeons' quarters and closed off by trellis. This will help the health of the birds. Bad smells and vitiated air accumulate near the roof and it is thus unhealthy and injurious to a degree to allow the pigeons to occupy this space.

Such an arrangement as I describe will increase at the same time the size of the loft and afford a greater volume of air for the birds.

It must not be overlooked to keep a place apart for the invalids: a few boxes in a dry place, well ventilated, where the sunshine can enter. To avoid contagion, this «hospital» should not be in direct contact with the rest of the loft.

**FOOD.**

Pigeons live principally on grain. They are fond of certain plants, cultivated as well as wild: in the fields they find slugs, acorns, and small pebbles.

Their food is masticated and digested in the crop. It is not definitely established what part the small pebbles play, which the pigeons swallow. For a long time it was supposed that these took the place of teeth for the grinding up of the grain. Probably they aid towards this end: It has been demonstrated, however, that small pebbles, old mortar, brick, earth, and all the hard matter the pigeon swallows are acted upon by the juices secreted by the organs and glands of the bird, and certain substances are extracted by the process which are useful to the functioning of the pigeon's organism.

As principal elements of nourishment, there are:

(1) Albumen

(2) Hydrates and fats.
Scientific research seems to prove that albumen has a great influence on the formation and renewing of the tissues, the plumage, and the horned parts, such as the beak and claws. The albuminoid matter gives heat, as also do the fats, while the hydrates of carbon give strength and activity.

A superfluity of hydrates becomes that, which is secreted by the body as a reserve. The oxygen taken into the blood by the action of breathing comes into contact with the hydrates and fats, producing energy. At the same time, carbonic acid and water is formed which again is eliminated through the lungs and other organs.

The action of oxygen on albumen produces heat and activity as the carbonic acid becomes water and uric acid.

If too great a quantity of grain rich in albumen is given (tick beans) too much uric acid will be produced for the organism of the pigeon to eliminate quickly enough: this is the principal cause of the dreaded wing disease. Many writers have used these scientific facts to demonstrate the need for making up the feed to hold certain proportions of albumen, hydrates, and fats. After analysis of the different grains, they have laid down that this and that food is to be given and others excluded.

Experience, however shows that many fanciers have obtained excellent results from the use of tick beans alone (excess of albumen) while others again have pinned their faith to maize (excess of fats, hydrates and carbon) and in spite of this have succeeded in winning championships over all distances.

This all goes to prove that in the pigeon game, one has not to be too dogmatic. It is success that counts, theory is but secondary.

I am, however, far from suggesting that anyone should limit himself to any particular kind of grain.
I give hereunder a scheme of feeding, which I have recommended to many fanciers of my acquaintance, and can say that those who have adopted it, have never had cause to regret doing so.

**Winter.**

End December — 2 weeks before mating
Beans : 25 0/0 (peas, tares).
Maize : 25 0/0.
Wheat : 25 0/0.
Barley, buckwheat, rye, oats, and linseed: 25 0/0.

This mixture contains sufficient nitrogen, and yet is rich in hydrates and carbon. It is calculated to gently free the body from the injurious elements accumulated during the period of racing.

**One meal per day is sufficient.**

It would be a good thing however to give in addition a little linseed in the mornings if time permits (a handful for every 20 birds).

**During Rearing.**

A fortnight before mating, the pigeons should be left to fast during one whole day. The following day a purgative should be given: on this day they only should be given a good feed of linseed in the afternoon; the following days the composition of the feed should be changed very gradually adding tick beans maize, wheat, buckwheat, until the following mixture is arrived at:

<table>
<thead>
<tr>
<th>Beans (peas, tares)</th>
<th>45 0/0</th>
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</thead>
<tbody>
<tr>
<td>Maize</td>
<td>35 0/0</td>
</tr>
<tr>
<td>Wheat</td>
<td>15 0/0</td>
</tr>
<tr>
<td>Buckwheat and linseed</td>
<td>4 0/0</td>
</tr>
</tbody>
</table>

The remaining 1 0/0 will be the «dessert» — husked barley, rice, millet, canary seed, and bread (but very little of the last).
This mixture is well calculated to enable the birds to bring up their young and to prepare themselves for the racing season.

Two meals per day.

Racing Season.

The rearing is not the main thing: as soon as the youngsters are weaned, the pigeons will be ready to go into training.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount (0/0)</th>
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<tbody>
<tr>
<td>Tick beans</td>
<td>30</td>
</tr>
<tr>
<td>Tares</td>
<td>15</td>
</tr>
<tr>
<td>Peas</td>
<td>5</td>
</tr>
<tr>
<td>Maize</td>
<td>40</td>
</tr>
<tr>
<td>Wheat</td>
<td>5</td>
</tr>
<tr>
<td>Small seeds</td>
<td>5</td>
</tr>
</tbody>
</table>

(buckwheat, linseed, millet, rice, colza, turnip, hemp, barley, husked oats.)

Three meals a day - 6 a.m., noon, 5 p.m.
or Two meals per day - 8 a.m., 4 p.m.

It is advisable to give the small seeds as following:
2 0/0 in April and May, increasing the ration gradually to 5 0/0 in June. In July and August, there should be given in addition a little hempseed (very little) to pigeons actually racing.

Moulting (from August onwards)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount (0/0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick beans (peas, tares)</td>
<td>35</td>
</tr>
<tr>
<td>Maize</td>
<td>40</td>
</tr>
<tr>
<td>Wheat</td>
<td>20</td>
</tr>
<tr>
<td>Linseed</td>
<td>4</td>
</tr>
<tr>
<td>Small seeds</td>
<td>1</td>
</tr>
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</table>

Two meals a day.
REMARKS ON FEEDING.

The proportions as given above of the different grain and seeds are only an indication: the percentages should not be taken too literally.

If you are satisfied with your present system of feeding do not be too quick to change it.

It is up to the fancier to find out the mixture that best suits his pigeons. What is good for one strain of bird may not be so for another. Some strains do well with plenty of maize, while others require more tick beans to give of their best.

Some birds need stimulants like hempseed, while others can easily dispense with them.

A pigeon keeper should hesitate to try and copy others: let him rather search out what suits his peculiar case. Beginning with the mixture I have indicated he can increase or decrease the proportion of maize or tick beans.

Avoid sudden Changes.

Take two or three weeks in changing from one plan to another: no sudden jumps: nothing is more harmful. It has frequently been my experience that a sudden change in the feeding plan has had the effect of immediately causing the birds to become ill. The dreaded wing disease in many cases has occurred directly after the giving of a different kind of maize.

There is no risk if the change is effected gradually: Before your stock of feed is exhausted, get a new supply and feed simultaneously from the old and the new stocks — very little of the new stuff at first, then gradually increasing the proportion as the old grain is used up. In this way you get on to the new stock entirely taking 2 or 3 weeks in the process. The above is of the utmost importance during the racing season.
Many a pigeon in the middle of successes had suddenly come to grief from no other cause than a sudden change in the food.

A sudden change of this nature can cause a bird to fall from the top of its form from one day to another.

This is the reason why it is so important to have the right kind of food from February until September

**The Grain should be sound.**

Never buy unsound grain or grain gathered under bad conditions. For this be sure you can depend on your supplier. Keep your food grains in a dry well-ventilated place.

The ideal is a bin with a metal sieve at the bottom, and the grain should be sifted occasionally to avoid heating.

Keep it proof from cats, rats, and mice.

Do not imagine that grain has to be two or three years old to be good. Do not be afraid to give new crop tick beans at the end of May, beginning June. It is a mistake, to think that old grain is the best. On the contrary, grain from the last crop is richer in vitamins and consequently better for the pigeons.

It is said that grain newly gathered gives diarrhea. There is not very much danger of this. It is easily avoided if the new grain is given sparingly. At moulting time, say in August, it is even advantageous to give the birds some newly gathered wheat.

**Method of feeding Pigeons.**

There are pigeon keepers who succeed quite well without taking any care of their birds, or even less of the food they give them. At odd moments, when they have nothing else to do, they think of feeding the pigeons. Usually they give more grain than the
birds can eat at the time, which does not matter, they think, as that is left will be eaten up later. They don't worry if the grain gets dirty with the dung, or if the drinking water gets dirty. They win prizes, so therefore their system must be all right.

I have already mentioned that there are more ways than one of winning success. My experience is, however, that many fanciers owe their failures solely to this method, or want of method. Such neglect does not absolutely preclude the possibility of prize winning generally, however, it is the direct cause of failure.

Furthermore, badly kept pigeons, fed on dirty food, and housed in an unhealthy loft sooner or later will bring on an epidemic: all the pigeons will be more or less affected. It will be too late to do anything then, and the pigeons will be useless either for racing or breeding.

If a pigeon keeper has not sufficient time to properly attend to his birds, who has to leave home in the morning and does not get back till the end of the day, can get over the difficulty by putting enough food for the whole day in a hopper so constructed that the pigeons can feed without dirtying the food. Such hoppers can be purchased ready made from dealers in pigeon accessories. For those who prefer to make their own the following directions will be useful:—
A bin filled with food — ab: cover B — place where the pigeons feed.

O: Opening through which the food slides from A to B as required by the birds.

B D C: front: D.C. small board (2” high).

B. D.: wood or wire lattice wide enough for the pigeons to get their heads through.

Fill the hopper with tichbeans 2/3 rds, Maize 1/3rd. In the evening when the pigeon keeper returns, he should make a point of going himself to the birds and giving them himself a few handful of grain, maize, linseed &c. This feeding by hand tends to make the birds tame. Those who go in for long distance racing especially find this is a good plan.

Nevertheless, the system has its drawbacks. Overfeeding not only makes pigeons too fat to win races, but also makes them liable to the various diseases that afflict the pigeon world.
I have known many cases where pigeon keepers have found the practice of letting the birds have feed ad lib was not working well, and have seen their birds resume their winning vein, as a result of taking my advice and modifying their method of feeding.

The system recommended by me aims at keeping the pigeons in good condition, and in good form for racing. The birds come in promptly and they keep in good health. The plan should be found sound and safe.

The best Way to feed Pigeons.

The food should not be given all in one go, but should be given handful by handful, and thrown down just in front of the person feeding so as to force the pigeons to come close to get it. At first some of the birds hang back. These, the rather untamed ones, and who are afraid to come close get no food. Hunger, however, soon tames them, and after 2 or 3 days they all come and feed out of the hand.

Speak to your pigeons as they feed. Accustom them to being taken up in the hand. This is one of the best preparations for racing and quick trapping. Give the food handful, by handful until you see they have enough. An observant fancier can tell as soon as the birds have had all that is good for them. A good general rule is this:—

When two or three pigeons leave off feeding, and go to drink, stop giving feed.

The other birds eat up the grain that is still on the floor: the pigeons will thus have no food between meals.

No food is to be given just before the birds go out.

The pigeons should be let out in all kinds of weather (except in the case of snow or fog) and during their absence their loft should be cleaned and fresh water supplied.
After half an hour or so, the pigeons are recalled — they soon learn to return at the first call. Those who do not do so get nothing to eat until the next meal, which teaches them a lesson.

This system should not be changed when the pigeons are bringing up their young.

Do not imagine that by putting a bowl of tick beans in the nest that you are going to help the youngsters to grow up any quicker. Those who follow this plan will find it pays and will not want to alter it.
THE PIGEONS

The characteristics of a good pigeon.

It is easy to enumerate a mass of qualities a bird must possess in order to be classed as good: standard types of pigeons have even been made up.

Nevertheless many a pigeon not possessing all these good qualities and even appearing to have many faults succeeds in winning prizes and turns out an excellent reproducer.

The following lines are intended as a guide, and with the qualification that there are exceptions to every rule.

The Head

should be convex, well developed, often it is slightly flat on the top in good class birds. Large between the eyes, even protruding. Certain experts claim that just here is situated the bump of orientation. The head should be high. The bump of endurance will be in the back part.

Although there are good male birds with small heads, it is preferable not to depend too much on pigeons with this peculiarity, whose beak is too near the eyes. Usually such birds are not intelligent. Again, a lot cannot be expected of pigeons whose eyes are close together.

The Beak

should be solid looking and well planted in the head. Its size should be in proportion to the rest of the body its shape is not of importance, it can be long and slender or short and thick. Neither has the co-
SCHOONE LICHTJE

Strain: Lemmens-Adriaenssens.
1e price in the show of the Olympiade 1921 at Antwerp.
lour of the beak any relation to the quality of the bird, as this depends on the breed of pigeon. There are fanciers who do not favour pale, almost white beaks, but nevertheless many good birds have this peculiarity. Any birds on the other hand have beaks quite black, especially when only a few weeks old: This is a sign of the strain, as also are black feet. It should not be assumed that either one or the other are marks of superiority. Pale or partly pale beaks go with breeds of birds that are withe or pied.

The upper mandible should be larger than the lower.

The Body

should be sturdily built — a lightly built pigeon is not much good, unless it is that the particular bird is out of condition. Neither, however, should a pigeon resemble a fowl. The bird should feel hard; the flesh not soft to the touch but firm as iron so to speak.

The Back broad with powerful shoulders.

The Chest deep with plenty of room for well-developed lungs.

The Rump

covered thickly with feathers.

Do not forget that the wing muscles are connected with the breast bone: if the breast bone is not well formed and strong the flight of the bird will suffer.

The Breastbone.

should be strong and thick to give hold to the various muscles. Pigeons with arched breastbones should be destroyed out of hand. It should be neither round nor flat, but should be slightly curved — deeper at the breast than the tail end, so as to facilitate the bird's flight.
A flat breast bone is a bad defect, but a slight deviation from the normal will not affect the bird's flight unless the deviation is an effect of the constitutional weakness of the pigeon: however weak pigeons are soon detected.

The Wings.

According to the strain pigeons have either rounded or tapered wings. Champions are to be found in both kinds. It is worthy of note that speed racers (e.g. the «Martinet») have very tapered wings.

Some pigeons stretch their wings at the least pressure of the finger — they «give» easily — while others are inclined to press the wings closer to the body. It is very difficult to stretch out the wings of these latter. Nevertheless there are some good pigeons like this, especially for flying against a head-wind.

I prefer the bird whose wing is supple when stretched. The wing should be convex, with broad primaries and no gaps. The rear part of the wing especially should be well developed. The primaries will have a great force of resistance due to their suppleness: the small feathers which cover the wings contribute largely to this resistance. The bigger and stronger the covering feathers the more serviceable will be the wings. It is not essential that the wings completely cover the rump. There are on the contrary good birds whose wings leave the rump uncovered.
The tip of the wings should be as near as possible to the end of the tail especially for short distance flyers.

I attach great importance to the length of the last flight — it should be at least as long as the second last if not longer.

The arm should be strong especially with stock birds. Nevertheless it should be supple.

Plumage.

The colour has no connection with the quality of the bird. Nevertheless it is an indication in certain strains. I had for example a pair — cock blue pied and a red hen: from them I had some good youngsters chequer, red, pied: the chequers turned out to be the best.

Preference should be given to birds with feathers with a silky and flexible quill. Dry feathers are a fault, especially during rainy weather.

Split Quills do not handicap the pigeon in any way in racing. There are many examples of birds with this peculiarity winning championships year after year and sometimes in bad weather. The cause of split quills is not known. Some claim that it is due to microbes or parasites: other experts aver that it results principally from lack of mineral in the food or that the quills split through faulty functioning of the glands that supply them. Whatever the cause may be, there is no need to worry about it, as it has no perceptible influence on the flight.

It would not be wise however to breed from two birds affected in this way. The peculiarity can be eliminated by selection.
The Tail

of a good bird is usually slender and not too long. When the bird is at rest, the tail has only the width of one feather. I can, nevertheless, give instances of excellent pigeons having long wide tails. For example, my famous stock bird «THE TAIL» of 1913.

The Feet

should be solidly built and nervous. The cleanliness of the feet is a sign of good health. If the bird is even a little bit off colour the state of the feet betrays the fact: only sick birds allow their feet to get dirty.

With certain strains the youngsters have very black feet. This is a sign of the strain, but the contrary is not inconsistent with good class. High footed birds, however, with few exceptions do not turn out well.

Many fanciers dislike birds with long claws but among my best birds were some with extraordinarily long claws, for example my «OLD BLUE 1904», and my «DREAMSTER 1919».

The Eyes

I will only treat of the parts of the eyes that are of interest:—

The Cornea;
The Pupil.
The Iris;
The Cornea

Although I have known pigeons with the cornea only partly covered to win races against headwinds, I am bound to recommend that preference be given to birds with normally formed eyes, that is to say the cornea should be covered as much as possible. This ideal can be attained by careful selection of parents.

The Iris

is of very great importance. A great many breeders believe they can gauge the value of pigeons by the colour of the iris. Let me say, however, that the colour of the eyes has nothing to do with the value of a pigeon as far as racing is concerned. It can be yellow, orange, chestnut brown or milk white. Among birds representative of all these colours can be found pigeons famous both in racing as well as in breeding.

It is a mistake to believe that a handsome pair of eyes is an indispensable condition to a good bird. The main point is a bright eye: The eye should shine in the light — a sign of health and strength. Many birds have the iris unicoloured, either orange, red or chestnut brown. This is especially the case in birds belonging to a long distance strain.

Crossings of birds with white eyes have produced a whole series of colours: eyes of two colours, viz.: white-red, grey-red, yellow-red. No one should reject a bird which has proved its value by bringing home first prizes merely on account of the colour of its eyes.

With a view to the future of the colony and to have a good strong strain, fanciers should be careful to breed from birds with the outer ring of the iris distinctly wider than the inner rim around the pupil.

One should particularly watch a tendency to paleness of the eye. This is a distinct fault, and a weakness, caused sometimes by too much inbreeding.
Certain pied pigeons have quite black eyes. Sometimes it is case of albinism, but many good birds have quite black eyes. My experience is that these birds are particularly efficient, especially in bad weather. In passing, it should be mentioned that good breeders mostly have eyes of bright lively colours.

The colour of a pigeon's eyes is not permanently fixed until the third year. Preference is due to birds with eyes of well defined colours.

The iris being a muscle, a continual vibration can be noticed either with the naked eye or by means of a magnifying glass. The degree to which this vibration is present corresponds with the sensibility to light.

Birds who have this muscle in continual movement are worthy of attention.

Let us now touch on the famous «circle of correlation». What is this circle? It is formed by the pupil muscle which enables the pigeon to increase or decrease the size of the opening of the pupil.

This muscle is almost invisible with certain pigeons. With others it is so strongly developed as to form a little band round the pupil, more or less wide, yellowish, greyish, greenish or quite dark. The band may completely encircle the pupil, but sometimes the part underneath the pupil alone is visible.

Occasionally the band is serrated.

For a long time certain experts claimed to gauge the worth of a pigeon by this band or pupil muscle. These experts called it the «cercle of correlation» from a supposed correlation between it and the worth of the bird.

Other experts declare that the theory of the cercle of correlation has no value.

The truth is that this sign has a significance in the case of certain strains while in the case of other varieties, it is devoid of significance.
First make sure, therefore that the strain under notice is one in which the circle is a sign of quality, when this is the case, the presence of the circle will signify:—

1, If the circle is distinctly visible all around the pupil and clearly defined, determination and will power on the part of the bird.

2, if the circle is serrated, that the bird will probably turn out a good reproducer.

Pay special attention to those pigeons whose pupils seem to stretch out towards the beak: this is seen among birds whose circle of correlation is only partly visible, that is, on the under part of the pupil.

Let us remark in passing that the pupil muscle contracts under the influence of light and dilates in the shadow or darkness. The more readily the muscle responds, the greater is the sensitiveness of bird generally. The circle of correlation is more evident in old pigeons than in young ones.

Intelligence.

Strength is essential in a pigeon if success is to be attained, but intelligence is equally necessary. In my opinion this latter quality is a sine qua non of a good pigeon.

Certain experts say the seat of the instinct of locality is the bump between the beak and the eyes, and that endurance is a quality of birds the back part of whose heads is strongly developed.

Please do not attach too much importance to these purely physical peculiarities.

Let us rather consider the great truth «The eyes are the mirror of the soul». It is rather in the nature of a special gift to be able to gauge intelligence and character from the eyes. It is done by intuition, and the reasons on which the conclusions are based are impossible of definition. Nevertheless the faculty im-
proves with exercise. Every fancier who wants to, can sooner or later, learn to distinguish an intelligent pigeon from a mediocre one.

Let us take careful note of the general appearance of a bird, its peculiar habits, its every action in fact. It is only by constant observation that one can become really acquainted with a pigeon. Make a habit of studying the behaviour of each one of your birds, at rest, in flight, in races, at home, and in the nest.

**The Sex.**

As a general rule, the male bird will be more heavily built than the female. In a model colony of pigeons, it is essential to be able to readily distinguish between the male and the female birds. The cock has the chest more developed and deeper than the hen. Its head will be heavier, its feathers broader, and the expression of its eyes harder. Sometimes it is very difficult to distinguish the sex especially with young birds. It will, however, generally be found that mealy, fawn, or red pigeons, whose plumage is spotted with black will be cocks. A pigeon with small, almost tiny feathers will always be a hen. Again, the young birds who shew themselves aggressive and vigorously attack their companions with the beak can safely be reckoned to be cocks. Another way of telling the sex is by the wing.

Open the wing; the cock bird has wider flight feathers than the hen, and the beamfeathers more pointed.

When the wing is fully opened, the end of the secondary flights and the primaries will form a straight line in the cock thus
I have frequently used the following method.

Hold a golden ring suspended by a thread over the rump of the pigeon: If the bird is a cock, the ring will commence to describe circles, if a hen, the ring will oscillate like the pendulum of a clock.

**Breeding.**

What we want to aim for, of course, is that our birds come in first in races. Consequently, handsome but lazy birds are undesirable. First comes the sporting value and afterwards beauty. If the pigeon combines both qualities so much the better, but no one should deplore the lack of good looks in a bird so long as it wins prizes in races.

**Selecting Pairs.**

The future of the colony depends on this.
By means of selection in domestic animals an infinite variety can be obtained. The variety of pigeons
in particular is infinite. So much so indeed that it is impossible to recognise in any domestic bird the common ancestor of all pigeons, viz. the wild pigeon (Columba livia).

The selection of pairs exercises a great influence on the form of the product. By mating two birds of long and slender shape progeny of similar shape will inevitably be produced.

By mating two birds who have wide tails, one can never hope to obtain slender tailed birds. We should remember and be guided by these indisputable principles. Each of us desires perfect pigeons physically.

The first point to be observed in choosing parents is to pick out the ones that have given the best results in competitions. Try to mate the pigeons in such a manner that the outstanding qualities of the one may compensate for the defects in the other. By careful selection of the young, faults can be entirely eliminated after a few years, and in the end one, will get the sort of birds one wants.

A pigeon with too narrow flight feathers should be mated with one which has not this fault; a pigeon with protruding eyes, with a bird whose eyes are deep set; a narrow chested bird with one whose chest is broad and deep and so forth.

Never mate two birds which have the same defect.

The young of two highly strong pigeons are generally strong youngsters.

But on the other hand it is not certain that the young of two good birds will themselves be good birds.

Heredity holds so many surprises that we sometimes get young that have no point of resemblance to either parent.

If two good pigeons always yielded good youngsters, the breeding of pigeons would be the easiest thing in the world. It would only be necessary to buy all the best birds and breed from them in order to win all the first prizes. Those with the most money would have the best lofts. Happily it is not so.
The best racing pigeons are not always the best reproducers.

It is essential that two birds have an affinity for one another in order to yield good youngsters. Your object should be to discover good reproducers: they are worth their weight in gold. Try to find out if the birds you are proposing to mate have an affinity for one another.

Do not expect to get results all at once: patience and perseverance are necessary in the breeding of pigeons.

Apply this compensating method to obtain well-formed birds, but avoid mating too widely divergent birds.

Do not mate a big cock with a small hen, nor a heavy pigeon with a very light one. Mate birds with small differences.

Do not attempt to accomplish your object in too great a hurry, nature insists on a slow gradual progression.

Above all, limit yourself to one type of pigeon. Choose the type that pleases you most, stick to it, and do not introduce another type of bird.

By confining yourself to one type, you are more likely to have success: By and by you will be able to recognise certain signs that distinguish the birds of quality.

Heredity.

All the laws, possible and impossible on heredity, emitted by experts have been applied to the breeding of the racing pigeon. Some breeders have wooed success by following to the letter the famous laws of Mendel.
All these laws may have a certain value from the physical point of view. Other qualities, however, from our point of view, are indispensable, viz intelligence, sense of locality, and tenacity.

It is not difficult to produce a handsome pigeon. It is not easy to produce good pigeons. In many cases the young cocks resemble the dam and the hens the sire. It happens even oftener that young birds inherit the character of one of their grandparents.

It is not rare for a pigeon to resemble a distant ancestor; it may inherit its plumage or its character. Thus it happens that a pied bird appears in the progeny of uni-coloured pigeons. This is purely a result of atavism. If a pigeon resembles an ancestor of good qualities this is a good sign.

Our efforts are naturally bent towards the improvement of the variety, to enhance the good qualities and eliminate the bad. History however proves that there is also a tendency to retrogression. To quote Darwin «When living things of different strains are crossed, there is found in the descendants a tendency towards the past due to unknown causes». I conclude that domestic animals will always have a slight inclination to revert to the savage state. Thus the best breed of racing pigeon may degenerate without any apparent cause.

If one examines the history of strains, human as well as animal, one notices that the strain progresses for a time, climbs, so to speak. Arrived at the summit, it remains stationary for a longer or shorter period, according to circumstances. Then the decline sets in, and it degenerates inevitably.

This is an immutable law, from which no colony of pigeons can escape, unless one obviates it by a severe system of selection, sided by successful matings.

Our pigeons inherit the general characteristics of the strain; if they had no these, they would all resemble one another.
But they also inherit secondary characteristics, from which circumstance arises the great variability of our birds.

It is on these secondary characteristics that we have a great influence by selection and culture.

**CHOICE OF PRODUCERS.**

More than once I have had good young ones from pigeons who were, themselves, bad travellers.

This does not prevent my advising every fancier to use for reproduction purposes only those birds who have given proof of good qualities in their voyages.

It is hard enough already to get good young from good travellers, and one should not attempt to breed from birds with which one has not been able to get good prizes.

It is essential to note carefully the prizes won by one’s pigeons and also the weather that has prevailed during the races.

Pigeons that get good results against a headwind—pigeons of great strength—would have our preference.

This is the only way to maintain a good strain, and not have your colony degenerate.

In rearing pigeons that cannot battle successfully against bad weather, and which cannot acquit themselves well against adverse conditions, one jeopardizes the future of one’s strain.

The best producers are almost always good shapely birds, powerfully built, with strong wings, abundant and silky plumage, hard muscles, massive heads, and bright, sparkling eyes.

These transmit to their descendants not only the qualities of their strain, but also their individual qualities: they are the stock of a whole line of good pigeons.
Do not be influenced by the origin of a pigeon: the majority of pigeons descend from some illustrious strain, which does not however, preclude the possibility of there being many worthless birds among them.

Investigate the value of the parent and grandparent to ascertain the capabilities of the strain.

It is essential, however, that the pigeon itself be good. This is more important than to know from which strain it descended.

**AGE OF PRODUCERS.**

If you have a pair of pigeons that produce good young ones, let them mate, whatever their age, so long as you do not detect any degeneracy in their young ones.

As a trial you might mate each of the pigeons with one of a year or two years old at the beginning of the year, and only for one batch of eggs.

I prefer, however, pigeons of three, four, or five years; they are then in the prime of their strength.

When young one are reared from pigeons of one year old, they will be rather pigeons for speed, and will not have as long a career as the young ones of older birds.

If you have an old champion from which you are desirous of breeding, mate it with a bird of two or three years old.

**Crossing or Inbreeding.**

Shall we mate blood related pigeons, i.e. inbreeding, or shall we mate birds of quite different strains viz, crossings?

Each of these systems has its partisans and its critics. The ones claim that crossings alone are to be
recommended, while others say that inbreeding gives the best results. The truth is to be found midway between the two extremes. While the partisans of the one and the other dispute, we should adopt the advantages of each.

It is indisputable that good varieties have been obtained by crossing. Personally we have had champion birds obtained in this manner - our «Big», - «Dark», - «Little»  «Old Blue» - «Bismarck» are cases in point.

I am convinced even that by crossing are to be obtained the best pigeons especially when it is a question of obtaining birds that are to be the basis of a colony.

I have experimented with inbreeding since 1912. I have obtained in this manner birds remarkable from every point of view - my blue hen «The Tail», 1913, my «Dreamer», 1915, my famous «Basserke» 1918. etc.

Notwithstanding this, it must be said that inbreeding by itself causes degeneracy.

The greatest advantage of inbreeding consists in obtaining the desired results more quickly. It is easier to keep to the type.

Here are two examples of inbreeding I have made with great succès.
B. C. D. were pigeons of a different strain.

A'' (blue hen) mated thus with its great grandparent aged 11 years, gave me Ax (1913) blue hen «The Tail».

In 1914 I mated Ax (1 year) with its father A (12 years). I got from this union Axx, blue hen, which was an excellent bird in every respect.

This hen, Axx, was mated with a great grandson of A; All the progeny were good racers, and also good reproducers (among them, my «Golden Hen».)
Basserke — 3173-1918

of the loft L. Vermeijen, Borgerhout-Antwerp.

Renowned pigeon for speedraces.

Dam of many champions.

Has won the following prizes:

1919: 62, 72, 30, 22, 1, 4, 2, 26.
1920: 30, 49, 8, 51, 82, 7, 44, 98, 46, 3.
1921: 43, 101, 46, 8, 29, 8, 151, 82, 32, 11, 27, 4, 1.
1922: 392, 1, 180, 14, 18, 57, 97, 44, 69, 33, 14, 293, 59, 23.
1924: 4, 7, 13, 25, 7, 1.
1925: 32, 1, 45, 27, 12, 12, 28, 60.
1 our champion, unbeatable in a strong headwind

2 our blue stock bird, which did not give one worthless bird with a hen of the same strain (a great granddaughter of A (blue cock with white flights).

I have had, however, the youngsters of inbred pairs to die within a week of their birth.

I have known the same thing happen in other lofts — one youngster dying after a few days, and the other turning out a star pigeon.

When one goes in for inbreeding, one has to work with only perfect birds. As a matter of fact, the slightest weakness becomes magnified into a serious physical debility. The pigeons should be in the pink of health: the merest indisposition on the part of either being capable of undermining the strain.

I have been in a position to observe many colonies of pigeons managed along the lines of inbreeding. Almost all have gone to nothing after a few years of brilliant performances. The only ones that have survived are those that have been subjected to a stringent course of selection, and by introducing now and then a fresh bird to regenerate the strain.

It is, however, true that crossing, on the other hand, is not a guarantee of durable success. Many fanciers, who follow a plan of constant crossing, experience failure.

To succeed with crossings, both pigeons must have great affinity. It is through the lack of affinity that the majority of good crossed pigeons give poor progeny.

Inbreeding or crossing: each system has its defects. It is, therefore, inadvisable to go to the extreme in either direction, but rather to adopt the happy medium, and combine the best points of both.
In view of the foregoing, I do not, for example, recommend the union of father with daughter, mother and son, or sister with brother, unless it be done for the express purpose of keeping the strain pure, or if you are dealing with pigeons that are absolutely perfect in every respect.

Such unions should be the exception, otherwise the results are bound to be disappointing.

Let me say frankly that inbreeding, while it produce many brilliant birds, will also yield pigeons that lack the strength for morely normal growth.

It is advisable to keep the entire products of inbred pairs, so as to eventually choose the best birds, perfect in every respect.

In order to avail oneself of the advantages of both systems, viz, (1) the affinity that exists between the pigeons of the same family, and, (2) the vigour that comes from crossing, that inbreeding be cultivated, and crossing be practised.

The following will illustrate my meaning.

Let us suppose that we have two young pigeons, C & D, from an exceptional stock bird, A, with a hen, B, of quite another strain, but of the same type. C and D will be once more crossed with another strain (E x F).

The product thus obtained will be mated with one another (inbreeding).
In mating G and H (grandchildren of A) a return is made to the original strain. There is every likelihood of success with this combination, because G and H will have great affinity, while the new blood introduced by B, E, and F will preserve the strain from degeneracy.

The progeny obtained from G. and H., which resembles the original stock, A, can be regarded as new stock A'. A beginning is again made with A' on the same lines, thus:

\[
\begin{align*}
A^I \times B^I \\
E^I \times C^I \\
G^I \\
D^I \times F^I \\
H^I \\
A^{II}
\end{align*}
\]

and so on.

The greatest difficulty is to find the proper kind of strain for one's purpose.

For this, you must look for pigeons of the same type as your own, and which have had success in races of 400 to 600 kilometers.

Avoid fast racers (even champions) which are only good for distance up to 100 kilometers.

Try especially to find pigeons belonging to a strain that is still on the up-grade. A strain that has had its day, and is degenerating will be useless to you, even
though some of such birds still acquit themselves honourably. It is unfortunate that this degeneracy is so difficult to detect. It betrays itself, however, usually, since the youngsters have neither the strength nor the development of their parents.

Notice that excellent results are obtained by mating as follows:

(1) Cousins with cousins (G x H);
(2) Uncles with nieces (E x H or D x G);
(3) Grandfather and granddaughter (A x G);
(4) Grandmother and grandson (A x H).

The following shews the inbreeding that I have, myself, carried out:

A3 A3' A3'' A3''' are grandchildren of A obtained by crossing.

Ax comes therefore from A with A3.
Axx from Ax with A;
Axx' from Axx with Axx';
Axxx from Axx with A3'';
Axxx' from Axxx with A3';
Axxx'' from Axxx' with Axx'.
The results were more than satisfying. The progeny not only distinguished themselves in racing and breeding, but also were valuable for crossing with other strains. Many are the fanciers that have introduced my pigeons into their lofts, and the crossings have enhanced the reputation of my strain.

Environment.

Environment has a great influence on the pigeon. Do not take the word environment too literally. When I say environment, I am thinking of the loft itself, its situation and construction, the region (nature of the soil, climate &c.) and also the way the pigeons are managed.

All these factors contribute to form a whole on which depends the development of the variety of each loft.

The influence can be favorable or unfavorable. The pigeons go ahead, or degenerate.

I have often noticed that pigeons take some little time to adapt themselves to their environment, but, his stage passed, have gone ahead and given good results.

But experience has proved that pigeons cannot remain indefinitely in the same place, without feeling the ill-effects of too long a stay among the same surroundings. The causes of this are unknown. There is only one way to avoid it; put the birds into different surroundings.

It is even a good plan to take a few good youngsters to a friend upon whom one can depend, and who lives in quite another district. After a few years, the grandchildren of these same pigeons can be brought back. In this way you will have pigeons from a different environment, but which will have a great affinity for your own birds, since they will be of the same origin.
Being the product of crossings, the danger of too close inbreeding need not be feared. I know of some experienced fanciers who change their lofts after ten or fifteen years to afford a change of environment.

Certain animals living in one region for many years lose much of their reproductive qualities and their value for crossing, when they are brought into a quite different region; different formation of soil, different surroundings, and, above all, different formation.

It is only the next generation that will recover all its faculties. This danger is hardly any longer to be feared with pigeons, these being already the product of a vast number of crossings.

It is remarkable what a large number of youngsters stray from the loft towards the second month. It is lack of intelligence in some, and in others rather a reversion to the wild state: It is instinct that moves them tot his. Their impulse is to get away to another place and to found another strain there. In this way many youngsters of a given strain go off when they cast their first flight feather.

Those of this sort, that one can manage to keep, usually turn out good racers.
BREAKING.

It is possible for good youngsters to be obtained from pigeons kept close in a loft for more than a year. This is, however, the exception.

One can put good reproducers in a good well-ventilated loft and let them rear young for a year. The youngsters will not have suffered from the captivity of their parents. It will not be so from the beginning of the second year. It is necessary, therefore, to break to a new loft.

The breaking of a pigeon.

1st requisite:— Construct a small open cage, a small loft in which a strange pigeon can be put to accustom it to the surroundings.

2nd requisite:— Cause the pigeon to be broken into mate with one of your own birds.

3rd requisite:— Do not agitate the bird. Put it in the loft at night. It will stay in its place through the night. As the day draws on it will accustom itself to its new abode.

Do not attempt to break a pigeon so long as it is not accustomed to its surroundings. Accustom it first.

BREAKING IN OF A COCK.

Mate it with a hen that is already used to the place, and, if it is possible, put them in a separate nest from which they can go at will into the little cage on the roof. A hollow tile gives access to this. As soon as the two pigeons have mated, take away the cage and take out the hen in order to accustom it to go in by the special tile.

For the above, one, or, at the most, two days are required.
The third day the hen is taken out, preferably in the morning and while fasting. When she has flown around the loft and has gone in again, throw a little grain on the board in front of the hollow tile: set the cock at liberty and it will rejoin its mate: being hungry, it will also stop to eat up the grain.

Let them now carry on by themselves.

Probably the hen will go in, then come out again, followed all the time by the cock. They will stop to play on the roof. The strange bird will become more and more accustomed to the surroundings.

If he does not fly away the first day, all the better for the breaking. One of the following days, he will go up to drop on the landing board or to return to his old loft.

See that he finds no food there, and no hen to court. Catch him as soon as you can: put him in his nest and give him a little grain to eat, meanwhile giving him every liberty with the hen.

It may happen that you will have to fetch him a second time. If he returns again to the other place, hunt him out (never do this towards nightfall). He will learn soon enough to come to his new abode. Hunger and the hen will draw him.

**BREAKING IN OF A HEN.**

This is usually easier than in the case of a cock. The strange hen can recognise the surroundings through being in the breaking cage, where she can go freely.

Leave her alone when she sits for a few days: this is the most favorable moment. In the morning, you should cause the other pigeons to fly off: do not lock them up all day, let them come and go as they wish.

The hen to be broken in will leave its eggs towards 10 o’clock. On seeing the other birds go out, she will go out on the landing board, but will not go off at
once. She will remain among the band on the board and on the roof. If she flies off go and feth her immediately. Put her in the loft. As she is hungry, a little grain will be acceptable. Do not lock up the loft, let her go out again. She will finally get into the habit of going in and out with the other bird. Hunt her out of the old loft as in the case of the cock.

BREAKING IN OF A WHOLE LOFT..

Through our having to move in the year 1919, I had to break in the whole of my loft. I demolished the loft, and re-erected it at the new house. The pigeons were able to take refuge in a very large aviary 6' x 6' x 6' which was situated in front of the loft. They stopped there one month (December).

One fine day, I let go the cocks. They returned immediately to the old site, where they stayed two days and two nights.

My friends predicted that the pigeons would never come to their new abode.

The morning of the third day, however, they came and placed themselves on the gutter in front of the loft. They came in at the first call. Here were all my cocks broken in.

I followed the same plan with the hens and did not lose a single one of my 32 pigeons.

The distance was 1 1/4 mile.

It was a drastic method, but sure and quick.

For those who may think this plan too risky, I suggest they leave a little aperture in the roof to let the pigeons return to their old loft, where you should be careful to see that they find no attraction: Four walls and nothing to rest on but the floor; no perches, no light, no food, not even a drink.

Break the cock birds in first, then the hens. Fetch them twice, then hunt them out of the old loft by flapping at them with a handkerchief, or scare them away by setting up a large flag on the roof.
REMARKS.

(1) To break in a pigeon it is not necessary that it stay a long time in the breaking in cage: a few days are enough.

(2) Break your pigeons in in the morning when the weather is fine. In the winter do not free a pigeon that has come from a long way off: wait for the good season.

(3) Do not break in when the pigeon has very small youngsters: this is the most dangerous moment.

(4) When a strange pigeon is introduced to better the strain, do not free it without its having either an egg or youngsters. If it is a cock, break it in when it has big youngsters. Free the hen when she is sitting, and when you can put the eggs under other pigeons.

N. B. — Certain fanciers put a collar on the pigeon to be broken in, so that it, will not fly away. Others anoint the feathers with starch or soft soap that can be readily washed off. Never cut the flights of valuable pigeons.
MATING.

THE NATURAL METHOD. — The most simple plan would be to put in the loft an equal number of cocks and hens and let them mate as they like.

This is the most natural method, and, on the lines of the survival of the fittest, the best: the strongest cocks would have he strongest hens, and the best pigeons would mate together.

This is all very fine in principle, but does not so work out in practice, and for the following reasons:—

Pigeons who have no affinity would mate together: mating would occur of too nearly related birds, and it would be impossible to apply the principle of compensating qualities and defects. Furthermore, mating along natural lines implies combat, with its accompaniment of broken feathers and injured eyes. There would be no harmony in the loft: some birds would have eggs or youngsters, while others were still courting: the fast racers would mate with the long distance birds, and there would be vast confusion when it came to the races.

Mating Time.

This varies according to the end one has in view.

If one is siming at the fast racers, one mates the birds at the beginning of February.

If you want pigeons which will be in full vigour when the long distance races come round, put them together at the end of February or beginning of March.
Make the following distinctions:

1. Pigeons of one year (juniors);
2. Old fast racers;
3. Old long distance birds;
4. Late bred youngsters of the previous year;
5. Stock birds.

**Pigeons of one Year.**

These form the foundation of the future of the loft, and should be spared. Do not make them travel too much or bring up young too soon. Accordingly I myself, mate such birds rather late, and they do not go on the road until the fine weather (May).

**Old fast Racers.**

These should take part in the first races (mid-April). In order that they may sit for the second time, I mate them towards the 15th February. They will have eggs on the 25th, youngsters in the middle of March. The second laying will take place towards the 7th April so that they will have shed the first flight feather before the training.

**Old long distance Pigeons.**

These should have their plumage still complete at the end of June, because it is then that the great long distance races take place.

In order that the pigeons may not commence their moult too soon, mate them fairly late 1st — middle March.

**Stock Birds.**

Do not mate these before 15th February.

Their first youngsters will go out towards the middle of April, and will thus benefit by the fine
days that will be coming. To rear in January of February should be the exception (with a borrowed pigeon for example).

I do not approve of fanciers mating their birds about New Year to have precocious youngsters. In the case of old stock birds do not mate them until April.

**Late Breds.**

These being a reserve, it is better that they do not mate. They are born at the end of the season, and therefore need all their strength for their own development.

I leave them in the loft and let them do as they please.

To make them breed would constitute a handicap to their proper growth and also would interfere with their normal moulting. Late breds are only kept to have good results from them in their third year.

Late bred hens, especially, should not be mated: laying is injurious to their development.

Late bred birds should not be kept unless they are perfect in all respects: a set-back in their growth is not in their favour.

The best plan is to put the late breds in the youngsters' loft: They will then not mate until August, when laying and breeding will no longer have an injurious effect. Late breds have on occasions produced excellent progeny.

**Method of Mating Pigeons.**

More than one fancier has difficulty in the mating of his pigeons. Such and such a cock will have nothing to do with the hen that is destined for him. Such and such a hen fights continually with the cock with which she should mate. Another pair will stay in their box without so much as looking at one another.
All these difficulties are the fault of the fancier himself; he puts a cock and a hen in each box, and leaves them locked up until they mate. It is easily conceivable that certain birds will sulk for a while, and then mate against their inclination.

Now, every fancier should know that pigeons which have not mated according to their inclination will not do anything great in the races: even the rearing will suffer.

* * *

The method described hereunder is one that I have followed for a long while, and one which I recommend as a means of avoiding the difficulties to which I have referred.

When the time for mating comes along, I take away all the hens: the cocks will be locked up in the boxes that I intend they shall occupy.

Then I put a hen in the loft and open the box of the cock for which I have destined this hen.

Seeing that the pigeons have been separated since December, they will be very keen. It will not be fifteen minutes before the cock will start to court the hen. As there is no other pigeon in the loft, these two will be mated immediately. After 15 minutes or half an hour, I lock them up in the box they are to occupy. They will not fight. If the cock nothers the hen too much, separate them again until the following day.

When the first pair is locked up, I put another hen in the loft and open the nest of the appropriate cock.

I repeat this manoeuvre with each pair. When each has had its turn, I begin again by opening the nest of the first pair for fifteen minutes. At the same time they can eat and drink. If they are too much occupied with one another and do not eat, never mind. They will eat all right the next day.

The following day I open two nests at a time, taking care not to choose two that are too close together.
Always allow them fifteen minutes of liberty: the pigeons will mate and learn to return to their nest. In the afternoon of the second day, three or four of the nests can be opened simultaneously. From the fourth day, open all the nests.

It goes without saying that you must watch that the birds do not fight too much.

Following this method, it never takes me more than a week for all my pigeons to be mated.

They all know their nests, and I can set them at liberty without having any damages.

It is advisable to separate the pigeons for a few days after the racing season.

They will be mated, therefore, at the end of the summer, as they ought to be the following season. This is a very advantageous plan, as one can bring up a youngster of each pair to see the result of the mating. In this way, it can be seen in advance if it is advisable to leave the pairs as they are.

**Changed Pairs,**

If it is desired to mate a hen with another cock, isolate her for several days.

On a fixed day, lock up all your other pigeons. Only leave at liberty in the loft the widowed hen, and put in the new cock. They will soon mate. Leave them together for fifteen minutes, and then shut them up in their new nest.

The hen will soon know where she has to go, especially when she has laid: she will not look at her old nest. There will be no risk then in letting the original cock into the loft.

It is advisable as far as possible to have the cocks in the same nests that they occupied the previous year.

It is easier to change the hens: the cocks occasionally take it into their heads to go into their old
nests, and regular battles take place with the new tenants.

***

It may be that a cock is too vigorous, and will not let its hen have a moment of rest. The resultant fatigue may endanger the strength of the progeny. To prevent this, it is only necessary, to shut up the pair during a good part of the day.

There is no objection to putting a small drinking fountain in each nest during the mating, in order that the pigeons can drink when they feel inclined to. See that they do not soil the drinking water.

Laying.

When it is seen that the pigeons have mated (towards the seventh day), straw is thrown in the loft to enable the pigeons to make their nests.

As straw contains many insects' eggs, I prefer stalks of tobacco leaves, small furze branches or pine needles. I like to see pigeons make a good nest. This is a sign of champions.

During the construction of the nest the hen will have more rest.

She will lay, usually, towards the tenth day (about 4.30 p. m.) The second egg will be laid the following day (about 2 p. m.).

It is advisable to give the pigeons a good handful of linseed each day after the mating. The oily content of these grains will greatly facilitate the passage of the eggs.

Inspect the nests to see if there are any eggs without shells. These must be removed; they will be found when the pigeons have been deprived of their liberty or have not been provided with substances containing lime.
SCHOONE LICHTE

Strain Wegge of the Loft De Strijcker, Lier.
Bought on the auction sale 1925 for 6000 fr.
Always have in the loft a little vessel filled with old crushed mortar, powdered brick, and grit, which can be obtained from the trade.

Examine the hens who have not laid on the tenth day. If you find she has difficulty, lubricate the vent with a feather soaked in olive oil.

To help the hen a laxative pill or a little Carsbad salts may be given (a soup spoonful to a quart of water).

If the hen still cannot lay, and you see that she is getting in a bad way, you must make an effort to save her.

(1) When you have introduced oil into the vent, put a little table salt on the place and replace the hen on the nest; she should at once lay.

(2) If this is still without effort, try to break the egg by putting your finger into the vent, but be careful to remove the shell to the last tiny morsel.

This operation is very dangerous, and it will be better to consult a specialist.

* * *

Have an artificial egg ready to replace the eggs without shell and the broken eggs.

* * *

If the eggs are only slightly damaged, they can be mended with a piece of stamp paper.

* * *

Certain fanciers remove the eggs after a few days to make the hen lay again. This is very risky. One should not ask too much.

It is better to let the hen sit for about ten days. After that, remove the hen from the loft for a week. Then she can mate again and lay without injury to her health.
Incubation.

As soon as the pigeons are sitting, peace returns. The pigeons relieve each other at sitting at fixed times.

The cock will be on the eggs from 10 a.m. till 3 p.m.: the hen for the remainder of the time.

Note specially the birds that are reluctant to leave the nest: this is a good sign.

It happens sometimes that both the cock and the hen are on the eggs.

From the eighth day it can be seen whether the eggs are fertile; fertile eggs will be opaque, the others transparent. Hold them up to the light to see.

Eggs freshly laid can be kept for a longer or shorter period according to the time of the year.

Remove them at once and place them in sawdust at the bottom of a box. Keep them in a cool place, e.g. the cellar, and turn them over every day.

Hatching.

The youngster itself will break the shell; for this purpose its upper mandible is furnished with a very hard point.

By repeated blows, the youngster succeeds in breaking open the egg. (17 days after the laying of the second egg occasionally 18 days, if it be cold weather).

It may happen that the youngster cannot get out of the egg, the shell being too hard. It may be necessary to help it by lifting off with the finger nail small portions of the shell, but without breaking the interior membrane. The youngster should then be strong enough to free itself entirely.

If you do not want the pigeons themselves to rear the youngsters, replace the eggs by artificial ones. The pigeons will continue to sit on these for several days longer.
The Youngsters.

When the pigeons have sat for 13 or 14 days, they form the pap which is to nourish the young during the first six days of their existence. It will be noticed that the parents eat more than ordinarily some days before the hatching.

All the youngsters will not hatch out at the same time. Sometimes there will be a difference of several hours. The first youngster will come from the egg laid the last.

Towards the seventh day a few grains will already be found in the youngsters’ crops. It is then that the ring is put on.

If this is delayed any longer, the ring will not go on, the foot being too large.

If, however, it must be done, apply a little oil to the foot to make the ring pass more easily.

After ringing the youngsters, put them in a clean nest privoded with good litter.

Do not again touch the youngsters; do not move the nestpan, not even to take away the droppings.

I am in the habit of surrounding the nestpan with a bed of sand mixed with powdered lime; this mixture will absorb a lot of damp. Sifted ashes can also be added.

Powdered lime can be obtained by putting pieces of quicklime in a box; the humidity of the air will reduce the pieces to very fine powder.

***

The youngsters should rest quietly in the nestpan; if they are not still, and chirp constantly, there is something amiss with them, or the old birds are not nursing them properly; you should not waste much time with such birds. If they come out of the nest in 16 or 17 days, and if their excrement is rather fluid, do away with them, they will never become good travellers. It is a sign that their parents are not what they should be.

***
Remove drastically every young pigeon that does not grow normally.

Mark well the youngsters that keep quite still in their nests and continue to grow well.

Note that the healthy youngsters will be strong enough to drop their excrement over the nest.

Youngsters well covered with down will have plentiful feather.

Youngsters of certain strains will have very black feet; those with very speckled beaks will have a pied colour as well on the body as in the wings.

**Weaning.**

I am in the habit of putting a little grain in the nests when the youngsters are 20 days old; in this way they learn to food themselves.

They should be weaned from the 25th day. Some would say that this is too soon, and that it is better for the birds to leave them with their parents. The weaning should be begun on the evening of the 25th day: this is the most favorable moment. The following day they will eat hardly anything. Plunge their heads into the drinking fountain so that they know where to find the drinking water.

From the 27th day onwards, they will eat and drink and they will grow better than those that are weaned only at 5 weeks.

See that the youngsters are drinking enough; it is only necessary to feel the crop to ascertain this. If they have not drunk, plunge their heads again into the fountain.

See that the older birds do not beat the very young ones, especially when the latter go out.

Many youngsters are lost on the first day out. This depends very much on the strain, and also, let it be said, on the fancier.
I hardly ever lose youngsters, but I put them on the landing board form the 26th day, so that they get to know the surroundings.

They are acquainted with the neighbourhood before they start flying.

* * *

Certain youngsters leave the loft and stay away until night of the next day. Watch these; among such will be found the best pigeons.

* * *

It sometimes happens that the feet of a youngster left alone in the nest will slip and spread out. The feet will become deformed and the bird will be condemned unless it is remedied in time. Place the bird between two little heaps of straw, so that the feet cannot spread out.
TRAINING.

Training does not only consist in the few short tosses that are given the birds before the races, but includes also preparation.

To make the pigeons tame is the first thing; wild birds bring nothing but trouble, and no advantage.

In order to have tame birds, you must arrange that they have you constantly in view. Go to the loft in the same way each day; your pigeons will come to recognise your least sign.

* * *

Keep calm: do not agitate the loft no matter what happens.

Speak to your pigeons as you would to children.

* * *

When you go to take them up, do not chase them.

If you want a pigeon and cannot get hold of it easily, have recourse to stratagem: throw down a little grain; the pigeons will come for it and you will be able to take the pigeon you want from the group.

There is, however, for that matter, only one way to make pigeons tame: never give food otherwise than within reach of your hand. Those that will not come near go hungry, and the next day they will learn better (see chapter on feeding, page 22).

If the pigeons constantly have grain before them, use a little millet, hempseed, rice, or maize to entice them: have some of this always in your pocket; the pigeons will come to you for it.

Wild pigeons always waste a lot of time coming in from a race. From tame birds you will be able to take the ring immediately.
Exercice.

The best system consists in leaving the loft open day and night.

As soon as day breaks, the pigeons can go out if they want to. They will take their flight around the house, go into the fields, or stay on the roof just as the fancy takes them, always in the fresh, pure air: they will thus have the maximum amount of oxygen, making for good rich blood.

There will be a few casualties, due to birds of prey, and through poisoning from chemical manure, which the pigeons like for the salts that it contains. Complete liberty is, however, so good for the birds that a few losses are relatively unimportant.

Forced Exercice.

There are not a few fanciers that are unable to apply the principle of the open loft: those that inhabit the large centres. The neighbours, the cats, the dirty gutters are all obstacles as also are small gardens. Pigeons kept in an aviary in a small town garden will soon get sick if left at liberty. Furthermore, the gutters of the neighbouring houses would be the favorite resting place for your pigeons, where they would almost certainly get poisoned, and also on the asphalt ledges covered with little pebbles, where vegetation injurious to pigeons grows freely.

It is for these reasons that I have to shut up my pigeons during a portion of the day.

Exercice, however, is indispensible to them: hteir digestion is improved; the circulation of the blood becomes more regular, and the muscles are more supple.

* * *

In summer I open the trap at six in the morning. While the pigeons have their fly around, I clean the
loft. They remain at liberty until 7 o’clock. This is the hour for the first meal.

The second outing takes place from noon till 1 o’clock, and the third from 4.30 to 5.30.

My pigeons go out in all weathers (snow or fog excepted).

The cocks in the morning and evening: the hens at noon.

Food is distributed after each outing.

The hours mentioned need not be strictly adhered to. Each fancier should choose the times most convenient.

Nevertheless it is necessary to be regular. It would not do to let the pigeons out one day, say, at 6, noon and 4 o’clock, and the next at 9 a.m. and 6 p.m. The outings must take each day at the same hours.

Two outings each day would be enough in case of need, say 7.30 to 9 a.m. and 3 p.m. to 4.30 p.m.

Watch your pigeons when you open the trap: some birds are reluctant to go out: be suspicious of these. I prefer pigeons full of activity, who go out immediately. The others are not up to the mark. Either they are too fat, or they are unhealthy.

I like particularly the birds that do not return with the crowd, but continue their flying: these take pleasure in using their wings.

Let us say in passing that many fanciers get good results by forcing their pigeons to remain in the air for 30 minutes or an hour. They wave a flag to prevent their coming back on the landing board.

Regular exercise is particularly beneficial to breeders or odd pigeons.

Do not, however, thrust such a system as this suddenly on your birds. It should be done gradually, say, 10 minutes, 15 minutes, 20 minutes, half an hour. If more is wanted, give them the following week three quarters of an hour, and later, a whole hour.

This system has the advantage of enabling one to single out the weak birds: they will not be able to
DROOMERKE — 30516-1919

Good stock hen in the loft L. Vermeijen, Borgerhout.
stand the strain of such a long exercise: the strong ones will not tire.

Training old Birds.

Do not commence too early: it is in March and the beginning of April that most of the pigeons are lost, as well as in September.

Do not be impatient: success is for those who can wait.

Train your birds when the leaves are on the trees.

I commence by individual tosses of 6 miles. Afterwards my birds go with those of the club or federation over 12 miles, 30 miles, 70 miles. They are then ready for the races over 100 miles. The veterans go safely over 250 miles, then over all distances.

The juniors do 60, 90, 130, 160 and 200 miles.

That the pigeons only return very late from the first tosses hardly worries me.

I note particularly the birds that return fresh against a headwind.

A pigeon that tires in training does not promise anything good.

You should welcome the opportunity of training your pigeons against a headwind. This is the best way of getting to know their capabilities.

Those who have the time to spare, I advise to go in for individual tosses of 30 to 40 miles.

Toss your pigeons separately over 6, 12, 25 and 40 miles. This is the best apprenticeship. You will lose pigeons, but they will almost always be the worthless ones.

This training will take place before the races. It is advisable that pigeons do a short toss (6 to 12 miles) before each entrainment, preferably in the early morning, and tossed singly. (I toss my pigeons in the op-
posite direction to that of the usual line of flight: I give a good mark to those that take the right course immediately.

Training of young Birds.

Do not delay too long before putting them in the basket.

To accustom them to a stay in the basket, I put them in a training basket furnished with a drinking fountain. They learn in this way to eat and drink in it.

This should be their first exercise, and is done several days before the training begins.

Afterwards I toss them all together at some distance from the loft: then the individual toss becomes the principal exercise. The tosses are in the following sequence: — 6, 12, 25, 40, 60 miles.

Individual tosses of 12 and 25 miles are specially good, as also is one of 12 miles, but this latter in the opposite direction to the usual line of flight.

* * *

The young birds themselves will tell you when it is time to begin the training: they will set off in the morning and not return till night.

This is the moment to begin. If it is not done, youngsters will be lost.

IMPORTANT NOTICE.

If you are dealing with youngsters with whom you are totally unacquainted, train them severely until they have done 200 to 250 miles. Only keep those that give proof of possessing good qualities. The others should be done away with, even though they may be of illustrious origin.

There is nothing against pushing this experiment further, and putting some youngsters over a course of 300 miles.
A longer distance than this is too much for a young bird, unless it is to be left to rest the following year.

* * *

If you know your strain, a training up to 60 miles will be enough for the first year.

You should choose the youngsters that most conform to the type of the strain.

The second year they will go over distances of 250 to 400 miles.

The third year will see them over all distances.

It is only exceptionnally that big jumps can be made when training young birds: for example:—

12, 35, 60, 160 miles.

Good youngsters will return from such tosses if the wind and weather are not too adverse, but with anything like bad weather you will have severe losses.

* * *

If you have youngsters that return late from training tosses, stop the training, resuming three weeks later by short tosses of 3 miles (individual tosses and in groups).

There are some young pigeons that lend themselves readily to training, and others whose intelligence only develop slowly.

KNOW YOUR STRAIN.
PREPARATION OF PIGEONS.

This does not commence with the training as many fanciers think. It goes on the whole year round. Paradoxically it can be said that with our pigeons we reap in summer what we sow in winter.

It is contrary to common sense to cease to care for the pigeons as soon as the racing season is over.

Take care of their health especially during the months of resting.

Plenty of air and light.
Movement.
Good grain distributed sparingly.
Clean drinking water.
Pigeons should be purged two weeks before mating; towards the month of June, and after the races, August-September.

A pigeon can be in perfect health and yet not win prizes.

This is the reason that many pigeons require in addition to good health, a stimulating circumstance that impuls them to make special efforts, e. g. sitting, young, chasing.

It is this stimulating circumstance that is called:

The Position.

There are pigeons that are always in good position to win prizes in all weathers every time they are engaged.

These are real exceptions, and unfortunately not many of them exist.
We have to be content with pigeons that win good prizes when in one of the special circumstances, i.e., positions, named above. This position differs from pigeon to pigeon and never recurs regularly from one season to another.

It is important, therefore, to know the propitious moment of the good position of a pigeon.

It is only experience that will teach you what is necessary to each pigeon to make it give of its best. The rules that follow are, therefore, only generalities.

* * *

The Cock. — The coks will be in their best position when they have big youngsters or eggs; certain cocks make their best efforts when the mate has laid the first egg.

I have not great confidence in cocks when they are chasing. I hardly ever enter them at such times except in the case of a strong, wiry cock, and if he is to be entered for a long distance race (in such a case, he should do very well).

The same applies to a cock with a very small youngster (i.e. long distance race).

An excellent position is that when the youngster is from 10 to 12 days old and the cock wants to begin chasing again.

* * *

The Hen. — I do not enter my hens when the cocks are chasing them (certain fanciers get good results with hens that are due to lay the day they are put in the basket; this is a cruel practice and weakens the pigeon).

Enter your hens as soon as they have sat for several days. Do not put them in the basket the laying day or the day after. The laying of two eggs requires a rather big effort in itself, and a little rest can do nothing but good to your hens.

The more a hen sits, the better will be her position.
Give preference to the hen whose eggs are due to hatch out on the day of liberation.

Notwithstanding what many writers on pigeons say, do not trust hens whose eggs are chipped before putting in the basket; I have proved time after time that such a position is not propitious to the majority of hens, even if they are champions.

Many hens develop their greatest speed when they have young of four to five days old at the day of putting in the basket; there are some even that win prizes only in this position.

For long distance competitions, the best results are obtained with hens who have sat about ten days or who have youngsters of 8 to 10 days old.

SOME CONSIDERATIONS.

Chasing, young, and sitting are so many stimulating circumstances for pigeons, but what is favorable for some is sometimes unfavorable for others. This will be seen quickly enough.

A pigeon becomes lighter when it loses his good conditions.

* * *

A great drawback of voyages is the difficulty of getting the birds to resume their sitting on their return. I always take the precaution of placing the eggs or the youngsters with other pairs still together.

At need you can place the eggs in an ordinary incubator used for hatching chickens.

The mates of the pigeons that are away are put in a basket, cocks and hens separated and put somewhere in the shade. Give them to drink rather than to eat.

On the return of the racers, the prisoners are again put in the nest: all the pigeons should resume sitting on the eggs or nursing the youngsters as the case may be.

Those birds that are not send away for the race, and whose mates are on the road should be removed from
the loft on the day of despatch, and their nests are shut up.

If this precaution is not taken, there is a big risk of the birds that remain abandoning their eggs or youngsters: the birds returning from the race would also abandon the nest.

* * *

The position varies with the age of the bird; sitting is the favorable time for birds during their first two years. After that, it will be the youngsters that form the greatest inducement to get back quickly, and also the beginning of chasing.

My «Basserke», late bred of 1918, won many prizes during the sitting (1919-1920). Later she won her best prizes with eggs chipped (1921).

In 1922 she attained the highest speed with youngsters of 5 to 6 days. Afterwards, in 1923, 1924, and 1925 she never missed the first prize being with a youngster of 15 days.

* * *

A good fancier will take note of when the eggs are laid so as to know exactly the day on which they will hatch out.

This is quite a necessary precaution, especially during the racesseason, when the eggs have to be changed from one to another.

Mark the egg with copying pencil so as not to have confusion.

Always make a careful record of the prizes that your pigeons win and their position at the time.

When the position recurs (see your note-book of the laying dates) you will be able to gauge more or less what your pigeon will be able to accomplish.

* * *

Do not forget that your pigeons have to be in the best position on the day of the toss, not the day of their being put in the basket.
The influence of the position waxes for a few days, then wanes.

Your pigeon should be entered when this influence is on the increase. If the effect of the position is on the wane, and you enter your pigeon, say on Thursday, the position will be naturally still lower on the day of the race and the bird will not acquit itself well.

This is the case of many pigeons of which marvels are expected because they seem in tip top form when put in the basket: they will have passed the climax of the position on the day of the race.

Do not place too much reliance on the exploit of the bird the previous race day.

**Some little Wrinkles.**

The keen fancier will know how to exercise a certain influence on the position of his pigeons.

1. **Prolonging the sitting period.**

If one has a pigeon that performs well while sitting, it is possible to extend this beyond the normal duration. A few days before the eggs are expected to hatch out, remove them and substitute others laid later. The pigeons continue sitting for one or two days, long enough for you to put them in the basket in their good position.

Watch the pap that birds form when they have sat for 15 days. Not to extract this is sometimes the cause of grave trouble (rotting of crop). To obviate this ill, leave a big youngster with the old birds. While the sitting continues the youngster will benefit by the pap.

I do not make use of artificial eggs during the racing season. The pigeons notice the change on turning the eggs, and their enthusiasm diminishes.

2. **With Youngsters.**

(a) Certain pigeons perform well while with youngsters especially hens).
DARK CHEC HEN 1926

A beautiful type of the Antwerp racing pigeon.
This parental affection can be exploited when the pigeon has sat for more than 14 days. Half an hour before putting the pigeon, in the basket, remove one egg and substitute it with a small youngster. Leave the old bird alone for a short while, then put it out; it will return immediately to nurse the youngster. Then put it in the basket. It will acquit itself well on the race day.

(b) In order to keep up the scheme, give the eggs back to the pigeon on its return. The important thing is to keep it on the nest. On the day of putting it in the basket, give it again a little youngster.

If it is found that a pigeon abandons its eggs, give it a youngster: it will be sure to nurse it.

To a pigeon that has been sitting 10 to 12 days, you can easily give a youngster of 7 days or more.

(c) Certain hens can be entered more than once with little youngsters. The first time, they are put in the basket having youngsters of 5 to 7 days. When they return they will find a youngster of 6 days in the nest. They will remain with it until put in the basket for another race.

Certain fanciers prolong the position by changing the youngster more after the second return.

(d) I prefer to leave the hen alone with her big youngster of 14 to 15 days. On the day after the race, I simply remove the cock who is not put back into the loft until after the hen is put in the basket. The whole thing is to see that the hen does not lose her interest in the youngster and start looking out for another cock.

I have had hens who were unbeatable when in this position of partial widowhood.

(3) If you have a cock that does not exert itself as it should, you must seek a means of gingering it up.

Begin by putting in its nest another cock that is very hungry, and throw down a little grain so that it stays there. Your lazy cock will see the intruder and will proceed to chase him out. Before he succeeds in
doing this, take your cock and turn him out. He will come back at once to fight. This repeated two or three times will enrage him. Take him while he is fighting and put him in the basket. On being released, he will «get a move on».

This trick can be tried each week to keep in trim a rather lazy cock: he can be made to fight once or twice a week. See that he wins however.

A better result still is obtained by setting a hen which has little youngsters to fight in the same way (to avoid breakage, put in artificial eggs).

Widowhood.

Some fanciers obtain marvellous results with «widowed» pigeons.

This system requires a special loft, much time, and continual care.

The pigeons are rearing youngsters, and when they have sat for 10 days (second batch), the hens are all removed and placed in an aviary where the cocks can not see them.

The cocks abandon the eggs after a few days.

It is then that the special education begins.

In the loft they have only one place: their nest (as many nests as there are cocks). There is no perch there.

Furthermore, the arrangement of the loft is such that these cocks cannot see the other pigeons.

Morning and evening they have to make a forced flight for at least half an hour.

They are fed after each return: they are given at first the grain that they like least — no stimulants. — at most a little millet. Feed them sparingly: not a single grain should be left after the meal.

* * *

The loft should be always fresh and well ventilated.

* * *
Training is begun a week later.

The first toss should be 3 miles. The cocks will find their hens on their return; they remain together a quarter of an hour. The second toss is given the next day — 6 miles. Again they find their hens on their return; these are removed after 15 minutes. The third toss will be 12 miles, which should be repeated three times.

The cocks will finally understand that the hens await them in the nest after a toss, and they will hurry to return, which of course is the object to be attained.

When put in the basket for the race, they will know that they will find their hens when they return; from the moment of being liberated, they will put forth their best efforts.

On race days they will be left together for several hours. The hen is then removed and not replaced until the following race day to await the return of the cock.

This method seems simple at first sight, but in reality it will be found very difficult in practice.

Appetite fails very quickly with widowers: they absolutely need exercise — forced flights. These pigeons have their moult very much delayed, and very few youngsters are produced.

Furthermore, losses are very severe in bad weather.

This system may be practised during the months of May, June and July, after which they should rear a youngster in order to bring on the moult.

This widowhood can be worked with the hen, removing the cocks.

The principal thing to be careful of is mating amongst the hens themselves.

As soon as the pigeons in widowhood weaken, the system should be stopped and the cocks and hens left together.
Partial Widowhood.

This is easier to work. I have already said something about the hen left alone with its youngster for one or two weeks.

If it is desired to race a cock several weeks in succession, the hen is removed on the day after the race, and not put back in the loft until a few moments before the cock is put in the basket. He will be very keen. Do not let them have connection.

The hen can be shut up in the nest (the day of putting in the basket, from morning). The cock will get on the landing board in front of the nest and get himself into a great state of excitement.

He is removed to be taken away to the federation. On the race day he will make his best speed back to find his hen.

Cocks without Hens.

It happens frequently that there is an odd cock, for the reason may be that a hen is lost: more than one fancier would be in a quandary as to how to meet this circumstance.

I treat these cocks as a reserve. Furthermore they help me to consolidate the position of the other cocks.

As a matter of fact, these cocks, simple or widowers, are always on the move, they are never at rest. They pursue all the hens, bluster into all the nests and oblige the other cocks always to be on the qui vive.

There is nothing to prevent these cocks being entered in a race, without giving them hens. Give them a nest box: they will defend it. They will form a great affection for their home, and will fly well.

If the worst come to the worst, a hen can be put into the loft a few moments before the cock is due to be put in the basket. The cock will start in pursuit of her immediately, and when released for the race, will hurry back to find the hen, which is then removed until the next occasion,
LATE BRED YOUNGSTERS.

These are born in July and August, even later. They do not finish the moult of their flight feathers, and some of them do not moult any of their flights during the year of their birth.

I retain several late breds every year — especially cocks.

1st — the late breds are born when the best pairs are already known.

2nd — they benefit by the strong sun for their development.

3rd — It is at this epoch that the influence of atavism is felt the most. Youngsters will be born that are the purest representatives of the strain.

4th — Never keep a late bred that is not strong, well feathered, and true to type of its good ancestors. This is a rule that should be strictly adhered to.

CARE OF THE BIRDS.

I am not of the opinion of some fanciers who lavish too much care on these youngsters born late, in the hope of inducing them to develop more quickly.

I prefer to subject the late breds to the same regimen as the other pigeons. If they do not develop normally, it is because they are not strong enough, and I have no use for them.

These late breds constitute my reserve: when I lose one of my racers, I have at once a substitute.

***

Furthermore the late bred cocks keep the other cocks up to the mark.

Do not mate late breds before May. Otherwise the hens will suffer from precocious laying.
It favours the development of late breds not to mate them the first year.

* * *

One can nevertheless get good youngsters from a pair of late breds, especially speedy subjects which will be of great help in rejuvenating the strain.

TRAINING.

Some say a great many late breds get lost, for the reason, they say, that they are not intelligent enough, to make a quick return to the loft.

In regard to this I would reply that the primary object in keeping late breds is not that they may win prizes the following year.

They should be put into training at the end of May, June or July, while the weather is fine, in the same way as the young pigeons of that year, but with still greater precautions.

Several tosses of 3 miles are given (separately or in groups: then 6, 12 and 25 miles.

If they do 60 miles the second year, you should be satisfied with that and stop them there.

Do not forget that many late breds moult in two different places in the same wing, which makes training more difficult.

Do not expect wonders before the third year.
PIGEONS IN GOOD POSITION.

Certain pigeons are in good position at the beginning of the year, and others only in the fine days of May.

The majority of pigeons have already lost their good position towards the end of May: they do nothing good after a brilliant start.

A pigeon in good position is recognised by the following signs:

1st — the pellicles on the breast bone disappear. The skin will be glossy and rosy, and a little red spot will be visible in the middle of the breast bone which is a sign of the perfect circulation of the blood.

Beware of a grayish skin, or skin with a violet tinge.

The pigeon are losing their good position as the pellicles re-appear.

* * *

2nd — The feet are clean and free from excrement, and are of a vivid red colour.

* * *

3rd — The caruncles and morils are powdery white.

4th — The inside of the beak will be free from glairs and there will be no filament between the tongue and the palate.

* * *

5th — The aperture in the palate will be well opened. If it is not, the pigeon is not in a fit state to perform well over any serious distance.

* * *
6th — The eye should be quite bright, clear, sparkling, and the pupil quite black.

7th — The wing shows that the moult is following its normal course: the very slightest indisposition will have a deleterious effect on the moult.

8th — The plumage should be close, shiny, bloomy and greasy as if oiled.

9th — The body should feel firm to the touch, and should give the sensation of a solid firm block.

10th — The droppings should be hard and crowned with white. It is especially the state of the excrement that tells the good fancier how his pigeons are.

Beware of pigeons that keep themselves in a ball all day long, huddled up: who open their beaks constantly as if to tast; who shake their heads; and whose feathers are ruffled at the base of the beak.

Do not imagine that the turbulent pigeons, the rabid hunters, will win the first prizes. Place your reliance rather on those birds that keep to their nests, defend them valiantly, and are always bringing in some little thing to improve them.

As I have already said, they like to fly off and remain in the air longer than the others.

I prefer an active pigeon: one that has a nervy, vibrant air about it.

Do not examine your pigeons when they come to eat or to feed their youngsters. They have a tired appearance at such times, and have the habit of rolling themselves up into a ball.
On the return from a race or the following day, it is hardly to be expected that your pigeons will look their best.

In order to be certain as to the condition of your pigeons, you should go to the loft early in the morning and examine the droppings.

* * *

In feeding their youngsters, the parent birds may get their nostrils dirty. At other times they should have the nostrils quite dry. A pigeon that is not in condition will have the nostrils and the borders of the eyes wet. This is the first symptom of cold in the head.

FINAL REMARKS.

1 — Avoid mating two pigeons destined for a race. A good pigeon should find its mate on its return.

2 — Let a good pigeon have the nest it occupied the previous year.

The slightest change is sufficient to discourage a pigeon.

3 — Do not change the regimen at every moment so to speak, adopt any system you like — but stick to it all the year round. Nothing is more injurious to the organism as to keep chopping and changing.

4 — If you have a pigeon become lazy, remove it from the loft two or three days before putting in the basket for the race. Put it somewhere it cannot see the other birds. Even put it in a friend's loft, and take it to the basket without its having seen its own loft again.

5 — If you notice that any pigeons are not all right, destroy eggs and youngsters. Separate the pigeons for a fortnight, purge them. Should return after these two weeks of drastic treatment.
Let us say at once that the moult is not a disease. Quite the contrary: sick pigeons will have a bad moult.

The moult does not only consist in the renewal of the flight feathers, the covering of the wings, the neck, breast and head which takes place from July: the renewal of the down is not less important: This latter is taking place all the year round.

A true fancier will look each morning to see if a little down is round about where the pigeons have rested: this is a sign of good health.

A pigeon that has a bad moult has its future in danger.

The Process of the principal Moult.

When pigeons sit for the second time and towards the 10th day, they cast the first flight feather. The second flight is cast after the new one has partly grown (the pigeons then will have big youngsters or will be sitting for the third time), and so on, flight feather after flight feather at each sitting (at times two, during the fine weather). At the seventh or eighth flight the small feathers and also the tail feathers are cast.

The two middle tail feathers are shed first, then in sequence until the last but one: this is shed after the last.

It is not rare, however, for a pigeon to shed a flight feather when the youngsters are still quite small.

The moult stops towards the fifteenth day of the sitting: the pap begins to form from this moment.
A few days later the plumage will be complete. The moult starts again when the youngsters are ten days old.

This stoppage in the moult has its importance for the pigeon that one wants to race at the end of the year.

When the moult begins it is time to stop the good pigeons.

The moult does not take place at the same time in all lofts.

It depends on the loft itself, on the heat, the ventilation, the food, the efforts made during the season, as well as, to a lesser extent, to the time of birth of the birds.

There are late bred that will begin the moult very late all their lives. (This is the reason why certain fanciers reserve these late bred for long distance races).

* * *

Do not trust a pigeon that has a bad moult if a flight feather bears the trace of a journey, this is not a great danger: much more grave is the bad formation of a flight feather through indisposition. The pigeon will not be in good form until it has shed the feather in question the following year.

* * *

It is a good plan to destroy all pigeons that have a bad moult.

**Conditions necessary to a good moult.**

Rest
Air
Light
Liberty
A dry loft
Regularity
Baths.
Do not force your pigeons to fly while the moult is at its height.

Arrange that the pigeons get the full benefit of the rays of the sun: those are regenerators.

It is an error to imagine that it is necessary to keep pigeons very warm: those in an aviary wide open to the South East will have the best moult: It is only strong draughts that one need fear.

Arrange that during heavy rain, the water does not penetrate to where the pigeons are resting.

When it rains in the morning, make the birds go out: this is as good as a bath.

Put a bath at the disposal of the pigeons when the weather is not too cold (in the morning so that they are dry by night time).

Do not imagine that overfeeding will help the moult: rationed pigeons will have the best moult.

I am in the habit of marking the two flights as well as the two exterior tail feathers. This enables me at the end of the year to tell if all the pigeons have finished their moult: It is a bad sign for them not to do so, excepting of course the late breds.

How to help the moult.

No more breeding after the 15th August; shut up the nests and let the birds sit on artificial eggs. If a pair attempt to make a nest for themselves in some corner, stop them at it. If the pigeons have little youngsters, however, leave them for about 10 days.

If the moult does not follow its normal course, you can help it on in the following manner:—

1st day — complete fast
2nd day — purge (a little linseed at midday)
3rd day — half linseed, half ordinary ration)
following week — 25 0/0 linseed, 75 0/0 ordinary food.
To help the moult you can give flour of sulphur (14 days): the grains are damped and powdered with the sulphur; then stir (a teaspoonful for 20 pigeons).

See that the loft is dry: this is effected by good ventilation, without draughts. Draughts and also dampness are very injurious during the moult, and usually cause cold in the head.

Avoid overpopulation: With the old birds and the youngsters that are born during the year, at the end of July, the number of birds is almost always too great for the space in the loft: lack of air and freedom follows, and the result of this is indisposition and sickness.

Healthy food: As I have already mentioned, you must not forget the daily ration of linseed.

Pigeons living in the country will have a very good moult; they get plenty of exercise; they breathe the pure air, and find all kinds of small seeds that help the growth of the new feathers. The seeds contain many substances necessary to the formation of the feathers. They can be obtained from the peasants who get them after the grain has been threshed, and put through the sieve. Give the pigeons a little of it each day.

** **

The grain can be sprinkled with a mixture of the following:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>oz. avoir du pois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour of sulphur</td>
<td>6 1/2</td>
</tr>
<tr>
<td>powdered aniseed</td>
<td>30 grains</td>
</tr>
<tr>
<td>cinamon</td>
<td>15</td>
</tr>
<tr>
<td>gentian</td>
<td>45</td>
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<tr>
<td>quinine</td>
<td>30</td>
</tr>
<tr>
<td>ginger</td>
<td>15</td>
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<tr>
<td>rhubarb</td>
<td>5</td>
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<tr>
<td>fennel</td>
<td>5</td>
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<tr>
<td>sulphate of iron</td>
<td>5</td>
</tr>
<tr>
<td>cumin</td>
<td>5</td>
</tr>
<tr>
<td>corundum</td>
<td>5</td>
</tr>
</tbody>
</table>

** **
In order to get a last feather cast, the pigeon may be put in the kitchen in a small basket with a layer of straw (slightly damped) at the bottom. This expedient however, should only be resorted to in very exceptional circumstances. Try first of all to make your pigeons moult in a normal manner. You will succeed by following the directions set out in this chapter.

Do not pull out the flight feathers with the idea of getting better ones to grow.
Pigeon Diseases

Please do not expect a treatise on veterinary medicine: this is the province of the specialist, who have produced many specifies for which much success is claimed, though nothing is said of the unfortunate birds upon whom these remedies have been tried without effect.

The biggest mistake by the majority of fanciers is their abuse of all sorts of drugs.

If we are to do as the specialist would have us do, we should spend all day giving the pigeons pills and elixirs.

The best policy, of course, is to prevent disease: you can do this to a great extent by adopting a good regimen and following a few rules of elementary hygiene.

First of all, look after the health of your pigeons. The requisites are:

- Good ventilation
- Light
- Sound wholesome food
- Exercise
- Cleanliness.

Cleanliness.

There are fanciers who win many prizes and yet never clean out their lofts. They attach no importance to hygiene.

It is only to be expected that epidemics break out first of all in neglected lofts.

I limewash my loft twice a year — 1st, before mating, 2nd after the racing season.
Each month I disinfect the place: an easy task with the help of a spray (Creoline, or any other desinfectant that is on the market may be used).

Every day, I clean out the loft. While the pigeons have their outing, I remove the droppings. This does not take fifteen minutes.

Each week I clean the loft thoroughly with a broom and scraper.

I notice every time that the pigeons are happier after the cleaning.

There is no objection to spreading a layer of fine sand over the floor.

**Drinking Water.**

Pure water, renewed every day.

Take care to clean your drinking vessels every week (with hot water and a rough brush).

Certain fanciers give tar water and find it beneficial (add a few drops of tar obtained from the chemist).

Other fancier profer iron-water. They put pieces of iron or a little sulphate of iron in the fountains.

I prefer to add 5 drops of perchloride of iron to one quart of water (not more) on two or three days each week.

When it is freezing, put the drinking fountains in the kitchen in the evening, to be replaced on the following day (add a little warm water so that it will not be too cold).

If you want to give your pigeons elixirs put on the market by the various specialists with much advertisement, be careful not to overdo it. Put it in the drinking water on Sunday and Monday, and perhaps on Thursday.

When the races have been very severe, I give my pigeons on the day after the race barley water to drink — a handful of barley boiled for a quarter of an hour in a quart of water, for 20 pigeons. Leave the brew to cool before giving.
BLUE HEN 1922.

Bought for 4000 fr. on the sale of Mr De Greef (1925) and for 6000 fr. on the sale of Mr Bousman (1927)

Won in 3 years 35 prizes of which 34 prizes with pools; has been only 36 times in the basket for racing.
Purgative.

Purge your pigeons as follows:
(1) before mating
(2) at the beginning of June
(3) after the racing season.

Purgative pills are very efficacious, but also very dear. You can make them yourself, as follows:

50 grains of powder of aloes
25 grains of Rhubarb powder
25 grains asa foetida.

Make pill of the above mixture about the size of a pea, using a little honey. Give two in the morning fasting with one hour interval.

It is easy to add a purgative to the drinking water, as follows:

50 grammes of sulphate of magnesia or sulphate of soda

Multiply by the number of pigeons.

The night before remove the drinking fountains, and replace them in the morning; to make the pigeons drink the purgative give a handful of linseed.

* * *

The following is an excellent purgative:

Put a branch (sprig) of ruta officinale — ruta graveoleous — in a quart of water (for 20 pigeons), keep simmering for 15 minutes and then let cool. This is a remedy recommend specially for the autumn purge.

In order that the effect of the purge may be complete, it should be preceded by a course of linseed. For a week the quantity of linseed ordinarily given should be doubled. Do the same the week following the purge.

After the purgative that is given 14 days before mating, the following drink should be given (for one week).
oz. avoir du pois

Gentian root ... ... ... ... ... 1 1/2  
dock root ... ... ... ... ... 1 1/2  
strawberry root ... ... ... ... ... 3/4  
root of wild chicory ... ... ... ... ... 3/4  
iodide of potassium ... ... ... ... ... 30 grains  
water ... ... ... ... ... ... 6 pints  
simmer for fifteen minutes and then allow to cool.

S I C K P I G E O N S.

No amount of precaution will prevent pigeons becoming sometimes more or less indisposed, and even sick.

First Steps to take.

As soon as you notice that a pigeon lacks appetite, and huddles itself up, let it fast for 24 hours, and then purge it.

The fasting plus purging will cure the majority of indisposed pigeons.

I know many champion fanciers who use no other method but the following for their sick pigeons. They put them apart in a wide open loft; a few boards protect them from the rain: for food linseed and a little wheat and barley.

If the pigeons do not get well of themselves, these fanciers prefer that they die. A drastic system.

Going Light.

This may have different causes: bad digestion, diphtheria, poisoning.

It can be cured by giving cod liver oil capsules (two in the morning) or a little unsalted bacon fat.

Another remedy is to give pills of powdered red brick mixed with fresh, unsalted butter.
DRINK. — Infusion of flowers of camomile (10 to 12 heads to one quart of water). Pour boiling water on the flowers, leave for fifteen minutes, and then remove the flowers, and let cool.

FOOD. — Linseed, wheat, rice, bread and butter.

Diarrhea.

The excrement of the pigeons is liquid. The cause may be defective feeding: change of diet will produce an improvement.

Diarrhea may be the result of dampness (dry the loft with powdered quicklime).

If it is caused by intestinal worms, give a worm powder.

If the excrement is liquid and greenish, there may be poisoning, in which a case purge the invalid.

GENERAL REMED — Wholesome food.

Put in the affected pigeon's beck a pinch of bismuth.

For drink give barley or rice water. If there is no improvement, give in the morning a little rice, slightly damp, and sprinkled with the following mixture (1 teaspoonful for 10 pigeons).—

| Gentian   | 1  |
| Quinine  | 1/2|
| sulphate of iron | 1/6 |
| ginger   | 1/6|
| fennel   | 1/6|
| caraway  | 1/6|
| aniseed  | 1/6|

See that the excrement does not dry at the entrance of the anus. Remove it carefully by cutting the down.
Thrush (Cancer)

This is one of the most serious of illness. Yellowish patches appear in the beak and throat.

Diet — To be strictly followed. Two days without any food whatsoever. Purge the affected birds, and isolate them from the others.

I never touch the affected parts, the pigeons will get well by themselves.

Give light food: linseed: wheat. Feed yourself the pigeons that are unable to eat.

If you wish you may scratch the affection parts lightly, but be careful not to cause bleeding.

Pain then with the following:—

- Tincture of iodine ... ... ... 1 part
- Glycerine ... ... ... 2 parts

Diphteria.

This is an illness that manifests itself in various symptoms.

1st — Formation of soft grayish patches in the beak and pharynx, the gullet and the intestines. The liver and lungs may also be affected.

2nd — Small pox may be the result.

3rd — White spots in the palate.

4th — Wing disease.

Diphteria is due to a bacillus discovered by Klebs in 1883, and cultivated for the first time by Loeffler.

The symptoms are as varied as the forms that it takes.

The most characteristic is the appearance of false membranes which arise from the ulceration of the mucous membranes of the digestive canal and the respiratory tubes.

It is a disease very difficult to eradicate. The affected pigeons must be isolated and subjected to a long
course of purifying treatment and then tonic treatment.

Strict diet for 3 days: purge the invalids: as a tonic give the drink already indicated:

\[
\text{oz. avoir du pois}
\]

\[
\begin{align*}
\text{Gentian root} & \quad \ldots & \ldots & \ldots & \ldots & \ldots & 1 1/2 \\
\text{dock root} & \quad \ldots & \ldots & \ldots & \ldots & \ldots & 1 1/2 \\
\text{wild chicory root} & \quad \ldots & \ldots & \ldots & \ldots & \ldots & 3/4 \\
\text{strawberry root} & \quad \ldots & \ldots & \ldots & \ldots & \ldots & 3/4 \\
\text{iodide of potassium} & \quad \ldots & \ldots & \ldots & \ldots & \ldots & 30 \text{ grains}
\end{align*}
\]

For food: wheat, rice, toasted bread, and a little hemp seed.

Small Pox.

These may be caused by diphteria or by too rich food.

The best treatment consists in purging the invalids for two days, and then feeding them on light food. I prefer not to touch the pox. I get better results in that way than by scratching, painting, or removing them.

White Spots.

These appear on the palate. Pigeons well looked after and fed on sound lines will not have much trouble with these white spots. In any case, there is no need at all to paint them with any of the various fluids that are supposed to be a cure.

Be careful, however, to mate affected pigeons with subjects of another strain which have not been attacked by diphteria. For that matter, this is a general plan to follow if you have pigeons affected with diphteria: the ones that recover should be mated with healthy pigeons of another strain.

Pigeons that have been ill, and also their progeny should be closely watched.
Wing disease.

This disease may be caused by the diphteria microbe.

The cause may also be a toxic condition of the blood set up by too rich food.

Or again, it may be the result of a violent blow or too great fatigue.

MILD CASES.

The pigeon can still fly a little.

Make the patient fast for two days, purge with sulphate of soda, and afterwards give light food, linseed, wheat etc.

Bleed the bird (cut with a sharp knife between two claws).

Bathe in warm water
Massage the affected part
Apply a leech.

SEVERY CASES.

Swelling at the joints.

The same treatment can be followed and in addition the abscess may be opened (be careful not to cut into an artery).

Let it suppurate for several days, bathing it in warm water, and pressing gently. Do not lock up the sick birds.

THE FEET. — It may happen sometimes that the feet are attacked by arthritis.

Light regimen
give a drink with a pinch of bicarbonate of soda
friction with oil of turpentine.

Cold in the Head.

This is due to dampness, sudden change in temperature, or to diphteris.
MILD FORM.

The pigeon sneezes, the caruncles become brownish and the nostrils are moist.

REMEDY — Good ventilation, without draughts. Purge the pigeon affected.

MALIGNANT FORM.

A thick, malodorous liquid flows from the nostrils and the eyes are swollen.

To avoid infection, the affected subjects should be isolated. Diet the birds two days with purgatives, and light food. Inject into the nostrils a drop of sulphate of copper 3 0/0 with a syringe.

For the eyes — a few drops of the following eye salve:—

nitrate of silver ... ... ... ... ... 0.03
 distilled water ... ... ... ... ... 10

NOTE — It sometimes happens that the discharge coagulates and obstructs the nostrils.

Open the beak: the aperture of the palate will be closed: breathing will be difficult and the pigeons greatly handicapped in racing. Inspect your pigeons, before putting them in the basket for the race.

A pinch of alun and a drop of «Haarlemmer Oil» in the beak will cause the aperture, in the palate to open.

Poisoning.

The pigeon will not eat, will have its crop full of water, and will vomit a greenish matter.

Isolate the pigeon: give it an emetic or a purgative pill after having washed the crop with warm milk. Inject milk into the crop with a syringe. Then hold the pigeon head downwards, pressing on the crop towards the beak to make the milk run out. This should be done two or three times.

Give the bird milk to drink.
**Apoplexy.**

The pigeon falls to the ground with strong convulsions. If you get to it in time, hold it under cold running water (under the tap). Bleed it on the foot. Then two days of absolute fast, followed by a purge and light food.

**Worms.**

The excrement is not hard: it is composed of little morsels in a greyish liquid.

Give a worm powder, and a piece of garlic the size of a pea every morning. Drink: $1 \frac{1}{2}$ oz. garlic + 2 pints of water. Simmer 15 minutes.

**Parasites.**

There are many kinds: the best preventative is strict cleanliness.

Put under the nests a piece of muslin soaked in paraffin. Do not use straw in making the nests, it provides a refuge for parasites. A small bellows is very useful for getting the insect powder in among the feathers. The powder to use is Spanish camomile.

A BAREGE BATH is good for pigeons that have a lot of lice (especially if there is a lot on the quills of the flight feathers).

Dissolve 30 grammes of bareges in a quart of water and boil. Wait until the solution is luke warm, and then plunge the pigeon in all but the head.

Wipe the bird and place it in the shade well out of the way of all draughts.

**WOUNDS.**

These cure very quickly. If the pigeon has the crop torn, sew it up with white thread (both needle and thread must be thoroughly disinfected. Both the interior and exterior must be sewn in such a way that the feathers will not get into the wound. It is advisable to cut away the feathers and down around the wound. Do not give any drink, and for food, some tick beans that have been soaked for 12 hours.
REMARKS.

First eggs — Pay particular attention to the youngsters from a pigeon's first egg during the year following its birth.

Fertilization. — This takes place 4 to 5 days before laying. Give plenty of liberty to your pigeons so that their eggs may be fertile. There is risk of sterile eggs when the pigeons are continually locked up. They prevent one another from performing the act of fertilization.

Calcareous Substances.

The pigeons should find the substances for forming egg shells in their food and drink.

Nevertheless it is well to give them some old mortar (without hair) crushed red brick and grit.

A cuttlefish bone is a tit-bit that pleases the birds.

A SECRET. — Make a mixture of:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime</td>
<td>2 1/4 lbs</td>
</tr>
<tr>
<td>Old mortar crushed</td>
<td>1 »</td>
</tr>
<tr>
<td>Powdered brick</td>
<td>1 »</td>
</tr>
<tr>
<td>Crushed hemp seed</td>
<td>1 »</td>
</tr>
<tr>
<td>Anised</td>
<td>3 1/2 oz</td>
</tr>
<tr>
<td>Crushed egg shell</td>
<td>1 lbs</td>
</tr>
<tr>
<td>Kitchen salt</td>
<td>3 1/2 oz</td>
</tr>
<tr>
<td>1 small cuttlefish bone crushed.</td>
<td></td>
</tr>
</tbody>
</table>

Add enough water to make a rather thick paste, and then roll into half pound balls.

Dry in the sun or in the oven, and then give it to the pigeons. They will go mad over it.
Blue Tongue.

Do not fear for the pigeons that have the tip of the tongue blue.

Red Morils.

Certain pigeons have red morils. This is a defect from the point of view of beauty, but has no relation to the flying powers of the bird.

EVENING MEAL — It is a serious mistake to feed one's pigeons late in the evening: the last meal should be given about 5 o'clock.

Empty Crop.

Examine the pigeons in the morning to see if they have empty crops: if not, the pigeon is not well. Give a pinch of carbonate of soda.

Care of tired Pigeons.

If a pigeon comes back very tired, keep it for five minutes in warm water (250) and then keep it in the kitchen to dry it. Give it wheat, linseed, rice, and bread soaked in milk (250 = 67 degree Farenheit).

RETURN FROM VOYAGE.

Do not let a pigeon appropriate the nest of another that is out racing.

Do not alarm a pigeon that is returning from a race. Do not let it drink very cold water; this might result in a chill.

SEPARATING RACING PIGEONS.

In order that pigeons can have a complete rest through the winter, separate the cocks from the hens. Arrange in such a way as to able to give liberty to both cocks and hens. I do not hold with locking up half the pigeons during one or two months.
BATHS.

Give baths in summer and winter. Monday morning and Thursday morning during the racing season. On mild days in winter the bath is healthgiving; it helps both cocks and hens. I do not hold with locking up preservative.

LENTILS-MAPLES.

These may be used instead of tick beans or tares. Lentils should not be used until they are over a year old: very young lentils make the birds ill.

HATCHING.

Of the two eggs, the last laid will chip the first; this is the egg that will yield the first youngster.

THE GOOD POSITION OF A PIGEON.

In order to find out how your pigeon is, put in the basket an hour before the time for sending off. Arrange so that he can see the loft.

A pigeon that is all right, will be quite firm after his stay in the basket: if he is limp there is something the matter with him.

Some experienced fanciers clean the feet on their pigeons and anoint them with olive oil before putting them in the basket for the race.

GREENSTUFF.

This is good for pigeons: it is rich in vitamines and mineral matter. Lettuce, cress, chickweed, cabbage leaves — all are good.
REMINDERS

JANUARY.

The pigeons are separated.
They are let at liberty in turn before feeding.
One meal is sufficient.
Look out for the moult of down.

FEBRUARY.

Prepare your pigeons for mating
Purge and tonic drink
Change from winter food to breeding time food
(no sudden changes)
Cleaning, disinfecting, white washing.

MARCH.

The pigeons are mated
Let them alone
Give them the wherewithal to build good nests
Ring the youngsters in good time.

APRIL.

The rearing is at its full. Do not touch the youngsters after they have been rung. Wean them at
25 days old.
Two meals per day of rearing mixture.
The pigeons will moult the first flight feather at
the second hatch of eggs.

MAY.

Change to racing diet, but always by degrees.
The big races begin
Two or three meals per day
No strong stimulants.
JUNE.

Long distance races
Training of youngsters
Give them a little hempseed to help to put your birds in good humour.

JULY.

The month of champions.
This is the month in which the small seeds come into use.
See that your pigeons do not drink too cold water when they return to the loft.

AUGUST.

Still a few more races, then rest for the gallant fighters.
The pigeons should moult.
Do not race your pigeons that are moultng, the rain will render their flight very difficult, and there is also risk of loss.
Change imperceptibly to moultng diet.
Do not forget the linseed.

SEPTEMBER.

Stop all breeding.
It is no longer advisable to enter your good pigeons; race the birds that you do not care much about.
Get rid of the old birds and the youngsters that have not been up to scratch.
Mark the last feathers to be moulted.
Disinfection.
Close up the nests.
Purge your pigeons.
Two meals per day.
Beware of poisoning.
A little sulphur will help the moult.
To the baths with the pigeons.
Give them new crop wheat.
OCTOBER.

The moult continues.
Avoid dampness
Two meals per day.

NOVEMBER.

Change to winter diet
One meal per day
Beware of fog
Visit the shows
Look for a pigeon to improve your strain
The moult continues, especially of the down.
Less food

DECEMBER.

Put the drinking vessels in the kitchen in the evenings when it freezes
Alterations in the loft should be made before the end of the year.
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A FEW REASONS

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Because it keeps them in better health and makes them more profitable to you.

Because it's very nourishing and birds thrive upon it.

Good grain alone will not make hens lay, squabs plump or birds sing; they have no teeth and must have grit to grind their food and it should be a palatable grit mixture they relish.

They relish «XX» RED CROSS HEALTH GRIT and walk over all others to get it.

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IT'S GOOD

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Red Cross Health Grit

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BIRD'S DIGESTIVE ORGANS.

All birds, which are animals with a body covering of feathers, have quite a different digestive system from that of the animals covered with fur. The fourfooted fur animal has a set of teeth to grind its food, while the birds' system requires that it shall have a scientifically prepared and properly proportioned tonic health grit.

Scientific investigation has revealed the fact that the bird really requires grit for three purposes: (1) To assist in grinding its food in the gizzard, and (2) to keep it in a healthy condition so that nothing else is needed when our «XX» RED CROSS HEALTH GRIT is used but good, fresh, feed and water, and (3) for the purpose of making feathers there must be inorganic chemicals somewhat similar to those required in making glass, as the quill of the feather is almost of the same chemical composition as a piece of glass.

Pigeons, poultry and birds, when allowed their liberty, find such things in fields and earth and in various ways; but when they are confined in close quarters the soil soon becomes barren of such food element and experience has demonstrated that the best way to supply such elements is through some perfect grit composed which our «XX» RED CROSS HEALTH GRIT is.

«XX» RED CROSS HEALTH GRIT is a food and should be fed to the pigeons and poultry as judiciously as any grain. There are times when pigeons will eat more of it than at other seasons.
These times are when they have young in the nest which are beginning to grow feathers, and in the fall of each year when the adult pigeons moult.

They require grit at all times, but may not eat as much of it, as during the periods mentioned. The person in charge of feeding them, therefore, should study these things and arrange the quantity so that it will all be eaten. Pigeon men often overlook the fact that grit and feed that is allowed to stand around uncovered is soon contaminated by the dust of the loft and the white powder which is being constantly cast off from the feathers of the bird and is called «Effluvia». This is the powder that settles on the walls of the loft and soils your clothes when you brush against it. There is no doubt but that this loft dust settling upon the open pan of grit and open feeder on a wet day will absorb some moisture from the atmosphere, and starting to mold is one of the sources of disease among pigeons, and careful pigeon keepers will guard against it by having the grit and feed kept perfectly fresh and clean.

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It's the only health grit mixture guaranteed PURE.

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