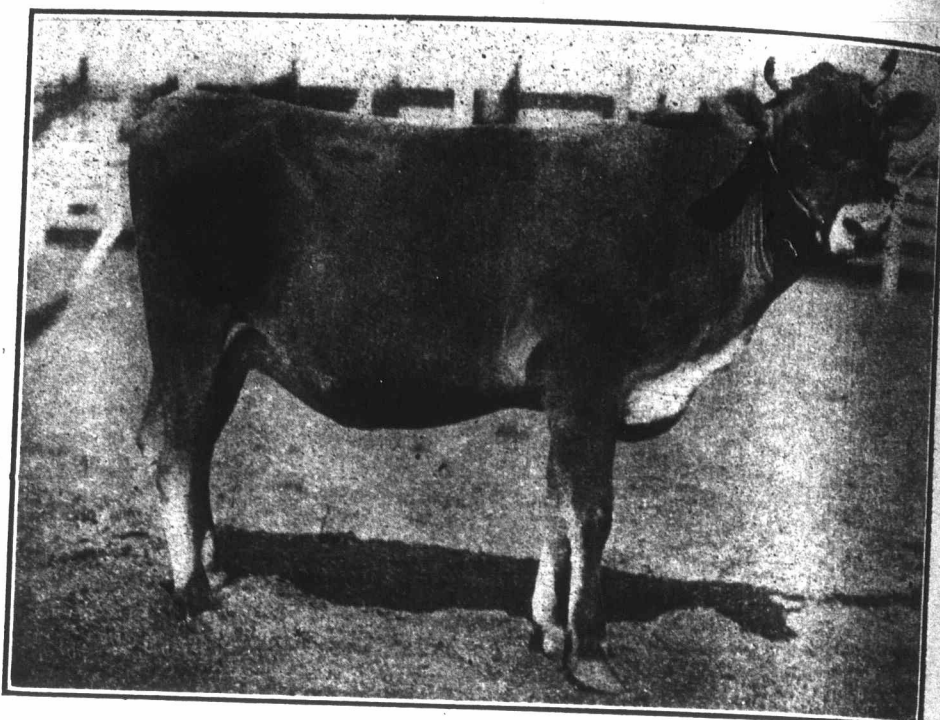


Lady Frances Schuiling.
Grand champion Holstein female at Toronto and Ottawa 1916. Exhibited by M. H. Haley, Springfield.



Brampton Miss Mourier.
Junior champion Jersey female at Toronto, 1916. Exhibited by B. H. Bull & Sons, Brampton.

grass is short the cattle crop it close, which causes it to make slow growth since it is necessary that there be leaves above ground to come in contact with air and sunshine in order to promote growth. The pasture that is given a chance in the spring will furnish a good deal more feed through the season than the one which is grazed closely from the time first growth commences in the spring.

Points to Consider When Purchasing Dairy Stock.

The real value of an animal is estimated by its earning power, either as a producer of dairy products or meat, or as a breeder of stock. Some dairy cows which are only average milkers throw excellent calves, while others which are top-notchers at the pail do not always produce offspring equal to themselves. These things influence the price which an animal will bring if offered for sale. There are many points the prospective purchaser should consider. Breed type and conformation are first noted. A large frame for the breed, with a good constitution and strong vitality are desired in any animal. With the mature cow, special attention should be given to the udder formation and the veining. "No udder, no cow" is a good maxim to consider. A large, well-balanced udder, which shows considerable elasticity is preferable to a fleshy, pendulous udder. The size of the veins and number of milk wells is also an indication of the cow's ability to produce. The yearly milk yield of the individual and the record of the ancestors are important. Dairy men are paying more attention each year to the milk and butter-fat yield, and to the animal's power to transmit these qualities to her offspring. Dairy men realize that the cow to keep is the one that makes the best use of the feed consumed. There is every reason to believe that many cows now kept have not the power of economically converting the feeds into the lactic fluid. There is a vast difference in the inherent ability of cows to manufacture milk from the raw material; one cow may produce twice, three and even four times as much milk as its stablemate, which consumes practically as much of the same quality roughage and almost as much concentrates. Consequently, it is advisable to look well to the manufacturing power of the cow. The milk and butter-fat yield depends largely on the animal's individual characteristics which have been bred into it. Select a heavy-producing strain. If this were more closely adhered to when laying the foundation or building up a herd the average production per cow would soon be considerably increased.

Size should also be considered. It is unreasonable to expect a small, finely-built cow to convert as much feed into milk as will a big, strong-framed animal. There is more or less of a direct relationship between the feed consumed and the milk yield. This does not hold to the same extent with the milk yield, as the smallest dairy breed which naturally consumes a comparatively small quantity of feed produces the highest testing milk, although the average quantity of milk is not so large as with the other two recognized breeds. Depth and thickness behind the shoulders and elbows indicate heart and lung capacity. Of course, a thick, beefy shoulder is not wanted. Dairy animals are naturally thinner and more wedge-shaped over the shoulders, but one which is shallow or tucked up behind the elbows is commonly predisposed to lung trouble. A large paunch or middle with considerable space between the last rib and hip bone, indicates good digestion. A good appetite and appearance of contentment generally goes with a money-maker. There are other points such as a large mouth, good-sized escutcheon, length of tail, etc., which some put great stress on. They are no doubt worth considering.

A dairy cow has a more nervous disposition than the beef animals, but an excitable, vicious cow should be avoided. A stockman can tell fairly well by the head

of an animal whether or not it will make a profitable feeder, so a dairyman views the head of the animal he intends purchasing. He likes to see a broad, dishing forehead and bright, prominent eyes, which indicate nervous power for converting food into blood and subsequently into milk. Nervous energy is also indicated by a prominent spinal column, and space between ribs. Look for mellow skin and oily hair. Dry, harsh hair is often the result of the animal system being a little out of condition. An unhealthy animal is unprofitable and a menace to other members of the herd. The dreaded disease tuberculosis is finding its way into many stables. Animals may be infected and yet show no symptoms of disease for some time. Consequently it is to the purchaser's interests to ascertain whether or not an animal is infected before he commits himself to a deal. The tuberculin test is generally considered to be reliable in determining the presence of lesions of the disease. Tuberculin tested cows with high milk and fat records are sought after by the large dairy establishments. If such are good for the moneyed men they are equally desirable for the average farmer. No man can afford to import disease into his herd, and he certainly cannot afford to keep a low producer, no matter how attractive the appearance.

A study of the pedigree and records will give some idea of the quality of blood, and will show if there has been gradual improvement. A cow should be a regular breeder and produce offspring equal to or superior to herself. The pedigree indicates the line of breeding and is valuable, but an animal should not be purchased on the strength of the pedigree alone; take the individuality into consideration.

The bull selected to head the herd should be true to type, of good conformation and show strong masculinity. He will either increase or decrease the production, and incidentally the value and profit of the herd according to his breeding and individual characteristics. An animal which looks cheap and has a cheap pedigree is dear at any price. Do not sacrifice the future value of the herd for the sake of a few extra dollars now. By use of a sire which carried the blood of high producers, and selecting and breeding the best heifers, some dairy men have greatly increased the milk yield in a few years. The value of a bull as a transmitter of his inherited good qualities is not apparent until his daughters commence producing. If it turns out, as it sometimes does, that the undesirable instead of the desirable qualities are transmitted, the herd receives a severe setback which may take years of breeding and selecting to overcome. Thus it is of paramount importance that the herd sire be bred right and have good individuality so as to minimize the risk of mediocre animals being produced. When possible it is advisable to select bulls which have daughters in milk, so that it may be definitely known what characteristics he transmits to his offspring. This can only be done in a few cases as some breeder must use the young animals. However, too many really choice sires are sacrificed to the block before they have outlived their period of usefulness as breeders. When adding to the herd do not be influenced in your choice of individuals by one feature alone. It is impossible to secure an animal that is perfect in every detail, but aim at securing the best all round specimen of the breed that may be for sale.

Cow testing eliminates some of the uncertainty from the dairy business, and accounts for profits and losses. It enables the dairyman to regulate the amount of concentrates according to the yield of milk and fat produced. In this way, more economical feeding is done. When the daily milk yield is recorded, there is no guess-work about what a certain individual in the herd has done during a lactation; it is down in black and white. Keeping records may entail a little extra work, but it pays in the end in more ways than one.

THE APIARY.

Spring Work in the Apiary.

Spring is an important and critical period of the bee year, because it is during this season that the bees have to build up their strength, often under trying weather conditions and in a short time, in readiness for the honey flow, and also because colonies that are in bad condition may die if not attended to. The principal object of spring management, therefore, is to get a large number of bees reared in each colony, and also later on to prevent the tendency to swarm. For a maximum production of honey there should be, during the honey flow, an abundance of bees between the ages of two weeks and six weeks.

If the bees have been well prepared for winter no anxiety need be felt about their condition in early spring and they are best left undisturbed for a while, but if any colonies are likely to run short of stores, or if so many bees have died in a colony that is in danger of getting robbed out, or of perishing, a short superficial examination should be made on a mild day when the bees are flying. The weight of stores may often be estimated by lifting the hive. Combs containing stores may be taken from colonies that have more than they need and given to those that are deficient. If it is found there are not enough bees to cover two combs the colony should be united to a stronger one. It is often possible to save the queen of a weak colony by placing the colony on top of the strong one with a queen excluder between the two, care being taken to see that the weak colony has sufficient brood (taken, if need be, earlier in the day from the strong colony) to keep the bees from deserting, and the colonies may be separated a month later.

When the weather improves a warm day on which the bees are flying freely should be selected for making a thorough examination of the brood nest. Evidence of the presence of a fertile queen may now be found in the appearance of worker brood. Any colony that is found to be queenless or to contain a drone-breeding queen should be united to one containing a fertile queen. Colonies may be equalized by shaking bees from the combs of strong colonies in front of the entrance to those to be helped; of course, the queen must not be included, and precautions may have to be taken to avoid fighting.

Since a high temperature is needed for brood rearing, care should be taken to conserve the heat generated by the bees in the hive by providing good insulation. Colonies wintered out-of-doors should be kept in their wintering cases until settled warm weather. In most places this is not until mid-June. The amount of protection to be given to colonies that have been wintered in the cellar will depend on the spring climate and the extent of shelter from wind. In many places it pays to give special protection in the form of an outer case deep enough to cover the sides of the brood chamber and projecting several inches above it, giving room for several sacks or a chaff cushion to be placed over the bees. In exposed places and those subject to great changes in temperature it will be advisable to have the case large enough to take packing material between the hive and the case. The size of the entrance should be kept small in early spring—only an inch or two wide in the case of weak colonies.

Bees need water in spring. If there is none within easy reach it should be supplied in a warm, sheltered place in or near the apiary. The building up of colonies may be seriously delayed by spring dwindling, that is, the dying of the bees that have wintered, faster than young bees can be reared. The common cause of dwindling is bad wintering, the bees having died in large numbers or become enfeebled through age or dysentery, and it is more likely to occur in coastal

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