

later, pitched them into a large pile and left them to rot, and after a couple of years they could be used as compost for the dressing. After several cultivations and gathering of roots the field was in pretty good shape, and was then seeded to buckwheat at the rate of one bushel to the acre. We had a splendid crop of clean buckwheat, which more than paid us for the labor expended on the field, and the satisfaction of a good clean field besides.

Inquiries have frequently been made in the columns of "The Farmer's Advocate" regarding sweet clover, commonly known as Indian clover, as it is claimed the Indian tribes are fond of it for their horses, as it is a very persistent clover and will thrive where other clovers fail to do so. The writer recalls an instance of a field which lay close to the river bank, which had become badly infested with it, the seed having been carried there and deposited by high water in the spring floods. I can safely claim that after that field became polluted with it that no good was ever gotten out of the field ever after, as those clover roots took such a hold in the ground it was impossible to pull or destroy them with the plough, and the stalk grew so rank and coarse that cattle would not touch it. The Indians are said to have to resort to fire in the spring of the year to burn off the old stalk in order to ensure a new growth of feed for their stock. Now, my advice to all such as have any notion of trying this noxious clover to let it severely alone.

Russell County, Ont. WM. LENEY.

Cost of Producing Hay.

Editor "The Farmer's Advocate":

Hay is one of the most profitable farm crops, because of the fact that in proportion to its value the cost of production is less than that of most other crops. The cost of production depends considerably upon the labor-saving implements used, and in making the estimate of cost which follows I have not taken into account the use of a hay-loader, which would reduce the cost to some extent. It will be noticed also that I have made no charge for rent of land, as I consider the value of the pasture after the hay is removed balances the charge for rent.

One of my fields contained five acres and I have estimated the cost of producing the crop as follows:

ITEMS OF COST.

Seed, for five acres, 10 lbs. per acre at \$15.00 per bushel.....	\$12.50
Sowing, 1 man, 2 hours at 20c.....	.40
Rolling meadow, 3 hours with team at 40c.....	1.20
Mowing 5 acres, at 50c. per acre.....	2.50
Tedding, 2½ hours at 40c.....	1.00
Raking, 2½ hours at 40c.....	1.00
Coiling, 2 men, 7½ hours each at 20c.....	3.00
Hauling, 2 men and team, 2 days at \$6.....	12.00
Depreciation in value of implements used.....	2.00
Total	\$35.60

This would be \$1.78 per ton for a 20-ton crop, or \$2.86 for 10-ton crop.

In 1913 when the crop was extremely heavy, twenty loads of about one ton each were taken from the field, making the cost per ton \$1.78. With an average crop of two tons per acre the cost would be reduced by \$1.00 for coiling and \$6.00 for hauling, making the cost of production \$28.60, or \$2.86 per ton. In the 20-ton crop there was a mixture of blue grass with the clover, which adds largely to the weight of hay, and also to quality, though we consider much of it not good for the land, and we aim to keep it in check as much as possible.

In a season like the present, when nearly all the hay has been wet by rains, more work has been required to get the hay in condition to put in the barn, thus adding something to the cost.

Norfolk County, Ont. J. AUSTIN.

A Letter From Leeds.

Editor "The Farmer's Advocate":

In looking over "The Farmer's Advocate" of July 15, I noticed an article entitled "A Raid in the Oat Fields." I have also inspected my crop which is mostly oats as I sowed 108 bushels. It was fully 10 per cent. smutted in 1914, but last spring I took particular pains to treat for smut and I only see an occasional stem affected this year. There is practically nothing to speak of in my crop. All crops are looking fine in this locality except hay which is a light crop, caused more from frost in May than from drouth. Occasional local showers keep crops in fine condition. Prices are good for all farm produce. The farmers of Leeds County have nothing to find fault with and should be happy.

Leeds County, Ont. D. F. A.

Ontario County Notes.

Editor "The Farmer's Advocate":

Some time ago most everyone was complaining about the drouth, but the tables have turned and it seems the extra supply of water stored in the heavens has been turned loose. It is certainly a most unsatisfactory haying time, much of it as yet is standing. Hay taken on the whole appears to be an average crop, and the red clover fields that were cut early have an excellent growth. Many are looking forward to a nice crop of seed. Alsike is almost unknown. This county seems well favored for this crop, but there will be little for the threshers this year, and probably it is as well as the export demand is cut off.

Fall wheat is looking nice and is filling fine. Those who were patriotic enough to grow this crop will benefit financially, according to present prospects. The writer's opinion is that wheat will be somewhat low in price after harvest and will advance later on, and we do not see as it will be unpatriotic to hold for a while, for if we sell it will undoubtedly fall into the hands of a few speculators who will sell to best advantage to themselves later on. All grain appears to be an average crop or better, except some fields of oats that are badly affected with smut. When oats can be so easily treated for this disease it is a wonder the seed is so neglected.

The new seeds are excellent, a more even catch was never known. A little sweet clover is tried in some parts, and in some cases the plants are eighteen inches high. It will be a hard matter to get these oats fit in time to thresh. The corn and root crop is looking very good; each year sees the number of silos increasing. Very soon few barns will be without a silo. Quite a number of new barns have been erected. Steel siding and roofing is steadily increasing in favor, but the present high price of galvanized metal will no doubt deter the use to some extent. The steel frame also is giving much satisfaction. What a change there has been in barn construction during the last 30 or even 15 years when we compare the old structures with the modern ones.

The army worm is reported to be again on its destructive rampage, but no serious harm is at present feared.

The mortality in colts this year has been very high, the cause is not known, although joint-ill has claimed its share. One of the local veterinarians claims to have secured excellent results from using an antitoxin if taken in time, and no ill effects follow subsequent to its use, that is the colt makes a satisfactory recovery.

Our county is not behind in sending its quota of men to the front, and many a home is mourning some dear one fallen for his country.

Ontario Co., Ont. H. W.

THE DAIRY.

Light on the Milk Problem.

Editor "The Farmer's Advocate":

Two rather remarkable pamphlets have recently come to the writer's notice, with reference to the milk problem. One is prepared by Dr. North, for the New York Milk Committee and the other by Prof. Rosenau of Harvard University, which is printed and distributed by an Insurance Co. "for the use of its policyholders." We can understand a milk committee being interested in the milk supply of a large city, but that a Life Insurance Company should take up the question for the benefit of policyholders is a "new one" to us and will, I think, be news to most of "The Advocate" readers. And yet, on reflection, it is doubtless economy for a Life Insurance Company to endeavor to save life and to guard against dangers from food in any form. This is cheaper and better than having to pay losses on lives of policy-owners.

The pamphlet by the New York Committee is called, "Safeguarding Nature's Most Valuable Food, Milk." The opening paragraph deals with "the food value of milk." The author gives a brief table of relative values for milk and seven common foods. He concludes: "It can be seen from the above tabulation that when the consumer pays eight or nine cents for a quart of milk he is getting an amount of food for which he would have to pay an average price of 22 cents if his money were spent on beef, chicken, oysters, eggs or pork. Milk at 8 or 9 cents a quart is, therefore, a real bargain."

He next refers to the fact that in the States, and the same may be said for Canada, "The milk industry is one of the giant industries. It is close to the pocketbook of practically every farmer and close to the health of every consumer."

Clean milk comes next. He points out that, "A little calf can run into any cow stable and take its dinner from a cow and run out again

with certified milk in its little stomach. . . . The dairy farmer can imitate the calf by using a milking pail with a small mouth which prevents dust and dirt in the barn from dropping into the milk during milking time. A small-mouthed pail to keep out dirt; plenty of boiling water to keep pails and cans sterile; a tank of ice water to keep milk cold; these three things alone will produce wonderfully clean milk on any dairy farm."

The section on clean milk concludes: "The clean dairy farmer should receive more money for his product than the dirty dairy farmer. Milk dealers in several cities have already established clean milk stations in the country where payment to the producer is based on the cleanliness of the milk. . . . Clean milk is winning its fight and dirty milk is losing ground every day. Clean people buy clean milk."

The author commends "clarification" of milk because it adds to the safety of raw milk by removing blood, pus, waste tissue and large numbers of bacteria. However, he recommends pasteurization at "such a temperature and for such a length of time as will destroy the worst bacteria with the least damage to the milk itself." He thinks 145 degrees F. for 30 minutes is the best, in practice. Five reasons are given for pasteurizing milk which may be briefly summarized by saying it prevents infant deaths and the spread of disease germs. This statement is made: "No epidemic of disease has ever been traced to pasteurized milk. The objections raised to pasteurization that it is a substitute for cleanliness and affects adversely the digestibility and food value of milk, are met by saying, the Health Office should prevent the first; and experiments with infants in New York at 55 municipal milk depots where 18,000 are fed daily in summer and 16,000 in winter, disprove this second assertion about pasteurization of milk spoiling it for infants. "For three years all of this milk has been pasteurized. Records have shown that the babies have gained weight, have kept well, have shown no signs of rickets or scurvy and in every way give evidence that pasteurized milk is not inferior in food value or digestibility to raw milk. The death rate among infants during this period has been reduced from 125 per 1,000, to 94 per 1,000 births which places New York City in the lead of any large city of the World in the reduction of infant mortality."

Pasteurization in the milk bottle is recommended as the ideal method. Where the dealer does not pasteurize, it should be done at home in a "double-boiler." The pasteurization of milk at home gives a guarantee to any householder that no disease can enter the family through the milk supply.

Certified milk is referred to as ideal milk in the way of cleanliness but cannot furnish a guarantee against disease germs. After pointing out that various diseases may be transmitted through certified raw milk, he states: "The result is that public confidence in any raw milk, no matter how clean, has been shaken and the leading milk authorities now believe that even the best raw milk is unsafe and should be pasteurized." He also points out that "Certified milk is too expensive. . . . Every quart carries a heavy tax of from 5 to 10 cents above the normal price."

The advice given for buying milk is, "Three matters are of chief importance to be considered. These are safety, decency and price. Safety comes first and is more important than decency or price."

The pamphlet concludes, advising Municipal Milk Control, by establishing a Milk Laboratory in every city, then pasteurizing and compulsory bottling of milk under sanitary conditions, and finally grading the milk before pasteurization into three grades, A, B and C, with bacterial standards for each grade. A valuable summary of the important points covered is given on the last page.

"MILK"

A very attractive cover on the pamphlet "Milk" by the Life Insurance Company shows a cow in a pasture field and over her is erected a stone arch of which pasteurization is the key-stone. The other stones making up the arch are "Healthy Cows," "Clean Barns," "Clean Pails," "Prompt Cooling," "Protection Against Flies," "Protection Against Dust," "Clean Hands," "Healthy Milkers," "Sterile Cans," "Sterile Bottles," "Prompt Shipment," "Care in Home," "Clean Dairies," "Official Inspection." The foundation stones are, "Care," "Clean," "Cold," "Covered," or what may be called the four C's in clean milk production.

The subject is dealt with in the form of a series of questions. On the first page is an illustration of a child's tombstone on which the name is obliterated but underneath are the words: "Died by the Disgrace of Impure Milk."

In answer to the question, "Did Nature Intend