

FORAGE CROPS: EFFECT OF MANURING AND OF WEEDS.

In the investigation of forage crops of high, medium and low protein content, it was found, at the Minnesota Experiment Station, that crops like corn fodder, timothy hay, rape, pasture grass and hay crops from mixed grasses were materially influenced in composition by the use of farm manures. The maximum protein content was secured from soils where the fertility had been maintained by the use of manures and crop rotations. Less fiber and from 25 to 30 per cent. more protein were secured from forage grown upon soils where the supply of plant food had been kept up, than from that grown on similar and adjoining soils where the fertility had been allowed to decline. This emphasizes the importance of maintaining the fertility of the soil as a factor in producing forage not only of the largest yield per acre, but also of the highest feeding value.

Analyses of eighteen samples of the more common weeds showed that many of them assimilate from the soil large amounts of nitrogen. When weeds are harvested with grain crops, the amount of nitrogen removed by the weeds is larger than that contained in the grain. The protein content of some of the weeds is greater than that of some forage crops, but the bitter principles and other objectionable compounds present render the weeds unsuitable for general forage purposes. Sheep, however, are capable of utilizing the nutrients in many weeds.

The dry matter of nearly mature rape contains about the same amount of protein as clover. Much care should be exercised in the feeding of rape, to prevent hoven or bloat.

Rye fodder, prairie hay and millet have about the same general composition and feeding value as timothy hay produced under similar conditions and cut at the same stage of growth.

Pasture grass and hay crops from mixed grass seeds and some clover contain more nutrients, particularly when grown on well-cultivated and manured land, than timothy, red top or bluegrass alone.

THE FIELD-CROP COMPETITION.

In "The Farmer's Advocate" of May 9th there was published a copy of the rules and regulations governing a Field-crop Competition, open to Agricultural Societies throughout the Province of Ontario. Only ten societies are to be allowed to participate in this competition this year, viz., the first ten societies to apply. The following ten societies sent their applications in to the office first, and were, therefore, the ten which will take part in the competition: Sundridge, Springfield, Morriston, Lucknow, Smithville, Bobcaygeon, Markham, Mount Forest, Highgate, Caledonia.

The societies choose the crops for which they offer prizes, and ten farmers must enter into the competition in each case. Markham has selected goose or marcaroni wheat for their contest; Caledonia, oats and potatoes; Bobcaygeon, white oats; Morriston, white oats and barley; Highgate, fall wheat and beans; Smithville, white oats and barley; Springfield, white fall wheat and alsike clover; Mount Forest, oats and barley; Lucknow, white oats; and Sundridge, oats.

THE DAIRY.

LOOK AFTER THE CREAM SCREW.

"The Farmer's Advocate" has repeatedly endeavored to impress upon patrons of cream-gathering creameries the wisdom of skimming and sending off the farm as rich a cream as the separator will skim. Hoard's Dairyman presents the argument by illustration as follows:

"Let us consider for a few moments what the individual patron is losing by shipping thin cream. Farmer S. delivered 5,001 pounds of cream containing 817.8 pounds of fat, average test 16.35 per cent. Had this amount of butter-fat been delivered in 32-per-cent. cream, only 2,556 pounds would have been delivered, and 2,445 pounds more of skim milk would have remained on this man's farm, which would have had a feeding value equal to 407 pounds of corn at 35c., equals \$2.43. The cost of hauling the 2,445 extra pounds of cream or buttermilk to the creamery was \$6.64. Thus, this man lost, during the year, on account of his wrong methods, a total of \$9.07, an amount sufficient to pay 9 per cent. interest on the price of one of the best hand separators made."

CHANGE IN RULES OF MILKING COMPETITION

Dairy-stock breeders will observe that there is a change made in the basis on which points will be awarded in the milking competition at the Ontario Provincial Winter Fair, Guelph. Instead of allowing 20 points for each pound of fat, and 1 point for each pound of solids not fat, the scale will be this year, 25 points for each pound of fat, 3 points for each pound of solids not fat, 1 point for each 10 days in milk after the first 30 days; limit, 10 points.

MILK RECORDS BY DUAL-PURPOSE SHORT-HORN COWS.

Editor "The Farmer's Advocate":

Shorthorns are only recognized in the showing when of the pronounced beef type. Despite this, which has a tendency to foster beef production at the expense of the milking qualities of the breed, a very large percentage of pure-bred and grade Shorthorn cows are excellent milk producers. The majority of cows used for milk production in this State are of Shorthorn blood, and while advocates of the special dairy breeds declare that cows of this breeding are undesirable animals in the dairy, the fact remains that Iowa is in the top rank among her sister States in dairy products.

At the request of "The Farmer's Advocate," the following official records, made by Shorthorn cows at the Iowa State College, are submitted:

College Huckleberry.—Red-and-white cow, bred on the College farm. Recorded in Vol. 36, page 57, of the American Shorthorn Herdbook. Tested in 1897, while in her tenth year of age. In 11 months she produced 7,464 pounds of milk, testing 3.59 per cent. fat.

College Lady.—Recorded in Vol. 40, A. S. H. B., page 638. Record for 10 months: Milk, 5,791 pounds, testing 3.85 per cent. fat.

College Belle 2nd.—Record for 10 months, 7,554 pounds of milk, testing 4.3 per cent. fat.

RECORD FOR COLLEGE MOORE FOR FOUR SEPARATE TESTS.

Recorded in Vol. 40, page 638. Born October 19, 1891.



An English Dairy Shorthorn Cow.

First and champion in dairy class, Staffordshire Show, 1906.

Calved October 21, 1896. From October 21st to Nov. 30th, 1897, 9,136 pounds milk, 3.79 per cent. fat.

Calved February 26, 1898. From February 26th, 1898, to February 28th, 1899, 8,734.5 pounds milk, 4.027 per cent. fat.

Calved October 4th, 1899. From October 4th, 1899, to October 31st, 1900, 9,896 pounds milk, 4.11 per cent. fat.

Calved Jan. 14th, 1902. From Jan. 14th, 1902, to Oct. 31st, 1902, 8,950.6 pounds milk, 4.96 per cent. fat.

In the year of her last test, College Moore won second place in the Farmer's Cow competition at the International Live-stock Show. She was a massive, broad-backed, thick-fleshed cow, and produced some very good male calves, but never produced a daughter equal to herself.

It is a well-known fact that the milking qualities may lie latent in Shorthorn cows, requiring only proper feed and care to bring them out. No one will claim that cows of Shorthorn breeding will equal the special dairy breeds in milk production. They will, however, produce calves that will give a creditable account of themselves in the feed-lot and on the block; and when their own usefulness in the dairy is ended, they may be fattened and disposed of for a good price. For this reason many farmers in such States as Iowa prefer them to the dairy breeds.

WAYNE DINSMORE.

Iowa Agricultural College.

There is no breed that can claim to be the egg-producer. It is not a question of breed, but rather a question of strain: there are good layers and there are poor layers in any variety, and the success, in egg-production depends on selecting your best layers as breeders.

POULTRY.

HOW DO YOU LIKE THE HOPPER SYSTEM?

The past two or three years have witnessed quite a radical change in the methods practiced by progressive poultrymen in feeding their birds. Wet mash has given way to dry mash, and this, as well as whole grain and grit, are fed from self-feeding covered hoppers, or troughs, so arranged that the birds may help themselves at will, with little or no waste. By filling these hoppers or troughs two or three times a week, and keeping fresh water before the birds, with an allowance of skim milk, when available, the problem of feeding is resolved into a very simple chore. The plan, however, is not yet very well understood by the amateur, and the experience of those who have tried it will be of considerable help. From such readers we invite short letters explaining points like these:

1. How is your hopper or trough constructed?
2. What classes of poultry do you use it for, and how often do you fill it, as a rule?
3. For what feeds is it best adapted?
4. How does it compare with the old system in point of convenience, economy of feed, and thrift of the chicks or laying hens?

SKIM MILK AND SHORTS FOR TURKEYS.

Editor "The Farmer's Advocate":

In looking over Mr. Bell's way of feeding young turkeys, I thought I would like to know if the "skim milk" he speaks of feeding them for the first five weeks is sour milk or sweet. I have been told to put a drop of coal oil in their drinking water. Would it be advisable to do so? As this is my first experience in turkey-raising, am going to follow Mr. Bell's plan. Now, kindly tell me, also, what kind of shorts to use, as I believe there are different kinds.

MRS. J. McC.

Ans.—The skim milk is generally sweet for the first feed in the morning, but, being left in the feed-room all day, is more or less sour for the balance of the day, unless the weather is very cold. I like to have them used to both kinds, for it is almost impossible to keep sweet milk all through. I remember being asked, while talking to the Poultry Class at Guelph, two years ago, what I did when the milk became so sour it turned to curd in the bottom? Did I use the watery-top or the curdy-bottom milk? I sometimes have had it that sour, and in such a case stir all together before using to mix the food. I would not think of putting coal oil in either food or water. Don't attempt to practice all the advice you will receive, or I "pity the poor poults." There is a medium grade of shorts, not so coarse as the Manitoba product, nor yet so fine that they get sticky in mixing, which I like best.

W. J. BELL.

GARDEN & ORCHARD.

TREE-DOCTORING, A SPECIAL TRADE.

"Tree-doctoring" is an art that is coming to be regarded as a special trade, or we might almost say a profession. In parks, orchards and rich men's forest belts the tree doctor finds his occupation, detecting and removing injured or decaying branches, binding crotches liable to split, and attending to any one of many possible requirements, with a view to preserving its vigor and preventing as well as remedying defects in symmetry or beauty. One of the many ingenious resources adopted is the filling of hollow trunks with cement. A correspondent of the Country Gentleman describes the manner of doing it:

"Old trees may become hollow, or they may be weakened by losing a side by splitting or otherwise, and when in this condition will decay very rapidly. Whenever it is found desirable to save these old veterans, they may be helped by first cleaning out the hollows, by removing all decayed wood, and packing the space full of cement composed of 1 part of water lime to 5 or 6 parts of sand. Before putting in the cement, the hollow should be soaked with a saturated solution of copper sulphate (blue vitriol). The cement should be formed close at the edges to prevent the entry of water back of the cement. In some cases the wound may be tinned over and painted. This