

**The Role of Inbreeding
in the Racing of Pigeons and
the Foundation of Families -
Round 2**

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Agenda:

Lets Review 1996

The Principles

Some Myths

Strategy for the Small Loft

My Program

Discussion

Remember!

I am here to share what I have come to believe after 37 years of intense study and practice in the field of animal breeding.

I am not here to make converts. There is plenty of room in the sport for many approaches. Use the ones that work best for you.

There are no “silver bullets” in this business. Every successful approach takes a plan, patience, and hard work.

Let's Review 1996:

- **Darkening/Lightening Systems have become virtually required for successful young bird racing.**
- **Van Loons and particularly Super 73's have become quite the rage.**
- **Computers have become commodities. They are everywhere and they are cheap!**

Darkening/Lightening Systems have become virtually required for successful young bird racing.

“Surely we will continue to improve our techniques, but remember that once a new technique is widely known, it stops being an advantage and becomes a requirement.

As sophisticated as racing is today, we may well be close to the point where we have maximized all the environmental factors. When this day comes, genetics will be the only area (outside of random luck) where one may forge an advantage.”

From last year’s seminar.

I am convinced this day has arrived!

Van Loons and particularly Super 73's have become quite the rage.

“... I asked him, ‘What methods do you use to get those kinds of results?’ Mr. Van Loon looked at me sternly and said, ‘Remember this, there is only one thing that is important - good pigeons, nothing else.’ ”

Tony Rossi, “Louis Van Loon: The Miracle Man from Poppel”, The Racing Pigeon Digest, October 15, 1995.

From last year's seminar.

Remember that for genetics to be an advantage, your gene pool must be significantly better than that of your peers. If the Van Loons really represent a step up, they will be an advantage only until they are widespread.

To maintain a consistent advantage requires that you either continually discover the hot new lines early or that you out breed your competitors.

Computers have become commodities. They are everywhere and they are cheap!

You don't have to actually use the computer to feel the impact.

- **Computerized traps --->**
Basis for effective contemporary group testing
- **Computerized race results --->**
Basis for unrating and national normalized data
- **Internet and the World Wide Web --->**
There is no longer an ocean separating our racing worlds.

Those who do use them effectively will come more quickly to separating the myths from the facts in their breeding programs.

The Principles

- 1) The laws of genetics apply to all species with amazing consistency. Learn them and use them to your advantage. The pigeon is not an exception.
- 2) Genetic change occurs in the time frame of generations. This requires that your breeding program be focused for a prolonged period (years!) on a consistent set of goals.
- 3) Body, attitude, fitness, fuel, and luck collectively contribute to winning a race. All but luck are influenced by both genetics and environment. Genes determine the maximum potential of the bird, while the environment determines how much of that potential is actually realized.

The Principles

- 4) Inbreeding increases predictability by narrowing the gene pool. (This also means that it decreases the variability that will be seen in the offspring and can actually set limits on progress that can be made). A true master breeder is never satisfied with such limits and uses both inbreeding and outcrossing to achieve consistent results that steadily improve over the years.

- 5) If the genes you need are not in the gene pool, no amount of selection will put them there. Start with the best stock you can possibly obtain and with great care and discipline, always watch for opportunities to improve your gene pool.

The Principles

- 6) **Inbreeding should only be done with world class animals.** If you inbreed with average animals you will develop a line that is only capable of producing average animals.
- 7) **Inbreeding decreases the effect of heterosis (or hybrid vigor).** This will require that you distinguish between your breeding and racing programs.
- 8) Assuming the appropriate genes are in your gene pool, your results are directly related to the intensity of your selection and the time period over which this selection is exerted. In other words:

Results = (Selection Pressure) X (Time)

The Principles

- 9) Selection pressure is determined solely by the criterion you use to cull and the extent to which you apply it. If you want to make progress you must cull. If you want to make a lot of progress you must cull hard and cull often. Even among world class animals you shouldn't expect to retain more than one in ten.
- 10) You must cull fairly. Remember the criterion you apply must in fact measure the traits you are selecting for and they must be measured evenly for all members of the selection group. Two examples of applying this principle:
- | | |
|---|------------|
| use contemporary group testing | 1 - |
| directly for the traits of interest | 2 - select |
| instead of selecting for correlated traits. | |

Some Myths

1) Pedigree isn't important, it's performance that counts!

The pedigree tells you an enormous amount about the gene pool from which the individual was bred. Of course it is important. It is extremely important! Obviously though, it isn't the only thing that is important. I want a breeder who comes from a long line of performers and from a line which has narrowed the gene pool so that I get a high degree of offspring who also perform well. I also want that pedigree in order to know how closely it is related to my existing gene pool. An outcross will result in the addition of new genes and will therefore broaden my gene pool and increase the variability I will see in my youngsters. As a breeder, I need to have a sense of how much variability I am adding before I throw away years of careful selection. Naturally, a sloppy or untrusted pedigree is the equivalent of no pedigree.

Some Myths

1) Consider this example:

		1376
	1017	
447		834
		192
	834	
		1175
		191
1001	1376	
		1036
		192
	834	
		1175

Some Myths

- 1) On the surface nothing seems exceptional. The animal is inbred and so there should be some uniformity in what it produces, but there are no flying or progeny records indicated for any of these birds. Many people would argue that it would be pointless to go back any further than the third generation since the contribution of any one bird would be minuscule.**

Agreed?

Some Myths

“Go for the Gold” Seminar

- 1) The percentages of Og and Meadowlane in this animal are 36% and 36% respectively. Og and Meadowlane are dead. This bird is a 1996 hatch. In my program, this bird is priceless, but I would never have known it if I hadn't looked in detail at the pedigree.

1376 Og Meadowlane Twice

1017

447

834 Og Meadowlane 4 Times

192 Og Meadowlane Twice

834

1175 Og Meadowlane Twice

191 Direct son Og Meadowlane

1001

1376

1036 Og Meadowlane Once

192 Og Meadowlane Twice

834

1175 Og Meadowlane Twice

Some Myths

2) I can't use this bird because it isn't a pure (Janssen or VanLoon or your favorite family).

The whole point of inbreeding is to increase the percentage of quality animals. However as the gene pool becomes more restricted to those “good” genes, the crop becomes more uniform. We reach a point where they are all good, but they are all the same. In the pigeon racing sport, “good” is a relative term and what was good twenty years ago is not really competitive today. As breeders, we must continually raise the standard. In an inbreeding program, this will require an outcross. It is far better that the “outcross” be a series of mild course adjustments over the years, rather than a radical cross to a totally unrelated animal.

If the animal in question is significantly superior to the birds in your breeding program (as indicated by its racing record or the racing record of its offspring) and if it is mostly of the family of your loft, then it may be the *perfect* addition!

Some Myths

3) This animal is valuable because it is inbred.

Inbreeding is a tool. The product of the use of the tool depends completely on the craftsman and not the tool.

If the bird is a superior animal, then I believe it is more valuable if it is inbred because it is more likely to pass on its superior traits to a higher percentage of its offspring than if it isn't inbred. Similarly, if the animal is not of superior quality and it is inbred, it may well only produce mediocre animals

I have in the past seen national champions in other species produced from poor individuals that were the inbred product of national champions. Given no other options, I would use such an animal in the breeding program. I would expect though to have to cull most of the youngsters and would patiently wait for the right one to eventually segregate out of the pool.

Strategy for the Small Loft

“Go for the Gold” Seminar

- 1) Make sure that every other aspect of your racing program is competitive. Genetically superior birds can consistently fail to win if the environmental factors among competitors are sufficiently superior.**
- 2a) If the above is satisfied and your best birds are still not superior to your competition, then look to add some new birds to your program.**
- 2b) I would recommend a good sample (at least 2 pair) of a single gene pool that is clearly superior based on race results.**
- 2c) I would place a premium on a gene pool which is already narrowed. If you are having to start over, start at the top and avoid the time it takes to reinvent the wheel.**

Strategy for the Small Loft

“Go for the Gold” Seminar

- 2d) I would obtain the very best animals from this pool that I could get my hands on. Recognize though that average animals from a superior inbred pool are potentially more valuable than very good animals from a widely diverse pool.**

- 2e) In either case, you will want to test the progeny of your purchase and reacquire stock if they do not measure up. Remember your acquisition was only a sample of the gene pool. You may not have gathered the right genes. It is also possible that the right genes are not really in the pool you selected from and you should try another source. The true value of animals from a high quality narrow pool is truly extraordinary.**

Strategy for the Small Loft

“Go for the Gold” Seminar

- 2f) If, on the other hand, your birds are already superior but you have been practicing years of continuous outcrossing, you might consider closing the pool to further outcrosses for awhile and narrowing it so as to increase the uniformity of your crop.
- 3) Heterosis (hybrid vigor) provides such a significant boost to the performance of the racing pigeon that you should assure that a significant portion of your race team is the result of a cross between two separate and largely unrelated families. In my loft, all the first round are crosses and then subsequent rounds are bred straight. I fly (for testing purposes) the first two rounds. Do not breed from the crosses!

Strategy for the Small Loft

“Go for the Gold” Seminar

- 4) Always maintain at least two generations in the stock loft. Progress is very often measured in two steps forward and one step back.
- 5) Test, cull, test, cull, test, cull, test, cull ...
- 6) Remember from last year:

Selection is a three stage process:

The 1st cut is based on the bird's potential

The 2nd cut is based on actual performance

The 3rd cut is based on the performance and/or breeding of the progeny

My Program:

- **20 different inbred lines**
 - Sprint: TRA, SPR, VAN, S73**
 - Middle: MOG, CAL, BRO, SME, JEM,
BER, FRE, ROE, JAN, HOF**
 - Distance: DEV, ARD, HER, BEK, STA, OSM**
- **Individual breeding cages**
- **Computerized trapping of one loft contemporary races**
- **Computerized records with full progeny analysis**
- **The Race Kit Program**
- **Web Page coming**