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Popular Article

Selection of dairy cow with physical appearance

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General consideration

- A dairy cow at its first appearance looks extremely angular and carries no surplus flesh and it should have extraordinary development of udder and milk vein. The barrel (body) development should be marked in proportion to the size of the animal.
- The dairy conformation signifies that appearance which indicates a tendency to produce milk rather than body fat. The body of the dairy cow should be angular in shape as viewed from the front, the side and over the top or withers.
- The angularity of the body is referred as the three wedges. The top and bottom lines, if extended (imaginary) will be in front of the head forming the first wedge. When viewed from the front, the two lines over the shoulder should meet at withers. The third wedge is the line drawn from the hook bones to the withers, with the apex at the withers.
- in addition to the three wedges there should not be any excess fleshing and coarseness and all part should have clean cut. The back, hook and pin bones should be prominent and free from coarseness.
- The neck should be long, slender and neatly joined with head and shoulder.
- The side lines drawn on a good beef animal are parallel. On a dairy animal they form a wedge. The dairy animal should have thin and incurving thighs but in beef animal it is thick and well rounded
- Pin bone should be slightly lower than hip bone, slight or moderate slope from hip to pin is associated with less calving difficulty and reproductive disorders.

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- **Dairy temperament**: it is natural that a cow has a tendency to fatten during the period towards the end of lactation and when she is dry. But this surplus fat is usually lost during the first three or four weeks after calving. A good dairy cow does not fatten with any ration during the best part of her milking period. This quality of a dairy cow is called as dairy temperament. This mean cow is endowed by nature with strong stimulation to produce milk, and uses, practically all the nutrients she can digest for milk production. A dairy cow should not be sluggish and too nervous.
- **Development of barrel:** high yielding dairy cow must have a capacity to utilize an enormous quantity of feed. This results in the development of a large barrel. The ribs should be well-sprung, far apart and slanted towards rear. The ability to lay three fingers of hand between the ribs is an accepted measure. An animal lacking in barrel capacity cannot use sufficient feed to be a large producer. In considering barrel development of a cow the depth is more important than the width. The depth should be viewed from the side and the width from behind. Some animals show a great depth, but on account of being too narrow have no more real feed capacity.
- ***Largest heart girth*** is usually assumed to indicate a large capacity of heart and lungs. All milk comes from blood; hence the circulation of blood in the udder is great importance. About 1818 litters of blood must pass through the udder for every 4.5 litres of milk produced. Two external pubic arteries supply blood to udder.
- **The *milk vein and milk well*:** the blood after supplying the nutrient for milk synthesis starts back towards the heart thought the milk veins. One of these opens on either side of the front line of udder attachment to the body and passes forward just beneath the skin. These veins crook back and forth and finally pass upwards through one or more opening the wall of the abdomen into the body cavity. The portion of the vein from the udder to the opening through which they pass into the body cavity is known as milk vein and the opening through which they pass into the body cavity is called the milk well. The larger and tortuous vein indicates the greater capacity of the cow for circulation and production of maximum milk. The milk vein is prominent only during lactation but the size of milk well remains practically constant after the cow is once mature. Therefore, the size of milk well is a better indication than the milk vein, since it is more reliable in all stages of production.
- **The udder:** the udder must be large enough to make and hold milk that is produced. Cow with small udder cannot be high producers. The udder is composed of glandular secreting tissues,

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ducts, storage reservoirs and connective tissues. The connective tissue tends to give the udder a hard texture, while the ducts and reservoirs produce a soft texture. Large udder consisting of connective tissue in excess are hard to touch and of poor quality. Good quality udders ***"shrink"*** after milking, while poor quality udders under go very little changes in size and shape after milking. The udder should be long and wide with a level udder floor. The teats should be of convenient sizes and placed squarely on the udder. The skin should be soft, pliable and veins prominent.

- Other features like wide muzzle and open nostrils, prominent, bright active eyes; long, lean neck; prominent and strong back bone; roomy pelvic region with hip and pin bones wide apart; thighs thin and incurving with plenty of room for udder development.
- **Basis of selecting dairy cows**

  In addition to type and general appearance which form one basis for selection of dairy cows, the other important aspect in selecting dairy cows are the pedigree or record of the parents and performance record of producing individuals in milk and butter fat.

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