clusively that no mistake was made in their destruction. A whole volume could be written on just such experience, the knowledge of which was gained while I was in the employ of Uncle Sam.

My advice to breeders is to employ only reliable, competent men to make your test if you have any doubt in your minds about its existence or not, and insist upon sufficient time being consumed to make it accurate; and by all means be perfectly satisfied that you know what the animals' temperature is before you allow them to be injected, and do not be too eager for the operator to get off the place until all reasonable doubt has been cleared away, for it is a fact that it does not act alike in all cases. In some I have known a positive and lasting rise to take place inside of eight hours after the injection, as also have I known it delayed until twenty-four hours following the operation.

I have frequently been asked where the injection should be made, and have listened to different opinions on the subject; some inserting the needle in the end of the tail, insisting that that is the proper place, and to which I can only add that I consider it a very improper location, if for no other reason than that it creates a great restlessness with the animals in inserting the thermometer afterwards; and I consider there is no location more favorable than the shoulder, midway between the top of shoulder and the elbow or over the center of the scapula. The operator, if right-handed, crowds the animal tightly over in the stall, and with the thumb and forefinger of the left hand pinches up the skin tightly and with the syringe in the right hand carefully but quickly presses the needle through the skin and the injection is made. Some animals are very restless and require to be held by the nose, but they are the exception; the whole operation occupying much less time than it requires to write it, and the quicker the operator proceeds with the work the more successful he will be. Another point not to be regarded lightly is the fact that all instruments require strict attention and must be kept free from poisonous matter, which convey such material to the wounds they make and produce annoying disturbances, such as blood poisoning, abscesses, etc., which tend to create an elevation of temperature.

The question has been frequently asked, "Does the injection affect the milk of healthy cows?" and to which I would reply that I consider it advisable to reject at least the following milking, as the secretion certainly contains a portion of the injection.

JOHN SPENCER, V. S.

A Maine State Tuberculosis Scare.

The Maine Board of Agriculture has made a thorough investigation of the Luther Bridges "tuberculosis" case at Bluehill. The story as published in a daily paper was this:

"Bridges has had a cow four years, and his family of nine children, all under seventeen years of age, with one exception, have lived upon the milk, and while heretofore they have been quite well, they have always been emaciated and poorly nourished. Five of them have recently had tubercular pneumonia, and one died Tuesday, one Wednesday, one Thursday, and three others now lie at the point of death. There is said to be a prospect that other deaths will follow. The cow was killed, and Dr. Bailey states that the animal had the worst case of tuberculosis that has ever come to his notice. The little girl, the only child having an aversion to milk and not drinking any, is strong and appears to enjoy the best of health."

The facts prove to be these:

1. That the children who died died of croupous pneumonia and not of tuberculosis.

2. That the present illness of Luther Bridges and his son is pneumonia and not tuberculosis.

3. That no tuberculosis was present in the cow.

The secretary of the Board adds the following comments:

"Thus it will be seen that another attempt to terrorize the farmers of the State into subjecting all of their cows, no matter what their condition might be, to the tuberculin test, at an expense to them for the test alone of not less than $150,000, has fallen flat, and that the efforts of the alarmist are brought to naught in the clear light of carefully prepared facts. Again, it has been shown that tuberculin is not infallible—in fact, that it may not be reliable—and that it is unsafe to depend solely upon it to diagnose tuberculosis. In this case we find a poor family deprived of their only cow, a perfectly healthy animal, the much afflicted parents distressed by the thought that they had unwittingly permitted their children to be poisoned, and the entire community and the State thrown into a fever of excitement and alarm by this one mistake. It may, perhaps, be said that it was not properly applied, or that the temperatures were not correctly taken, but Dr. West is a regular veterinarian of considerable experience, and is one of the executive officers of the Maine Veterinary Medical Association; and the average farmer may well ask, If he cannot properly apply it, who can? The dairy business of Maine is one of the most important industries of the State. A large number of people are directly dependent upon it, and it brings more money into our farm homes than any other branch of farming; therefore, any effort to bring distrust upon the healthfulness of its products, or to subject those who are engaged in the business to unnecessary expense or inconvenience, should be looked upon as a blow at the welfare and prosperity of the State, and discountenanced by all of her citizens."

ENTOMOLOGY.

San Jose Scale.

To the Editor FARMER'S ADVOCATE:

SIR,—The San José scale has not yet been discovered in this county (Essex). There is great danger of it being imported into Canada if American trees and fruits are allowed to be shipped into this country. It is often present on the fruit as well as on the trees. It is more liable to attack the apple and pear than the peach. All fruit and ornamental trees suffer from the pest. The scale is so small that it is very difficult to find until it becomes very numerous, then it is not easily destroyed. The remedies used to destroy other insects are not satisfactory when used for the scale. It would, no doubt, be for the best interests of the fruit growers of Ontario if the importation of both fruit and trees were prohibited for a time at least. The supply of Canadian-grown trees will nearly or quite equal the demand. A number of small nurseries have started up during the last year or two. These, together with the increased plantings of the larger nurseries, will prevent any serious rise in price of nursery stock.

W. W. HILBORN.

Essex Co., Ont.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Miscellaneous.

SHORTHORN SCALE OF POINTS.

ROBERT BROWN, Huron Co., Ont.:—"Will you kindly publish in your next issue the points of a Shorthorn bull and cow, and oblige a reader?"

[So far as we are aware, neither the Canadian, English or American Shorthorn associations have ever published a scale of points. There have, however, been several amateur lists gotten up by score-card enthusiasts. Years ago, some one attempted Shorthorn judging at the New York State Fair by that plan, but it proved such a farce that the judge resigned. The following resumé of the chief points, without any numerical values attached, may prove of interest and value to the enquirer:

LEADING POINTS OF SHORTHORNS.

HEAD rather small in proportion to the size of the animal, tapering, clean-cut, handsome and well-set, and longer and narrower in the female than the male. *Forehead* broad between the eyes. *Face* slightly dished in the female only, and tapering gracefully below the eyes to the nostril. *Nose* straight and tapering. *Muzzle* medium and broad, full and moist. *Nostrils* large and fairly expansive. *Cheeks* not heavily fleshed, the lower jaw in the female thin. *Eyes* large, full, bright, calm and intelligent. *Ears* rather small, thin, well covered with soft hair, somewhat erect and playing quickly. *Horns* short, but longer and finer in the female than the male, flat rather than round at the base, spreading and curving gracefully forward with a slightly downward or upward tendency, and of a creamy-white or yellowish color.

NECK moderately long, of medium thickness and arched in the male, but thin and straight in the female, gradually widening and deepening and slightly rounding as it approaches the shoulder, springing straight from the back, setting well into the shoulder and brisket, and carrying the head gracefully. *Throat* clean-cut and without dewlap.

BODY fairly long, broad, deep, rectangular, almost a parallelogram. *Shoulders* well-laid, slightly sloping forward and downward, broad at the top, but finer in the female and well-laid back toward the ribs. The shoulder points or neck vein wide and full. *Chest* full, wide and deep. *Brisket* and *Breast* broad, low and projecting well forward. The *Forearm* where it joins the body broad and graceful, tapering to the knee. The *Ribs* should incline to the shape of a barrel, springing well and level from the backbone, increasingly so towards the neck rib, and filling up the space behind the shoulder and in front of the hooks, so that the animal when viewed from the side should appear straight and level from the shoulder to the buttock. The *Heart Girth* should be good. The *Back* straight and level from the neck just below the horns to the top of the tail, and well covered. The *Loin* wide and level across the hooks. The *Quarters* long and full from the hook to the tail, and deep from the hooks to above the hock. The *Hips* should be wide and level with the back and loin, the hip bones so dovetailed into the quarter and false rib as to almost disappear. The *Twist* should be straight down, moderately wide and deep and well-fleshed. The *Flank* deep and low, and full and thick. The *Thigh* full, long and heavily fleshed. The *Tail* fine, tapering and set on a level with the back, and not too much covered with hair.

LEGS should be short and well set under the animal, and below the knee and hock joints, fine and flat and clean. The *Hocks* should be rather straight, short and well within the animal. The *Foot* flat and in shape an oblong semi-circle. The *Skin* should be of medium thickness, mellow and elastic to the touch, and of a rich cream or orange color. It is finer in the female. The *Hair* should be fine and abundant, soft and glossy. The *Udder* broad and full, extending well forward along the belly and well up behind. The *Teats* should be of good size and squarely placed, well apart, with a slight oblique pointing outward. The milk veins large and swelling.

COLOR—The standard colors are red, roan, and white. The skin around the eye and bald of the nose should be of a rich cream color.

GENERAL APPEARANCE—The animal should possess style, symmetry of outline and gracefulness of carriage.]

MORE ABOUT HEREFORDS.

ERNEST H. MORRIS, Victoria Co., N. B.:—"I beg to acknowledge receipt of book. 'Fertility of the Land,' and copy of FARMER'S ADVOCATE. I hope to remain a subscriber, and would be glad to see more on the Hereford cattle, if possible, and their crosses."

[See May 1st issue FARMER'S ADVOCATE, page 198.]

BEST BREEDS OF LIVE STOCK.

"A," California:—"I am well pleased with the FARMER'S ADVOCATE, and will do all I can to get subscribers for it. Your answer to my question concerning calf raising without milk was and is very much appreciated. Now, if it is not too much trouble, please answer the following: (1) Give the best breed of cattle for beef. (2) Give the best breed of sheep for mutton. (3) Give the best breed of hogs for pork—all *English breeds?*"

[Our correspondent has asked us rather a hard series of questions. We are not aware that these questions have ever been answered in a way that is fully satisfactory to the bulk of those who are interested in their solution. Even in great Britain, the home of the breeds, where the area of the country is comparatively small and the climatic conditions, though more varied than those who have not gone over the ground are likely to suppose, yet are not probably so varied as on the great American continent, the question of which is *the best breed?* has by no means been settled and probably never will be. The question, which is the best breed for you, for your conditions and environment, for your pastures or other sources of food supply, your markets and for your tastes and preferences (if you have any)? is one affording scope for a great deal of close individual observation and judgment.

Shorthorns have given entire satisfaction as beef producers in the stall or on pasture, especially the former, and have proven excellent in grading up common or mixed bred stock, producing, as a rule, fairly good milking cows and early-maturing and quick-feeding steers. The Herefords are especially popular both in their native home and in America as graziers, laying on flesh rapidly and making good use of their feed in the stall as well. The Scotch breeds, the Polled Angus and the Galloway, are thick-fleshed and produce a fine quality of meat; the latter are also prized for their hides, which are covered with long, curly, silky hair, and make excellent robes for carriages or sleighs. They are very hardy, and good rustlers and fair milkers. The Polled Angus are much like the Shorthorns in conformation and feeding qualities, though unlike them in being polled, or hornless, and black in color. The Devons and Sussex are much alike in form, and are both solid red in color. They are good feeders, good milkers, active, hardy, and good beef producers.

An interesting feeding test of beef breeds of cattle was conducted at the Ontario Agricultural College, an account of which is given in the annual report of 1892, a copy of which can doubtless be obtained by writing Hon. John Dryden, Minister of Agriculture, Toronto, Ont.

Of the different breeds of sheep for quality of mutton, the Southdown is credited with being at the top, and they have proved well adapted to warm climates and short herbage. They are not large and do not shear heavy fleeces, but their wool is fine and they are easily kept. The Shropshire is of similar character to the Southdown, growing a little larger and producing a somewhat heavier average fleece of nearly equal quality. The Hampshire is larger, has fine fleece, good lean meat, and the cross produces large, early-maturing lambs. The Dorsets are prolific, will produce a fine quality of mutton, and are especially suited for producing early lambs. Of the long-woolled breeds, the Leicesters, Lincolns, Cotswolds and Oxfords are very much alike in that they are large, thrifty, early-maturing sheep, and produce heavy weights of mutton and wool. In this connection, we would refer the enquirer to the FARMER'S ADVOCATE for Nov. 16th, 1896, in which the results of Prof. Curtis' celebrated Iowa feeding experiment with Canada lambs of the various breeds (illustrated) is given.

Of the English breeds of hogs there are three which have given good and by all odds the most widespread satisfaction as pork producers in America: the Berkshire, the Improved Large Yorkshire, and the Tamworth. Of these, the former have had a long trial over a large territory, extending from the extreme north to the extreme south, and have proved well adapted to all conditions. They are early-maturing, active, and vigorous, and as found in the hands of the best breeders, who have been guided by modern conditions, have the length of body, the leanness of flesh, and the size which meets the demands of the present-day markets. The Yorkshires are noted for great size and long, deep sides and lean flesh, and will readily attain the desired weight at an early age if well fed. The sows are prolific and good mothers. They are white in color, and make an admirable cross with sows of Berkshire breeding. The Tamworth is a dark red hog with long, light head, long, deep sides, smooth flesh with plenty of lean meat, and are good feeders. They are considered especially useful for crossing with the Berkshires or Yorkshires, producing a quick-feeding, early-maturing animal, having fine quality of flesh and attaining good weights at an early age. Canada is now enjoying the fruits of careful attention to breeding and feeding the modern type of the bacon hog. For details of an interesting experiment in this connection, see the annual report of the Ontario Agricultural College for 1896, referred to on page 270 of our June 15th issue.]

RYE FOR ENSILAGE.

HARRY J. GOULDING, York Co., Ont.:—"Can you kindly inform me if rye grain sown in August or early September, 1897, would do to cut green say