DAIRYING IN CHINA.

An American consul at Tsingtau, China, writes his Government a very interesting report on the condition of live stock and the development of the cattle trade among the Chinese :

"Cattle are not grown in China to any great extent; there are no large cattle ranches, each small farmer raising such stock as he may himself need. Cows are not used for milk by the Chinese people, but are yoked with oxen, or with any other available animal, and used in cultivating the fields. Foreign buyers can afford to pay prices which appeal to the owners of cattle, and it is feared that if large exportation continues the country will be depleted of this class of draft animal.

"In a few places in the Province, especially those towns where Occidentals are living, the Chinese raise cows for milking purposes, and even the better-class natives are taking kindly to the use of milk. It is the fear of typhoid germs in the milk that makes the sale of tinned products so large among the foreign population of this country.

"I am informed by Dr. Martini that a most curious fact has been discovered by him and his assistants in relation to the percentage of butter-fat contained in the milk of Chinese cows. These locally-grown animals are much smaller than our home cows, and give a much smaller amount of milk, but it contains 7 to 8 per cent. fat, while cows' milk in the United States seldom yields more than 2 to 3 per cent. fat, and 4 per cent. is considered extraordinary. This increased percentage of fat is said to be due to the bean cake fed to the animals there. Peanuts and beans are grown throughout this province in large quantities, and crushed into peanut oil and bean oil, which is exported in large quantities. The refuse from the mills is pressed into round cakes, measuring about 18 inches in diameter, and two to three inches thick, which is largely exported to Japan for use as a fertilizer, and is fed to cows, oxen, and all draft animals. The bean cake when used is pounded up in rough granite mortars and mixed with the animal's food, and all domestic animals in this country seem to appreciate its peculiar flavor.

"The large percentage of fat contained in the milk here makes it unsatisfactory for drinking purposes, especially for children, but it produces excellent butter in large quantities, there being very little waste material, and it is so easily manufactured that merely shaking the milk in a stoppered bottle for a few moments will produce butter."

APIARY.

BEES HANGING OUT.

Bees generally hang out for two reasons. It may be too hot inside the hive, or there is not room to store the freshly-gathered nectar (honey). Now, if bees hang out for the latter reason, it is, of course, self-evident that more room should be given. If this is neglected surplus honey is lost, that's all—and enough, too.

It generally is easy enough to tell whether the bees of a colony hang out for want of room. Simply note whether other colonies are working. You see when hives and surrounding conditions are alike, the hanging out of a few colonies hardly can mean that the weather is too hot.

Not much need be said about bees hanging out for want of room, for a beekeeper negligent enough to fail to provide necessary surplus storage room will hardly read articles on apiculture.

Bees hanging out on account of too high temperature inside the hive sometimes is a serious matter, especially in the Southern States. Hives have been known to get so hot that the comb melted. This is "just awful," to use a feminine expression.

In the first place, don't locate the apiary where there is little chance for a breeze, and the sun strikes with unrelenting intensity. Then, during the summer season all hives should be provided with deep entrances. Seven-eighths of an inch is the depth generally used. If the bottom boards are of the old style, that cannot be reversed to give a deep entrance, I would make them so or discard them entirely.

If extracted (liquid) honey is produced the cover may be raised a little by putting a piece of section under it. This will create a circulation—or perhaps I should say draft—of air through the hive, and thus help the bees in keeping the temperature low enough. This way of ventilation is undesirable in the production of comb honey, as it hinders the bees in comb building.

Shade boards are used by some beekeepers further south than the writer's location (Central Wisconsin). They are made of any kind of boards, cleated on the under side, so the air can circulate under them. Now, understand, they are put on the covers with the cleats down, so they will not lie in close contact with the hive cover.

Another thing, don't have hives painted a dark color. Paint them white. Dark colors absorb the sun's heat. Plain enough, then, that dark-painted hives will become too hot sooner than light-colored ones.

Central Wisconsin. F. A. STROHSCHEIN.

POULTRY.

A MANITOBA EGG AND BROILER PLANT.

There came to St. Charles, a couple of years ago, from France, an energetic young man, "Jean Badeau," by name, who, after a survey of the prospects for poultry farming near Winnipeg, determined to go in for this important branch, selecting St. Charles as an ideal place to carry out his plans, owing to its proximity to Winnipeg's fine market for poultry products. Mr. Badeau had to master the English language as well as poultry culture in the West, having little or no previous knowledge on the subject, and so the study of up-to-date methods of raising chickens profitably was commenced at once, and his signal success, so far, is evidence of plenty of grit and industry, as well as a great love for his birds; undoubtedly, a taste for poultry is half the battle in this business. Mr. Badeau deemed it wise to first rent a piece of ground, and secured the use

The Pet Lambs.

of an old house vacated shortly before by Mr. George Caron, taking over Mr. Caron's flock of White Wyandottes, henhouse and all, for the season. He then bought some mixed fowls and eggs from the neighbors to keep his two large incubators going.

During the first season, hatching out and rearing quite 700 birds, mostly of the common scrub variety, selling off broilers and roasters (dressed) at an excellent profit, retaining about 150 of the earliest-hatched pullets for winter laying.

When autumn came on he built a long, continuous henhouse for these birds, artificially heated; but the first winter did not show a full egg-basket until early spring, and the fowls did not flourish as they should have done. Upon advice from Prof. A. G. Gilbert, Central Experimental Farm, Ottawa, Mr. Badeau determined to do away with artificial heat for the winter of 1908.

His hatches turned out well, despite the poor season of 1907, and the sale of meat and fresh eggs was most encouraging. He raised considerably over one thousand birds, marketing

Bees Hanging Outside.

seven hundred in Winnipeg, retaining a flock of pullets, and giving toll to the wretched coyotes of nearly two hundred growing birds during the whole season.

This experience with the wolves made Mr. Badeau invest in woven wire for fencing his new chicken ranch which he bought some months ago, in an ideal location, a short distance from his rented place. Here, he has fenced six acres with nineteen-strand poultry fencing, which is warranted to keep all "varmints" at bay, and, having fine natural shade afforded by poplar and oak bluffs, he can leave the chicken ranch in safety any time, with a fine Newfoundland watch dog on guard for sneak-thieves of the human kind. No doubt, this fence will pay for itself during the first season.

Onto this six acres, Mr. Badeau has moved any poultry-houses he had erected on the rented property, and has built up a splendid poultry plant, incubator and brooder house. Henhouses are being erected for three hundred hens in winter, which he considers will bring in a nice little income. During the winter of 1908, he had splendid returns in winter eggs from his flock, kept in comfortable, well-aired houses, with no artificial heat, and when prices were soaring up to sixty cents per dozen for the new-laid article, gathered several dozen eggs per day. He finds, as does the writer, a great freedom from disease in poultry in Manitoba with proper management. Of course, he keeps his premises clean as a new pin, using a good supply of insect powder and a reliable poultry spray, having had a taste of fighting vermin during his first season, when some infected fowls were bought. Artificial incubation and brooding are used entirely at his ranch, and up-to-date colony houses of the portable kind are dotted everywhere, each containing a brooder of chicks of various ages, though in early spring the brooder house is used a great deal as well, some heat being required then.

As soon as the cockerels are large enough, they are put by themselves and fattened for the gridiron; despatched as broilers to Winnipeg, $1 to $1.25 a pair being realized on them in June and early July.

Pullets are allowed to mature as naturally as possible for the coming winter layers, to take the place of the hens, which are being killed off in early May and June, as they show broodiness, none being kept over their second year, and the price for table fowls is excellent then in Winnipeg. Mr. Badeau is gradually getting rid of his scrub fowls, and, in the future, intends to keep only pure-bred stock—White Wyandottes and Barred Rocks for utility birds, and a number of White Leghorns for eggs only, as he finds this part of the industry brings him a quicker return for his labor than the broiler-raising, but he will work them in together.

Keeping careful rate of eggs laid, he finds the pure-bred fowls lay more eggs than the scrubs, and are, of course, more desirable in every way.

Allowing about $1 per year for feed, Mr. Badeau claims he realized $3 per hen during 1907, which is certainly a good showing, and he looks for a larger return when he has his pure-bred flock.

A great deal of green cut bone is used at this plant all the year round, for both hens and growing birds, and, as this progressive young man has an excellent three-horse-power gasoline engine, 'tis an easy matter to get the bone cut, grain crushed, chaff cut, wood sawed, etc. Everything is bought in large quantities and stored ready for use, the one man doing everything himself, and, this season, he has a crop of early potatoes and roots for the fowls, put in on some breaking, to use up some of his surplus energy! This little sketch shows what can be done when hard work and intelligence are combined.

St. Charles, Man. H. E. VIALOUX.

GARDEN & ORCHARD.

CO-OPERATION STRENGTHENS EVEN THE STRONGEST.

Editor "The Farmer's Advocate":

In last week's issue, I was much interested in your article on "Co-operation of Co-operative Associations." As a member (Director and President) of the St. Catharines, which is the oldest Association that first obtained a Provincial charter (for $10,000) in the year 1898, I have always been deeply interested in the progress of the co-operative movement, and, in offering suggestions for the help of our younger associations throughout the Province, and even the Dominion, I fall back on our own experience. In the first place, there is as much need of co-operation of the many associations as there is of co-operation between the individual growers in any one section. Of course, we will find troubles and difficulties in the way. There are always, in each section, growers who can and do manage to market their produce without any other help or assistance, and who claim that co-operation is not helpful to them. Still, we find that, when these men do join the association, not only are they a help to the others, but their own position is strengthened, and that their own produce is marketed more easily. So, we may find some of our stronger associations who may say that they can and do market the produce of their members satisfactorily. If these associations would fall in and help the formation of a central, they would not only help the weaker associations, but would strengthen their own position. Happily, I can say that nearly all our stronger associations are only too willing to join in and help. This is what we should naturally expect, as no association could be truly co-operative that would not be imbued with this spirit. I believe that a charter should be obtained for the central organization, and that some arrangements should be made for the marketing of