

Science and Practice of Feeding.

From a timely bulletin on milk-production, bearing on its title page the name of Herbert A. Hopper, and issued by the Purdue University Experiment Station, we extract the following instructive paragraphs:

MISCELLANEOUS CONSIDERATIONS.

Various means of preparing foods have been resorted to in the past. Those that are cooked are no more digestible than the same uncooked. In fact, some parts are rendered less digestible through heat. Animals may consume more of it, which many times will account for the apparent good results. Wetting, except in special instances, when it is desired to tempt an ailing animal, is of doubtful value. If fermentation takes place, it may slightly increase digestibility, but should not be made a regular practice with the foods ordinarily used.

Drying, in general, does not exert any unfavorable influence upon digestibility if not excessive. However, most green foods are slightly more digestible than the same material as it is usually cured. Certain foods known to have laxative qualities should find a place in nearly every ration. Those in which it is pronounced should be fed moderately, as an over-stimulation of the digestive tract in this manner may prevent complete absorption of the nutrients, through an early expulsion of the same from the body. Again, as concerns the product, certain foods produce hard while others produce soft fats in the butter. Of the former may be mentioned cotton-seed meal and buckwheat middlings, while to the latter belong linseed-oil meal and the gluten meals.

No single food or combination of foods has yet been used, that will permanently increase the percentage of butter-fat in the milk of an individual cow. In the light of present knowledge, it is impossible to feed fat into the milk of a cow in normal condition. The quantity of milk can be influenced by feeding.

Salt is essential to health, but does not appreciably increase digestibility. Some cows are so greedy for salt that, when allowed to help themselves, they will eat so much as to produce scouring. Such are exceptional cases.

SANITARY CONDITIONS.

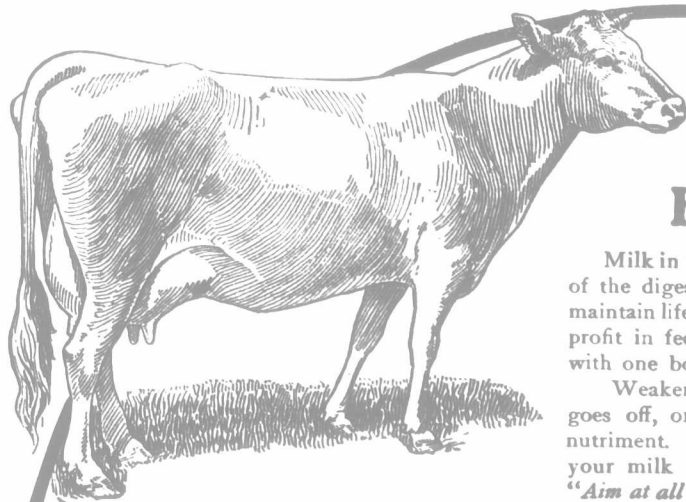
Aside from the quality of the product, sanitation pays, and pays well. Sunlight is Nature's greatest germ-killer and promoter of growth. Experiments with calves have shown that under the same conditions of feed and care, those furnished sunlight made better gains in weight, and were more vigorous, than those confined in dark quarters. Dairy cows always appreciate a congenial environment. Much available energy is wasted by compelling a cow to warm up a cold, damp room, or dry out saturated bedding. If these comforts are not furnished the cow, she uses considerable food in an attempt to secure them.

BALANCED RATIONS.

Ration, is the term applied to the amount of food consumed by an animal in 24 hours. There are various kinds of rations to meet the needs of a variety of animals under different conditions. When the food requirements of an animal are approximately met, no more, no less, its ration is said to be balanced. A ration suitable for a draft horse at work will not be balanced for one at rest. Neither will the ration that sustains a cow producing 15 pounds of 3.2 per cent. milk be adequate for one of the same live weight producing 35 pounds of 4 per cent. milk. The expression, "balanced ration," is a relative term, and depends upon the food requirements of the animal and the amount of digestible nutrients in the foods available.

The nutrients contained in all feeding stuffs, animal bodies and milk, may be divided for convenience into the following classes:

- Water.
 - Ash (mineral matter).
 - Protein (nitrogenous matter 16 per cent. nitrogen).
 - Carbohydrates (sugar, starch, cellulose).
 - Fats or oils.
- The first two need no consideration here, because water, though essential, is



Get More Milk—Fat More Beef

Milk in the cow and fat on the steer are both the result of the digestion of food over and above that required to maintain life and repair waste. You see, then, that the whole profit in feeding for either milk or meat is vitally connected with one bodily function—digestion.

Weaken the stomach and other digestive organs, and appetite goes off, or the manure heap is made the richer by undigested nutriment. Strengthen these vital parts, and appetite is sharpened, your milk pail fuller and your steer heavier. Therefore we say, "Aim at all times to strengthen animal digestion."

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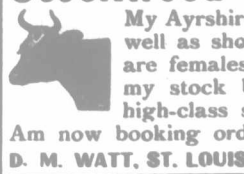
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