

## STOCK

It is doubtful whether unlimited pasture may be considered economical, except perhaps for brood sows. The proper amount of land to give over to pasture must necessarily vary according to its quality and other local considerations, and the length of time the pasture will sustain hogs likewise is dependent upon the climate, quality of the crop, age and number of the animals, and other varying conditions. For an average it may be said that an acre of red clover should support six to ten hogs for three or four months. Alfalfa the leading pasture plant for swine, should provide, if of vigorous growth, for twelve to twenty-five animals per acre, but an alfalfa stand should not be grazed by so many hogs that mowing will not be necessary for keeping it in the best condition. The practice with alfalfa should be to pasture fewer hogs than will be able to keep back a rank or woody growth.—Coburn's "Swine in America."

### Prof. Koch's Views on Tuberculosis

Prof. Robert Koch, the eminent German bacteriologist, who discovered the phthisis bacillus in 1890, has been much maligned because of the opinions expressed regarding the subject of bovine tuberculosis, and the chances of its giving rise to tuberculosis in man. At the International Tuberculosis Congress, in Washington, last autumn, he maintained his position, asserting that there was on record no authentic case of pulmonary tuberculosis in man in which the disease had been demonstrated as of bovine origin. Emphatic exception was taken to his views by most of those present, and the renewed discussion ensuing, elicited from Dr. Koch the following statement of his views to a correspondent of the London Times, in which paper they were published, December 28th, 1908. They are reported by the Times correspondent as follows:

The main points at issue are, first, whether there are two distinct types of tuberculosis, or, in other words, whether there is a difference between bovine and human tuberculosis. The Royal Commission has, he says, abandoned its contention that there was only one type, and at the Washington Congress nearly all those present were agreed as to the existence of two types. The second point at issue is the frequency with which human beings are infected by bovine tuberculosis. Professor Koch never maintained that human beings could not be infected by animals. All he contended was that bovine infection was a less frequent source of the disease than human infection, and less far-reaching in its evil effects.

Professor Koch would be very glad to see simultaneous efforts made for the repression and cure of bovine as well as human tuberculosis, and thinks it possible that a rich country like England may be capable of carrying on that double campaign. He does not consider it advisable, however, that the efforts of a country like Germany should be diverted from the task of repressing consumption by any attempts, on a large scale, to avert the far smaller danger from bovine tuberculosis.

### Warbles in Cattle

A correspondent asks for information re prevention and destruction of warbles in cattle.

The warble fly attacks cattle in the summer months. In general appearance the fly resembles a small bumblebee, but with rather more hair on its body; it is brightly colored, with thick bands of yellow, black and red hair on the abdomen, and somewhat similar markings on the thorax. The presence of the fly is readily indicated by the restless manner of the cattle, usually accompanied by their galloping frantically over the field with head and neck outstretched and tail erect. The fly introduces its eggs under the skin by means of a sharp-pointed organ, and these eggs hatch into the warble or ox bot. The theory was formerly held that the eggs were taken into the system by the cattle licking or biting them off, and that the grub found its way out through the skin of the back, but the latest and more reasonable theory is that above indicated. The simplest measure of prevention suggested is the smearing of the backs of the cattle during the summer with some offensive-smelling mixture which the fly will avoid, such as train or tanner's oil and sulphur, applied with a brush or rag. Treatment for destruction of the grub in the

backs of cattle in the spring may be by means of mercurial ointment rubbed into the warble, or by squeezing them out by hand and crushing them. But, since the comfort of the animal and the value of the hide are considerably lessened by the work of the warbles, prevention is surely preferable.

### Injured by Bull

A farmer at Holland, Manitoba was seriously injured the other day by a bull which he was leading. The animal suddenly attacked the man, tossed him into the air and but for a dog driving the infuriated brute off, would have finished him at once. One does not hear of accidents from bulls now so much as formerly, probably because more care is exercised in handling the animals and because it is customary nowadays to dehorn bulls. At the same time accidents of this kind occur with sufficient frequency and enough men are maimed for life or killed outright to make it worth while repeating the caution that a bull, no matter how docile he may be, is liable to turn on his attendant and should be handled always in such a way as to render him least likely to inflict injury. All bulls over one year old should be ringed and led with a pole. All bulls except those kept for exhibition purposes should be dehorned. It is possible for a dehorned animal to kill a man, if the man leaves the opportunity open for it to do so, but a bull without horns is far from being as dangerous a proposition if he runs amuck than one that has his goring weapons intact. It is impossible to exercise too much care in handling male animals of any kind.

## FARM

### Topics for Discussion

To afford an opportunity for the interchange of ideas, and to provide a place where information may be given and received, we publish each week at the head of this department a list of topics, which our readers are invited to discuss. Opposite each topic is the date of publication of contributions on it and readers are reminded that articles contributed on any of the subjects given, must be in our hands at least ten days earlier than the subject is scheduled for discussion in our columns.

Readers will understand that this department of the paper is theirs. They are invited to write the editor freely expressing their opinion of the manner in which it is conducted and to suggest topics. If any reader has in mind a question which he or she may think can be profitably discussed, it will be given a place in the order of subjects, if it is deemed of sufficient general interest. Because this notice runs weekly at the head of the Farm Department does not mean that farm questions, only, may be taken up. The discussions will be spread over every department of the paper.

For the best article received on each topic, we will award a first prize of Three Dollars and for the second best Two Dollars, paying the latter sum for other contributions on the subject received and published in the same issue.

Articles should not exceed 500 words in length. August 11.—Is it wise for farmers engaged in dairying to breed strictly dairy stock or is it better to have dual purpose cows that will produce beef stock as well as milk?

August 18.—What method have you found best in preparing timothy sod for grain crop? Is it better to break the land after removal of the crop and cultivate till freeze-up, or break and backset in the fall.

August 25.—How can garden crops best be stored to ensure having them fit for table use to as late date as possible? What precautions are necessary in harvesting to avoid undue loss?

September 1.—What treatment of stock do you advise during late summer and fall in order to have them in fit condition to winter well? Particularize for the class or classes of stock with which you have had most experience and also distinguish according to age of animal. Under what conditions would you advise the feeding of grains or green crops and what feeds do you prefer?

### Storage for Grain

This week's letters in response to request for suggestions on the construction of granaries will furnish hints to those who have to make provision for the out turn from this season's harvest, or at least a part of it. In the contribution awarded first place Wm. Hutchinson of Saskatoon gives practical hints on portable granaries while A. Jonson of Manitoba deals

### Like Portable Granaries

EDITOR FARMER'S ADVOCATE:

To the pioneer farmer—I mean the man, who, single handed, and very often only with a yoke of oxen, is transforming his 160 acres of raw prairie into a profitable farm with 50 to 60 acres sown to grain—one must consider that the careful and economical handling of his threshed grain is a most important part of his "cares." In older settled districts where help is plentiful and where neighbors are near to handle the grain at threshing time it is no serious item. Many teams of horses generally are available and the hauling of the grain from the thresher causes Mr. Farmer no concern. It is out in the new West where there may be only one or two available ox teams at hand, where we find portable granaries are a decided success.

My portable granaries are built of one-ply ship-lap—6x6 sills, 2x6 joists and 2x6 studding, are 10 feet long, 8 feet wide and 8 feet high to the eaves, having a roof one-third pitch covered with ruberoid roofing. I have no door. A hole, 18 inches square, on one side of the roof, admits of entry to finally clean out the grain. The roof door, we may call it, is also covered with ruberoid and being "flushed" with the same material is perfectly water proof.

This size granary holds 750 bushels of oats, and as the hole is in the roof I can fill it to the ridge board using the granary to its full capacity. I leave the granaries standing empty until the thresher pulls in to the stacks and when the machine is set, hook a pair of oxen to them and draw them into place. The machine I use has a Perfection high bagger. This only delivers grain to a height of 8 feet, and as my granary doors are some 11 feet from the ground I made a wooden shoot, and, after detaching the long metal grain spout from the machine the wooden one is hooked up. A sack open at both ends, tied around the machine's grain hopper prevents the grain spreading. When the hopper trips the half bushel, the grain is delivered neatly and without any loss into the granary. This operation of fixing up is done in less than a minute.

I generally build four medium-sized oat stacks to make one setting for the machine and about sufficient to fill the granaries. When they are through, all I have to do is put on the lid and move on to the next setting. I find these granaries are a decided success. I have not to go hunting around to get neighbors to come over for two or three days, and in return having to do the same for them, and before I know who's who, eight or ten days have slipped by and all I have done is monkey around with grain. There is no time in this part of the West for any regrets on days that have "slipped" by from thaw-out to freeze-up. In using portable granaries my aim was to save time and expense. I have used them now three years and have no fault to find with them.

I also have another handy contrivance used in hauling grain to the elevator. On one corner I have a small sliding door, 4x4 inches and an outlet shoot. This is fixed just "sleigh" high, including top boards. In hauling I just draw up the sleigh, pull back the door and out comes the grain—a regular little river of it. With a grain shovel I fill the sleigh box in 15 minutes, drop the small door and am off to town. No heavy sack lifting with mitts on at 20 below zero, no wear and tear in sacks. I can clean out the grain within 50 bushels.

I also have built near the house another building—granary, work shop and store shed. Here my fanning mill is housed, my seed grain carefully stored and on stormy days, 15 minutes out to the field granaries gives me a wagon box of grain. I'm back to the cleaner and the hum of the fanning mill drowns the sound of the storm and I am plenty warm enough and fully occupied watching the plump, golden stream running from my mill, cleaned ready for the drill.

I am fully satisfied with portable granaries, but I'll build the next a little lower, say, 12 feet long, 10 feet wide and 6 feet to the eaves, but with the grain inlet in the roof just the same. I've seen granaries with the inlet in the end, but find they only give the farmer two-thirds of their actual capacity.

Sask.

WM. HUTCHINSON.



Y ROMEO.  
Fork River, Man. Weight 280  
Wilson 240 pounds up.