REPRODUCTIVE SUCCESS (?) IN PIGEONS

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~1972?

Many fanciers allow only about 4 months in the early part of the year for all their breeding. With two or three successful clutches they can triple or quadruple their birds, then settle back to culling, training, showing, etc. But things don't always go without a hitch -- the breed may not be able to feed the squabs because of short beak or something, and feeders may be needed. Or eggs may not be fertile, or accidents may happen, etc.

For such reasons perhaps some fanciers will breed longer, maybe 8 months of the year. Hardly anybody even thinks of breeding all year around. However, squab farms can't afford to take such vacations, and their birds are kept shelling out until they get too old, maybe five years. It can be done, especially where the winters are not too brutal. And for laboratory studies we keep the birds in good buildings, heated in winter, and with controlled light timing. Under such conditions I have found that many pigeons reproduce steadily for several years, even the fancies.

What could possibly go wrong in a laboratory? You'd think all the environmental problems would be solved, no? Would you think somebody could neglect to feed and water on a holiday? We have hired help to do the chores, and there's many a slip. If we don't continually check up, things don't get done right, if at all. Once the time switch for the lights went haywire and it was four months before anybody realized that the birds were getting a 24-hour day. That really stopped production after a while.

Little things like that are just the beginning. Paratyphoid and other diseases occasionally pop up to take a toll. If we are not perpetually on guard, mice can infiltrate and raise havoc. And if we use wire-floored pair-mating coops, the birds are likely to pull all the straw out of the nest and drop it through the floor. Eggs may get mashed or cracked or just plain deserted, and squabs may somehow get out of the nest or die for other unreasonable reasons.

And then there are genetic problems. Some birds are just naturally poor producers or even sterile. Some hens may persistently have single-egg clutches, or double-yolked eggs. Some birds lay too soon, maybe in the same nest with the squabs. Some embryos are genetically abnormal or even lethal, and may be unable to hatch or to live long after hatching. We like to study such detrimental mutants as albinos, silkies, porcupines, congenital tremors, split and webbed feet, polydactyls, heel-walkers, etc., and we don't cull.

So reproductive success may be considered anything above zero. The success in our laboratory will astound you. Let me first say that there was little in-breeding, and most of the birds were healthy mixed-breeds. The feed was somewhat variable, but generally consisted of pigeon pellets or game-bird pellets supplemented with milo and sometimes other grains as well as some stock salt and oyster shell occasionally. Records were usually taken twice a week.

I am considering our records from 1966 to 1972. We had about 60 matings going for part of these years. Of these matings, about 20 failed to produce a single progeny that lived to be classified (several weeks), and such matings were discontinued after a variable number of months. The remaining 40 matings

were kept producing for from 6 to 42 months, depending on purpose, success (?), etc., the average being nearly 16 months per mating. We can put it another way -- there were 636 reproductive months for these 40 matings. We recorded 1129 eggs from them, of which 75 (6.6%) were single-egg clutches. This single egg value is a maximum because some eggs might have been broken and lost before recording.

We candled the eggs; 24% were apparently infertile (no sign of blood vessels developing). Only 53% of the eggs were definitely fertile, while the remainder were broken. And only 25% of the total eggs hatched (about 47% of the fertile eggs). Dead embryos amounted to 12%, while the rest were broken. How's that for success? Of the 281 squabs hatched, we raised 231 to weaning or fledging age, or 20% of all eggs. There were deaths all along the way, such as 29 of them by the third day of age.

So our reproductive success can be stated for the 40 pairs as about 1/3 squab per reproductive month; or to put it another way, it took 2 and 3/4 months on the average to get a squab per pair, or about 5 per year per pair.

Levi's section on production in "The Pigeon" mentions results from studies at Chaffey High School, Ontario, California, at Millville N. J. by the New Jersey Agricultural Experiment Station, and by his own Palmetto Pigeon Plant in South Carolina. Levi says that commercial meat pigeons should produce 16-20 (or more) squabs per year. The 3 year continuing California study included 1512 reproductive months for the 42 matings, averaging 9.47 squabs per pair per year. (Twice the success as this study.) Hatchability at Palmetto and in the New Jersey studies was about 80% of all eggs laid, while the current study was only 25%. Palmetto had about three times as many dead embryos as infertile eggs, while the present study had twice as many "infertile" eggs as dead embryos. Levi mentions that first clutches are about 50% infertile.

Anyway you can probably see why I'd like to "farm out" the linkage testcross research to non-institutional pigeon breeders.