

SYSTEMS OF MATING IN POULTRY

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INFERTILE eggs, among eggs kept for hatching are a constant source of loss to the poultry farmer. A loss, in that much incubator space is lost when the farmer is in urgent need of chicks and his reputation, as a producer of good hatching eggs, is at stake. There is no doubt that the different systems of mating, which are a very important factor in the production of the maximum number of fertile eggs, need investigation first and foremost. The writer in this article describes and discusses briefly the different systems of mating.

Pen mating is the commonest type of mating adopted in systematic poultry rearing and consists of allowing one cock to mate freely with a given number of hens, the number of hens to one cock depending on the breed. In the case of the heavier breeds like the Rhode Island Red six to eight hens and the lighter breeds like the Leghorn ten to twelve hens. The chief advantage in this system is that both parents of the off-spring are known, if trap nesting is adopted. The disadvantages are threefold. First, many small runs and night houses are necessary, which will appreciably increase costs. Secondly, cocks like most animals have a weakness for particular females, so that some hens may be mated too many times a day while some may be altogether neglected. This is a definite waste of sperm. Thirdly, and most important is the fact that all cocks are not equally fertile and this is the main cause in instances of low fertility in pen mating. Very often cocks, though young are very poor in reproductive capacity and should not be used. This has been found to be the case at the Central Agricultural Station, Labuduwa. Better fertility results can be obtained from the poorer cocks by either reducing the number of hens or stud mating a very limited number, even as low as one hen per day. One improvement in pen mating is to allow the cock to run with the hens for periods of ten days at a time and rest him for alternate periods of one week.

Mass mating is similar to pen mating in that cocks and hens are allowed to run together but the difference lies in that many cocks are allowed to run with the hens, the number of cocks to hens again depending on the breed, as in pen mating. The great advantage in this method is that a large number of fertile eggs are produced at a low cost. A large run and one large house can be used for all the birds. This method too has been tried at the Central Agricultural Station, Labuduwa, and has given very good results. As in pen mating the disadvantage is that some hens may be mated too many times. But the chances of some hens being altogether neglected are very much less because many cocks are used. The fear that a cock of poor

reproductive capacity is used is also allayed to a great extent for the same reason. The only serious disadvantage is that only the maternal parentage will be known if trap nesting is adopted. Here too, as in pen mating an improvement can be effected by resting the cocks for definite periods or by even having two sets of cocks to be used alternatively.

Stud mating as such is not practised in Ceylon. It has been systematically tried out at the Central Agricultural Station, Labuduwa, and proved to be well worth the while investigating further. Stud mating is the mating of a selected cock with a number of hens the cock being housed separately and the hen taken to the cock once in eight to ten days. The optimum number of matings per cock per day and what intervals need careful investigation. Judging from preliminary trials carried out at Labuduwa, the writer is of opinion that one cock should not be given more than five hens per day, three at regular intervals between 6.30 A.M. and 11.30 A.M. and two between 3.00 P.M. and 6.00 P.M. In nature it will be noticed that mating during mid-day seldom occurs, so that these hours should be avoided. The best and most convenient method of stud mating consists in taking the hen to the cock after she has laid her egg and when she can be easily taken from the trap nest itself. In practice it has been found that it is just after the hen has laid her egg that she favours copulation. It has been found to be so in the case of free mating too. The principle underlying this system of mating is the fact that the cock's sperm lives in the cloaca of a female for a period of ten to fourteen days after mating. The safer limit of eight to ten days is taken to ensure fertility. The chief advantage in this system is that an outstanding and valuable male can be mated to a large number of hens in the shortest possible time and the useful period of the cock's life can be appreciably prolonged by controlled mating. Hence this should be a valuable method in breeding and improving poultry in Ceylon. As in pen mating both parents of the off-spring will be known if trap nesting is adopted and as in mass mating a large number of birds, only hens of course, can be housed together in a large run. In short, all the advantages of the other systems are present in this one and proves itself to be superior because their chief disadvantages are absent. Needless to say, this being an artificial system the human factor will play an important part in its success or failure. The individuals personally attending to the mating should be reliable, otherwise results are bound to be poor through carelessness or irresponsibility. This is an all important consideration.