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GUIDELINES TO MAINTAIN OPTIMUM FERTILITY IN CROSSBRED CATTLE



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Problems of infertility in bovines resulting in poor reproductive efficiency is a major limiting factor for cattle improvement and economic milk production in Goa. Maintenance of optimum reproductive efficiency in the dairy herd ensures regular calving and milk supply.

With a view to achieve desirable breeding efficiency, the Animal Sciences Division of the ICAR Research Complex for Goa, conducted applied and adaptive researches in cattle reproduction and emerged with certain important findings. These findings could be of great help for the livestock farmers in Goa. Practice of the same in the cattle herd would considerably reduce the chances of occurrence of the problems of infertility as well as this knowledge would be of help in handling the reproductive problems before or as and when it occurs. A few such important guidelines are referred below:

I. BREEDING AT OPTIMUM AGE

Simple methods for identification of maturity for breeding heifers at the optimum stage

Breeding a heifer at the right stage of maturity is very important, as breeding at late age would mean maintenance of unproductive livestock incurring heavy economic loss, while on the other hand, breeding earlier than the optimum stage would make the heifers prone to poor milk production and various reproductive disorders.

In the identification of maturity, body size rather than age of the dairy heifer is more important as undersized

animals often ~~bring~~ problems during gestation and calving. For village conditions, a simple technique viz., girth size measurement has been established to be a positive indicator of maturity in cattle. It was identified that under Goan field condition good heifers attain maturity at an average girth size of 135 cm.

II. POST PARTUM ^{OUS}~~ESTRUM~~ MANAGEMENT

The period from calving time to the next heat is called post partum period. It has been found that at least 60 days post partum interval (breeding rest period) is required for the entire reproductive system to regain its lost vitality to become absolutely fit to be pregnant again. Therefore, no cow should be bred before 60 days post partum period and in the event of the animal coming to heat earlier than this period, it would be only recorded and allowed breeding rest. After a post calving period of 45 days, the cow should be keenly observed regularly for heat symptoms three times a day early morning, noon and evening. On detection of heat between 60-90 days, the cow should be bred with the help of the nearest Artificial Insemination Centre. In case the cow does not show any sign of heat between 60-90 days, the matter should be referred to an expert without delay and without approaching a quack for advice.

III. MANAGEMENT OF LONG POST PARTUM ANOESTRUS CONDITION

A cow not coming in heat and not conceiving within 60-90 days ^{post}partum would result in heavy economic loss as the cow would be maintained as a dry unproductive one. Through careful management during the post partum period, the cow could be restored to reproductive function and unproductive days could be reduced.

In the crossbreds in Goa, it has been identified that the average post partum days are very long (144 days) which means a cow remains an economic burden to the farmer for about five months.

In long post partum anoestrus (not coming in heat) period of beyond 90 days, the animal needs to be examined by an expert veterinarian, to differentiate true anoestrus condition from other abnormalities. On confirmation of true anoestrus ovaries, I/M injection of 5ml Tonophosphan and 2ml of Vitamin A (Prepalin Forte) for 5 consecutive days would restore fertility in most of the cases. But this must be carried out only by a competent veterinarian.

IV. MANAGEMENT OF REPEAT BREEDER COWS

The condition of repeated coming into heat at regular and irregular intervals but not getting pregnant is another very common infertility problem in the crossbred cattle in Goa.

The various causes of repeat breeding can be broadly grouped in two classes:

- (1) Infectious (due to infection/disease etc.) and
- (2) Noninfectious factors due to (i) hereditary and (ii) management.

To handle the repeat breeding condition it is always necessary (1) to consult an expert veterinarian when animals are purchased or selected, (2) to treat the animals at the earliest through a veterinary doctor who has specialised in this field of infertility and (3) to eliminate those animals from the herd which are diagnosed to have serious reproductive problems of infectious and hereditary nature.

V. COORDINATION OF FUNCTIONAL UNITS

The basis for successful dairy farming is dependent on three "Functional Units" viz. the cow, the farmer and the technician.

(1) Cow

A cow has to be from good stock with sound overall reproductive health having potentiality of good milk production. It should be physiologically sound to be able to mature early and evince strong heat symptoms, for easy detection and breeding.

(2) Farmer

A farmer must have basic knowledge of scientific husbandry practices to maintain his cow in hygienic conditions in a moderately good shed providing optimum sanitation and ventilation, balanced feeding and timely vaccinations for proper maintenance of general health and reproductive health. He should be clever in detecting even the weak heats and prompt in presenting the animal for breeding at the proper time at the Artificial Insemination Centre and should maintain proper records of each animal for future consultation with the specialists.

(3) Technician

The technician at the A.I. Centre should be able to differentiate a healthy breedable heat, from other common conditions like pregnancy heats, pyometra, endometritis etc. He should be able to maintain good quality semen and sterilized A.I. equipments in hygienic conditions and finally should be able to deposit good semen in the anterior cervix of the cow, recto-vaginally, without causing any disturbance and injury to the animal.

If all these three units are properly co-ordinated, then the breeding efficiency of the animal would definitely improve which would result in economic dairy husbandry.

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