

It is from liberal feeding that a large part of the profit of the dairy comes. If one has cows that are only paying their way, or perhaps not quite doing that, it will be well to try all reasonable means to increase their production. If this is done I am confident it will be found that in most cases the capacity for production is much greater than has been supposed.

Cows that have been regarded as hardly up to the average may develop into superior animals and the apparently poorest one may prove to be well worth keeping. This, however, will not be the universal experience. Some cows cannot respond to even the best directed efforts to make them more productive. They are lacking in capacity to such an extent that they are hopeless subjects for a profitable dairy and the sooner they are made ready for the butcher the better the interests of their owners will be served.—John Underwood.

Pasture

Seeds and Meadow Hay

With reference to the feeding value of hay, there is a wide divergence in the nutritive value of different samples. In chemical analyses of the digestible constituents the albuminoids in average clover hay is given as 7 per cent., as against 5.4 per cent. in average meadow hay; but horse-owners who want hard work, fast work, and hard condition, buy meadow hay in preference. Hunters, racers, hacks, and fast carriage horses are rarely fed with "seeds" hay. The quality of "seeds" hay is, on the average, not so good as that of meadow hay. It is made earlier in the case of the "first cut," and later in the case of the "second cut," and the weather in both instances often proves unfavorable. It cuts a heavier crop to the ground, and is, for this reason, as well as because of the nature of the stems and leaves of the clover plant and rye-grass, more difficult to manage and catch just right than meadow hay. We certainly see a great deal more spoiled, badly saved, mouldy, or overheated "seeds" hay than meadow hay; and, perhaps, the bad condition of the samples left for consumption

on the farm, more than the constituents of the hay itself, is responsible for the prevalence of digestive troubles and broken-wind.

Hay Quality

The quality of hay depends to no small extent on the soil on which it is grown, and is also affected by the maturing. The general conclusions arrived at are that as the plant matures the proportion of water nitrogenous matter, fat, and ash decreases, while the proportion of carbo-hydrates increases. As albuminoids are much more valuable than carbo-hydrates, and the greater the percentage of albuminoids in a given sample the more easily and perfectly it will be digested, it follows, as the plant grows older, that not only its nutritive value, but its digestibility also is diminished. Hay that in making has suffered much from rain and exposure and has undergone fermentation contains much less soluble matter than that which is well made, and hay that has become unduly fermented or "mow-burnt" not only loses in feeding value, but may, in addition, cause derangement of the digestive and urinary organs.

How to Recognize Good Hay

Good hay should be of a bright greenish-tint, if well saved, and of a pleasant aromatic odour; have a hard, firm, crisp feel, stems tough, flexible, and of medium length; heads showing inflorescence, and any seeds present firmly adherent to the spike, and free from dust or mildew. Hard hay is especially esteemed for horses, since it indicates that the best grasses predominate, and that they have been well harvested. Blanched, brittle, mouldy, bad-smelling, or highly fermented hay should be rejected by the purchaser, although horses like overheated hay well enough, and we have seen them eat stuff so black that it resembled charcoal. Slightly heated it does no harm, but badly mow-burnt hay acts as a diuretic, producing excessive thirst and a general falling-off in condition. Overheated hay is largely employed to give a "nose" to chaff cut from inferior fodder. Clover hay should be bright, clean, firm and flexible, free from mustiness, mould or dust, and have most of the leaves adherent

to the stem. Musty hay is very evident to the senses, and is due to stacking while wet or to wet getting into the stack. Its use is not only dangerous, but represents a serious loss of nourishment. It is often sought to improve it by salting or spicing, but this, although it may make it more palatable, does not make it more nutritious.

Best Hay

The feeding of old and new hay is an important matter, and particularly at this season. Very often old hay is sold off and new stacks are commenced prematurely for home consumption, because the old hay is the most valuable and generally the most saleable. In the trade, hay is considered new up to the end of September, but others consider it new until it is a year old. There is no doubt that hay is best when about a year old, but it is obvious that it cannot be kept at that, and in many cases the season's stacks must be commenced before. No new hay, however, should be used before November. Prior to that it has not the feeding and conditioning qualities of old hay; and new hay, like new oats, is apt to occasion digestive derangement. New hay causes some horses to "scour" badly. New hay contains more moisture than old, but this is difficult to detect by any ordinary method of examination. It is usual to regard new hay as greener than old, but this depends on circumstances, and may be very misleading in the case of a well-saved sample. We look for perfection in hay when it is about twelve months old, retaining its colour and aroma. The length of time that hay retains its nutritive properties is about two years from the time of cutting. After that it deteriorates.

Concerning Soap

Soap is the best means of removing dirt from men and things; but unless it is made of the purest materials, carefully and conscientiously compounded, and used in moderation, it is likely to irritate the skin and make it susceptible to disease.

Soap is the chemical compound of an alkali—soda or potash—with the acid part of fat. Potash soap is the soft soap

that all housewives used to make. They always had barrels half-full of lye into which they threw the refuse fat from the kitchen. The ordinary hard soap, both for the laundry and for the toilet, is made from soda, and its irritating qualities depend on the amount of free soda it contains, on the kind of fat that is used, and on what is used to adulterate it.

It ought to contain no free alkali at all, but even if there is none, some of the soda is set free when the soap is put into water. Soaps in which there is a certain amount of free fat in addition to that combined with the soda have been recommended on the theory that when the soda is thus set free, it combines with the free fat of the soap before it has time to attack the fat of the skin. Whether that actually happens or not is uncertain.

The fat that is used should not be rancid, and it should be capable of taking up a large amount of alkali. Tallow and olive-oil are particularly useful in soap-making. Olive-oil forms, or should form, the base of Castile soap, but unfortunately this soap is often adulterated with other fats, which are more harmful.

Cocoonut-oil makes a soap that lathers well, but is rather irritating, and cotton-seed-oil soap is said to be still worse.

Benzin and paraffin derivatives added to washing soaps increase their cleansing properties, but unless they are used with great care, they are likely to irritate the skin of the laundress. Eczema and other skin troubles can often be traced to the use of cheap and dishonestly made soaps. Be very careful, therefore, to select as your toilet soap one made by a responsible manufacturer.

Sand Bar Ferry, near Augusta, Georgia, is a flatboat affair, frail and rickety. Two timid ladies, hesitating to cross, plied the negro boatman with questions about it.

"And are you perfectly sure no one has ever been lost here?" they demanded.

"No, missus," replied the ferryman. "No one ain't never been los' here. Marse Jake Bristow done got spilled out and drowned last week, but dey found 'im again nex' day. We ain't never los' nobody, no, ma'am."

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