

than in feeding dry fodder. Good silage properly fed is all consumed, being palatable. Silage, like other succulent foods, has a beneficial effect upon the digestive organs. More stock can be kept on a given area of land when silage is the basis of the ration.

Among dairy farmers who have built silos the general opinion is that the use of silage has increased milk-production per cow and has increased the profits per acre. It is admitted, however, that in certain localities which are well adapted to the growth of lucerne or other hays of good quality the same amount of food nutrients may be produced at less cost in the form of hay as of silage. The experience in America is that any green crop can be successfully made into silage if sufficient care is taken to force out the air from the material. On account of the difficulty, however, of expelling air from plants with a hollow stem, such as timothy, oats, barley, these crops are rarely put into the silo.

From an estimate based upon inquiry made of crop reporters of the Bureau of Crop Estimates, United States Department of Agriculture, the disposition of feed crops in the United States are thus set out: Nearly 39 per cent. of the total value of corn, oats, barley, and hay used on farms is consumed by horses, 17 per cent. by swine, 16 per cent. by milch cows, 12 per cent. by other cattle, 4 per cent. by sheep, 3 per cent. by poultry, 2 per cent. (grain only) by human beings, 2 per cent. for seed, and about 5 per cent. is used for other purposes or is uncertain. The bulk of cultivated crops in these countries represent crops of corn, oats, barley, and hay. There must also be included in the total quantity of products fed to animals a small amount of wheat, potatoes, kaffir, milo, &c., and mill-residues. Pasturage is an important item in the feed-supply, particularly in the western-range districts.

The maize crop of the United States has averaged in the past five years about 2,708,000,000 bushels annually; oats, 1,131,000,000 bushels; barley, 182,000,000 bushels; and cultivated hay, 66,000,000 tons (of 2,000 lb.). The amount of prairie hay and forage crops gathered annually is not estimated, but according to the census report of 1909 it totalled 28,000,000 tons. The average annual consumption of all hay and forage crops may therefore be estimated as about 83,000,000 tons.

It is estimated that these crops were disposed of in the following manner:—

ESTIMATED DISPOSITION OF FEED CROPS ON FARMS OF THE UNITED STATES OF AMERICA.

Object.	Maize.		Oats.		Barley.		Hay.	
	Per Cent.	Bushels.	Per Cent.	Bushels.	Per Cent.	Bushels.	Per Cent.	Tons.
Total used on farms ..	85.6	2,318,000,000	72.0	814,000,000	47.0	86,000,000	83.0	68,890,000
Sold (not used on farms) ..	14.4	390,000,000	28.0	317,000,000	53.0	96,000,000	17.0	14,110,000
	100.0	2,708,000,000	100.0	1,131,000,000	100.0	182,000,000	100.0	83,000,000

The average annual number of horses and mules, cattle, swine, and sheep fed, apart from pastures, in the United States is estimated at about 25,000,000 horses and mules, 21,000,000 milch-cows, 38,000,000 other cattle, 52,000,000 sheep, and 65,000,000 swine.

Root crops, rape, &c., are not grown to any great extent in either the United States or Canada.

*Hay.*—The most valuable factor in the hay and forage crops according to the census of 1910 was—Timothy and clover mixed, valued at £51,456,000; timothy alone, £37,616,600; lucerne, £18,620,800; wild salt- or prairie-grass, £18,205,200. These four comprise more than three-fourths of the total for hay and forage.

*Alfalfa, or Lucerne.*—The story: Ahmed, the Bedouin, loved his horse. The beautiful bay mare, by her fleetness of foot and soundness of wind, had many times carried him to safety when beset by tribal foes. Ahmed watched her every move; he anticipated her every whim; he studied for her every need. After browsing near the desert spring, feeding upon the succulent green plant with the triple leaf, the mare (Zadeh) was fleet of foot and seemed possessed of all the stamina of all her ancestors. Quickly appreciating the food upon which his beloved mare thrived so well, Ahmed called it “alfalfa,” meaning “the best forage.” Alfalfa is an old, old crop, originating in Asia. It was passed on to the Greeks and Romans. The seed was introduced into America as early as 1793. Having been brought from Lucerne, Switzerland, it was called “lucerne.”

No data of a reliable nature is available in regard to the present areas under lucerne in the United States or Canada, but it must undoubtedly be considerable in both countries. According to the United States census for 1910 the acreage under lucerne in that country was 4,707,146, and the yield 11,859,881 tons, which was valued at about £20,000,000. Since that year, in all returns or estimates, it is included under the general heading “hay.” There can be little doubt, however, that enormous additions have been made to the acreage under this crop since 1910. As an instance of how the acreage has increased in some States Kansas may be taken as an example, where in 1891 the area under lucerne was 34,384 acres, and in 1914 it was 1,193,641 acres, an increase of 1,159,257 acres in twenty-three years.

At the present time all Departments of Agriculture, be they Federal, Dominion, State, or Provincial, throughout America are alive to the possibilities and the benefits that will accrue through an extension of the area devoted to lucerne-growing. Every channel is being made use of to disseminate information and bring home to farmers and communities the wealth and progress which is assured to the country through the extension of lucerne areas. A lucerne campaign