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Selection of a Dairy Bull

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Abstract

To get a good dairy cow we have to start with a good dairy bull Dairy bull selection and management are critical aspect for dairy industry. Getting more out of a bull, whether this means more calves per lifetime or more value from these calves can help the dairy farmer earn more profit. Selecting a dairy bull should be panned well in advance before the actual requirement. Examination of bull prior to introduction of the dairy bull in the breeding examination warrants a careful and critical examination of the bull right from the general appearances, muscular skeletal system, the foot, gait and the masculinity.

Introduction

India is considered to be a reservoir of excellent and diverse germplasm of cattle and buffalo genetic resources, gifted with many well-defined breeds for varied agro climatic conditions. Some of the notable dairy and dual purpose cattle breeds are: Sahiwal, Gir, Kankrej, Tharparkar, Hariana, Red Sindhi and Rathi. Sire (father) selection has a long-term effect on the genetic merit of a dairy herd. The production performance by the daughters of sires selected today is only seen four years later. About a third of the productivity improvement farmers have achieved in the last decade have come from better genetics and most of this from using superior bulls. In some cases, only a single bull is available for a community or village. The male pathway of selection theoretically offers more opportunity for increasing intensity of selection but, unfortunately, the livestock farmers often have little or no choice when selecting males for breeding.

The evidences show that the sire and the dam contribute equally to the inheritance of the offsprings. The sire has many more offspring than the dam and therefore his influence on the herd is more than that of a cow. So a superior bull can be responsible for the improvement of the herd, but unfortunately farmers do not pay any attention on selection, age, bull-to-female ratio, housing, feeding, disease control and overall management of breeding bull. Genetic progress in dairy cattle is largely determined by the merit of bulls used as sires of each generation (Andrabi and Moran, 2007). So the selection of young dairy bulls is an important step in any cattle-breeding program.

Animal breeding began when owners decided that mating the best with the best was a winning strategy; however, choosing which animals are best requires considerable insight. Animal Breeding as a science has helped us develop cattle herds which have an average milk yield of over 20-25 litres per day. This has primarily been made possible by concentrating those genes which are beneficial for good dairy type stock. Knowledge of the characteristics of good type in dairy bull is of importance

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not only to the buyer of new stock but also to the herd owner who wishes to raise his own dairy bull.

The breeding soundness evaluation (BSE) is a method to evaluate the potential of a bull to be used as herds sire (Chenoweth, P.J. *et al.,* 1993). One of the essential components of BSE is the physical examination of the bull for breeding soundness.

Physical Examination

The physical examination part of the exam may be the most difficult to objectively assess. Failure to properly evaluate bulls prior to and during the breeding season can result in huge economic losses. Some structural defects may have little or no influence on immediate mating ability but may predispose animals to early development of arthritis or injuries.

General Appearance

Basically a Bull Should Look Like a Bull

Powerful appearance, Attractive, revealing vigour, heavier in muscles and bone with harmonious blending, and correlation of parts. It should have an attractive and well balanced. The body as a whole should exhibit considerable angularity and freedom from blockiness.

The Head

Masculine and medium in length and width and not be too large in proportion to the body. A big head could potentially increase calving problems. It should have broad muzzle with large, open nostrils and a strong lower jaw.

The Neck

The neck should be of good length and held high. A bull which holds his head and neck low may in fact be straight in the shoulder. This affects the bull's gait and mobility.

The Brisket

The bull should be trim in the brisket. Overfat bulls may in fact be light in their muscle, producing progeny with lower yielding carcases.

The Shoulders

The shoulders are naturally sloping. The shoulder should be smooth against the rib cage. Bulls whose shoulders are wide at the point of the shoulder (the base of the neck) may throw heavily shouldered calves, increasing the chance of calving problems.

Front Legs and Feet

The front legs of the bull should be straight when viewed from in front. Bull is considered 'knock-kneed' when the knee joints lie inside this line, which may eventually lead to overgrown outside claws. A bull that is wide at the knees (bow-legged) presents a more serious problem. These animals are often narrow in their stance and may roll their feet as they walk Rear legs.

Rear Legs

Rear feet and legs are very vital and extremely important for walking, grazing, breeding and weight bearing when it mounts for natural mating or semen collection dummy mounting. Viewed from behind, the tibia and metatarsus (hock joint) should be in a straight line. A bull is 'cow hocked' when the hocks are rotated inwards and the hooves rotated outwards. A more serious problem occurs where the legs are wide at the hocks but the feet are turned in as it tends to interfere with the serving ability of the bull.

Walk

The bull should have a free-moving gait, with the hind feet stepping into the footprints of the front feet. Overstepping or under-stepping indicates some structural problems, as are uneven footprints from the claws. Bulls should be observed walking on a smooth level surface to check for evidence of lameness and the limbs carefully inspected for any conformational defects.

Conclusion

Selection of the dairy bull is very important decision a dairy farmer makes which will impact future production, health and economic return of the future generations of cows in a dairy herd. External appearance is a valuable consideration in selecting a dairy bull. Ensure your purchase has a good general appearance and health status. The bull should remove the word be observed periodically twice or thrice in breeding season, however the physical examination is not the only criterion for selection of dairy bull, Progeny performance and ancestry records are equally important. Dramatic changes have occurred in dairy sire selection practices in recent years and techniques like genomic selection are being employed by many countries for selection of dairy bulls.

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