

with water or salt brine previous to use, is enough for a cord of muck. Any one or all of these substances may be employed. When the heap is formed, it is well to pour on all the water that the heap will absorb, and then cover with a layer of muck. The ingredients should all be thoroughly mixed before forming the heap, and after standing one or two months it should be shoveled over, built up again, and covered with fresh muck. Five or six months of summer weather will be necessary to decompose the muck.

2. *Method recommended by Sempers.*—Take of peat or muck 50 cords, caustic lime 100 bushels, common salt 17 bushels. Make a brine of the salt, slake the lime in it, and spread immediately over the peat, which should be laid down in layers about six inches thick. The heap is commonly built from four to five feet high, and of any convenient length and width. Fork over at intervals.

3. Peat or muck is sometimes composted with farm-yard manure, by building up the heap with alternate layers of muck and manure.

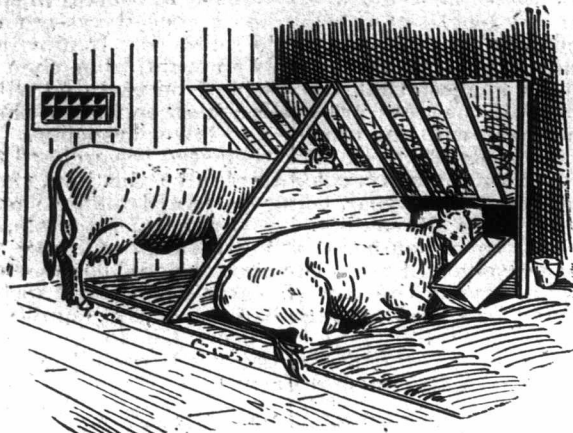
G. E. DAY,
Agriculturist, O. A. C.]

THE HONEY LOCUST AS A HEDGE PLANT.

T. G. Russell Co., Ont.:—"Is the honey locust suitable for hedge purposes in Eastern Ontario?" [As a hedge plant which will give general satisfaction, I cannot recommend the honey locust for the district of Ottawa. I have, however, observed during the last ten years that here and there in the Province of Quebec and in Eastern Ontario there are to be found successful and handsome hedges of this plant. Looking into the history of these hedges, I almost invariably found that they have not been successful when first set out; that is to say, that while perhaps a majority of the plants grew and proved hardy, yet a few plants unaccountably killed back, while others died out entirely. This points to the fact that the species appears to vary in hardiness and to be made up of a number of types, all differing slightly from each other. Some varieties of honey locust (*Gleditsia triacanthos*) are entirely thornless, while other types are heavily barbed. Some trees kill back entirely every winter, while others are never injured at all. In Western and Southern Ontario, and probably Central Ontario, I think the honey locust may be planted quite safely, and wherever it succeeds there is no question about it making a desirable hedge in a comparatively short time, particularly when "plashed." I do not think, however, that it will bear the amount of cutting back, nor preserve its compact and fully branched form to the base, as well as osage orange. Good work could be done in selecting the hardiest forms of this species, and propagating a strain that could be relied upon in Quebec and Northeastern Ontario. J. C.]

A MODERN COW STALL.

CAPT. H. S., Lennox Co., Ont.:—"Would you describe in the next issue of the ADVOCATE the Hoard cow stall and manger referred to recently in one of Mr. J. B. Muir's articles?"



A NEW COW STALL.

[We reproduce herewith an illustration of the cattle stall employed and recommended by ex-Gov. W. D. Hoard, of Wisconsin. The cut represents one row of cows facing another row. A closely boarded partition, four feet high, forms the front of the stall. Each stall is three and a half feet in width. The floor is made tight and there is no drop in rear of cows except the thickness of one plank, which is the double floor of the stall. The feeding rack is constructed for two purposes: (1) to contain hay or roughage, the slats being wide enough apart so that the cow can easily get her nose between them; (2) to force the cow, when standing, to stand with her hind feet in the rear of the cross bar, seen just forward of the hind feet of the standing cow. By virtue of this bar the animal has always a dry, clean bed to lie in, thus keeping her clean from manure. In placing the bar across the stall, bring the cow's head squarely up against the feeding rack, then just forward of her hind feet fasten down a 2x3 inch scantling. Fill the space forward of the bar with bedding, which, being without waste, will last until entirely worn out. It should, however, be made fresh once a week for the sake of health.

The grain and ensilage box is placed on that side of the stall opposite to the one the cow usually lies on. If placed sufficiently slanting, the feed will easily work down to the lower end next the cow, so that she will not need to bring her hind feet on to her bedding in order to reach the contents of the box. In constructing the feeding rack nail a 2x3 inch piece of scantling edgewise across the board

partition. This constitutes the bottom of the rack, and should be placed about thirty inches from the floor. Place the top scantling about two feet from the partition. To these the slats are fastened, making the feeding rack eight inches wide at the bottom and two feet wide at the top. In the center of the bottom scantling fasten a ring screw to tie the halter. On many dairy farms where little grain is grown, and therefore there is little bedding at the farmer's disposal, this stall provides a comfortable and clean method of stabling cows.]

GUERNSEYS VS. JERSEYS.

SUBSCRIBER, Toronto, Ont.:—" (1) How are Guernsey and Jersey cattle thought by competent and impartial authorities to compare with each other in all useful qualities of dairy cattle, including hardiness and power of improving the butter-producing capabilities of other cattle? (2) In what do the friends of each breed claim it to be superior to the other? (3) How do the bulls compare in tractability? (4) What is the scale of points, etc., of the American Guernsey Cattle Club? (5) Do they make and record official tests of their cows, like the A. J. C. C.? (6) What are the largest records of milk and butter produced in a year by Guernsey cows, and in shorter periods, as seven days? (7) What are the best records of average production per cow and year of milk and butter in good sized herds of Guernseys and Jerseys respectively? (8) Can you give me any such records of Canadian herds of either breed?"

[(1) The opinions of authorities who have had sufficient to do with the two breeds—Jerseys and Guernseys—to be able to give an impartial judgment are not easily obtained. Each, probably, has equally devoted admirers. We understand, however, that as producing cows in herds the two breeds have much in common. They have each been bred pure for a great number of years along dairy lines, especially for butter, with the skill of highly intellectual and practical people. It is claimed, however, that the breeders of Guernseys have paid more attention to robustness of their stock and the breeders of Jerseys to refinement of type. Each breed gives milk rich in fat, highly colored, and delicate in flavor, the Guernseys perhaps excelling in color of cream. With regard to the power of improving the butter-producing capabilities of other cattle, little advantage can be claimed for either over the other, though in America the Jersey has been most widely used for that purpose, being the most numerous breed. Either breed is highly prepotent. More difference can be found between various families or individuals of the same breed than between the best of the two breeds.

(2) The strongest claim made for the Jersey by her advocates is that she is the *butter cow*. She is claimed to be a persistent milker, giving milk of a high per cent. of fat, which churns easily, making butter of the finest quality. They are claimed to be more finely bred than the Guernseys—that is, with a greater nervous temperament, and therefore more intense as cream-making organisms. Guernsey breeders claim their cattle to possess more size and stronger constitutions than the Jerseys; that they give more milk per herd, and richer colored butter at less cost. They also claim an advantage in beef production for dry cattle and grades over those of the Jersey breed.

(3) It is generally considered that Guernsey bulls are more tractable than Jerseys; that is, fewer of them become unruly.

(4) —

	POINTS	COUNTS
Quality of Milk.	30	Skin deep yellow, in ear, on end of bone of tail, at base of horn, on udder, teats, and body generally..... 20 Skin loose, mellow, with fine, soft hair..... 10
	40	Esoutcheon wide on thighs, high and broad, with thigh ovals..... 10 Milk veins long and prominent..... 6 Udder full in front..... 6 Udder full and well up behind..... 4 Udder large, but not fleshy..... 4 Udder teats squarely placed..... 2 Udder teats of good size..... 2
Quantity and Duration of Flow.	16	Size for the breed..... 5 Not too light bone..... 1 Barrel round, and deep at flank..... 4 Hips and loins wide..... 2 Rump long and broad..... 2 Thighs and withers thin..... 2
	14	Back level to setting on of tail..... 3 Throat clean, with small dewlap..... 1 Legs not too long, with hocks well apart in walking..... 2 Tail long and thin..... 1 Horns curved and not coarse..... 2 Head rather long and fine, with quiet and gentle expression..... 3 General appearance..... 2
Size and Substance.	100	100

For bulls, deduct 20 counts for udder; for heifers, deduct 20 counts for udder.

(5) Not in the same official manner.

(6) Imp. Bretonne 3660 produced 11,218½ pounds of milk, containing 602.91 pounds of butter-fat, equivalent to 753.6 pounds of butter, with 80 per cent. butter-fat, in one year. In one month of 30 days she gave 1,243 pounds of milk, containing 67 12 pounds of butter-fat. In eleven days she gave 510 pounds of milk, containing 27.54 pounds of butter-fat. We have not at our command what is claimed as the highest record for any shorter period than eleven days.

(7 and 8) We have not data from which to answer definitely these questions. The nearest we can approach it is to quote the results of the "Columbian" World's Fair test, which is as follows: The best Jersey averaged per day for 90 days 40.3 pounds of milk, containing 2.64 pounds of butter; the best Guernsey, 39 pounds of milk, containing 2.04 pounds butter. The 25 Jerseys gave in 90 days 73,478.8 pounds of milk, containing 4,273.95 pounds of butter. The 25 Guernseys gave during the same time 61,781.7 pounds of milk, containing 3,360.43 pounds of butter. It is but fair to state, however, that the Jersey organization in preparing for that great battle had decided advantages over the Guernsey men in the vast number of cows they had to select from, the excellence of their long conducted system of records, and, in general, the means at their disposal. See article on "Cow Culture" elsewhere in this issue.]

VETERINARY.

Veterinary Amenities.

To the Editor FARMER'S ADVOCATE:

SIR,—J. A. Stevenson, V. S., evidently has an eye to cheap advertising. In the issue of Nov. 16th of the FARMER'S ADVOCATE he gives treatment for the disease affecting the swine in this vicinity, and alludes to "one bright V. S." prescribing hyposulphate of soda. He either does not understand the medicinal property of the drug or he does not know how to spell the word. Other than this, he only gives a rehash of the cause of the disease and the treatment that has been repeatedly mentioned by me, with the exception that he adds sulphur fumigation, lime and charcoal. If sufficient sulphur is used to kill the parasite it will surely kill the animal. I mention this hoping the Doctor will be advised in time to avoid heavy damages. If he will enlighten the public as to how charcoal and lime will in any way affect the parasite in the lungs he will merit the credit of advancing something new.

DAVID GREEN, V. S.

The Effect of Tuberculin Injections upon the Milk of Healthy and Diseased Cows.

The following extracts are taken from a report on the above made by E. A. de Schweinitz, Ph. D., M. D., in a bulletin issued by the United States Department of Agriculture:—

"Continuing the line of experiments given in my report (Bulletin No. 7, Bureau of Animal Industry) upon the variation in the amount of fat in the milk before and after the injections of tuberculin, tests were made on different dates upon a healthy cow (No. 290) with varying doses of tuberculin; upon diseased animals Nos. 145 and 161, and also upon a set of eight different animals (taken from the same milch herd), Nos. 185, 186, 187, 189, 194, 195, 222, and 234. The latter had all been condemned by the tuberculin test, and preparatory to their being killed were kept at the station for some days, thus giving an opportunity for testing their milk. There was practically no variation in the fat of the milk from the healthy cows after the tuberculin injection. This agrees with our first experiments and also with some tests made by Dr. Law, reported in Cornell University Bulletin No. 7. Neither was there any alteration when, as is seen from the tests in March on No. 290, large doses—30 c. c.—of tuberculin were injected. The second and third injection with tuberculin of Nos. 145 and 161, diseased respectively, caused no appreciable rise of temperature, but there was a decided decrease in the amount of fat."

"No. 265, an animal condemned for tuberculosis about a year ago, has been kept at the station since that date. At first she was injected with small doses of tuberculin until she ceased to give a reaction and was again apparently well. The injections of tuberculin were increased in number and quantity, and on March 20th, 1895, the date of the last examination of the milk, the animal received an injection of 100 c. c. Previous to that date she had received, altogether, 565 c. c. of tuberculin. The last injection caused no change in the amount of fat or in the temperature."

"The variation in fat should, of course, be attributed in part to the fever, but that this is not the only cause is also evident. The variation is not, judging from the few tests made, sufficient of itself to prove the presence of tuberculosis, but, taken in conjunction with the rise of temperature, might be considered as corroborative evidence."

"Many objections have been made against the use and reliability of tuberculin as a diagnostic agent, the opposition coming principally from those who are to a great extent unfamiliar with its practical use or who are only too ready to condemn a material which, through lack of skill and knowledge on their part, has perhaps given unsatisfactory results. The committee in Paris (composed of Cheveau, Leblanc, Mequin, Nocard, Strauss, Trabot, and Weber) reported as follows upon the principal objections to the use of tuberculin: "The use of high temperatures and carbolic acid in the manufacture of tuberculin makes it impossible that the tuberculin, if properly prepared, should produce disease. It occasionally happens that tuberculin fails to give a reaction in diseased animals, but these are very exceptional cases, and occur only sometimes when the animals are very badly diseased and their condition could be easily recognized, and are not of importance. Occasionally,