

latter, "your next move." The writer believes that move will be the adoption of a casein-fat test which will unite these two parties. A number of the "fat" school have said, "show us a practicable casein test which can be used separate from or in conjunction with a fat test, and we will accept the proposition."

Bulletin No. 197, published by the Wisconsin Station, in July, 1910, just twenty years after the publication of the bulletin giving an outline of the Babcock milk-fat test, says under the heading "Digest": "The value of milk for cheese making should be based upon the content of both fat and casein. . . . Upon the basis of these tests (Babcock and Hart) an allowance of equal values for fat and casein is a just method of payment."

This bulletin is written by Drs. Babcock and Hart, and Prof. Parrington. Coming as it does from these well-known authorities, and sponsored as it is by this excellent experiment station, it ought to settle the matter in the minds of the doubting Thomases as to the correct basis upon which to divide proceeds of sales of cheese among patrons of cheeseries.

O. A. C.

H. H. DEAN.

THE APIARY.

Bees Winter With Lightest Loss in Years.

The Fruit Branch of the Ontario Department of agriculture has summarized the reports from one thousand one hundred and fifty individual beekeepers throughout Ontario, and declares a loss of colonies amounting to only 7½ per cent. This summary was arranged by Morley Pettit, Provincial Apiarist, from replies received during the month of May.

The winter loss of 7½ per cent. is the lightest for several years. In 1913 it amounted to eleven per cent.; in 1912, fifteen per cent., and in 1911, fourteen per cent. What losses there were during the past winter were due principally to starvation, caused by lack of sufficient feed in the hives. The total number of colonies reported in the fall of 1913 was 41,318, and in May, 1914, 38,222, being an average, in the spring count, of thirty-three colonies for each beekeeper reporting. So far as the bees are concerned the prospects for a good honey crop this season are gratifying, but clover is none too good in some districts, and there is no other crop so dependent upon weather conditions from day to day throughout the harvest time as is that of honey. The secretion of nectar in the flowers may be checked by sudden changes, and not until the season is well advanced will reports convey any definite estimate of production.

HORTICULTURE.

Explaining Re-loading of Spray Tanks.

Lest some of our readers might be confused over the manner of filling spray tanks on the Lynndale Farms described in our last week's issue, we may say that the second illustration was not clearly explained.

When the spraying outfit is spraying some distance from the mixing tank, the spray material is drawn from this mixing station to the spray outfit in the orchard with an ordinary tank mounted on a wagon and reloaded to the spray outfit in the orchard. This second illustration showed this operation of loading from one tank to the other in the orchard, so that no time is lost by the valuable spray outfit travelling back and forth long distances for the purpose of filling. There are two of these mixing stations on the property;—at the second one, water is elevated from a deep well to the mixing platform by windmill or gasoline engine, and there are four re-loading stations in the orchards, so situated that the spray outfits never have to travel far to be loaded, no matter at what part of the property they may be working. A four-inch pipe is used to run the water from one tank to another.

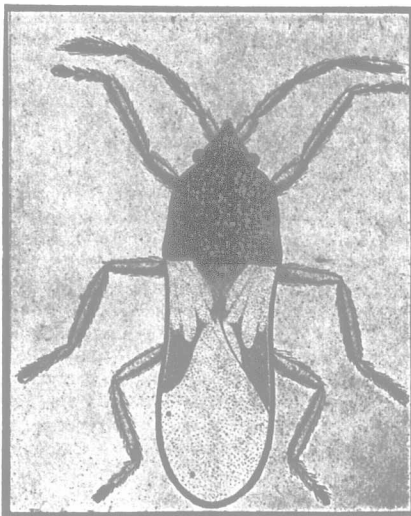
The estimate on the crop of strawberries as given in the previous write-up was for eight acres instead of ten, the plants from two acres having been removed for new plantations and for sale.

With the rye a great deal of vetch is sown to be plowed down. It is worth anyone's time to see this farm.

An Insect that Threatens Meadows and Grain Fields.

Certain sections of the United States have suffered severely from the ravages of the Chinch Bug, and it has been estimated that in Illinois and other States the loss has amounted from twenty to one hundred millions of dollars in a single season. So far Canada has been happily free from its depredations owing to the winters and unfavorable climatic conditions during the breeding season. However, a few sections have reported dangerous numbers of this pest and these come more particularly from Middlesex County, in Ontario.

The insect itself requires several changes to complete its life history, but in the adult form, H. F. Hudson, Division of Entomology, Ottawa, describes it as elongate-oval with broadly-rounded ends. It measures about three-twentieths of an inch in length, its width being one-quarter of the length. The head and thorax are black, the entire surface except the wings minutely hairy. The wing covers are white with a triangular black scutellum between them in front, the whitish area



The Adult Chinch Bug.

From Entomological Circular No. 3.

giving it the form of the letter "X". The adult female will lay in the vicinity of 100 eggs during the season of ovi-position. The young hatch out and establish themselves on the growing plants, and do the greatest injury by sucking the sap juices from the tender rootlets. They will often destroy fields of corn by sapping the brace roots of the plant, thus weakening it and causing it to fall.

Dry land is more subject to infestation and seasons noted for their absence of precipitation are more often accompanied by heavy injury. It is usually in pasture fields or in fields near to unploughed land that the worst injury results, and methods of control must be based upon the habits and characteristics of the insect. Where a cultivated field lies in proximity to pasture land or wood land it might be wise to cultivate a strip of land on the outside of the field. This could be plowed down and rolled after the eggs had been laid and the young hatched, thus destroying them before injury results.

POULTRY.

Room at the Top.

Editor "The Farmer's Advocate":

Will the poultry industry be overdone? This question is doubtless asked as a result of the great rush from all classes into the industry on a small or large scale. It is a popular business to-day, and men and women, both rich and poor are entering it for various reasons, some for money, some for health, some for novelty, some because others are, and some at least to a certain degree for the love of the business itself. And of all the people we see working in this business, how many know where they stand? When we consider that poultry is raised, we may say on all farms we realize how many people call themselves poultry raisers. How many can answer accurately when asked How many hens do you keep? How many eggs did you gather last year? How many did you sell? What did it cost to feed your hens? What was your profit? Do you know which are your best layers? Very few indeed. Some can answer as to what value they sold, few go further, therefore having little or no idea whether they lost or gained.

Not long ago I heard a man say quite

proudly that he had sold \$225.00 worth of eggs last year. Just a few minutes before he had said he had 250 hens. Not \$1.00 to a hen. It has been proved on experimental farms, hens cannot be fed to good advantage for less than \$1.15. So where was this man's gain. It is argued by some that if hens just gather their living or cows pasture upon the road-side all summer that what they make is all gain. This we must allow to be a fact, but if we invest nothing and make 50c, have we as much gain as when we invest \$1.00 and make \$2.00? Simple as this seems it is difficult to make some people see it. Of this we feel sure from what we see as we drive through the country. Not merely because it is my own opinion from experience that the majority know very little of how their poultry accounts stand that I presume to make these statements, but these facts were learned from a census taker.

I read recently in an article bearing on poultry these words: "There is always room at the top for the crowd is at the bottom." This makes one think that the only way to make one's work satisfactory in every respect is to stand high on the ladder. On observation we notice that no matter how overdone any trade may be or how overcrowded any profession, there is still room at the top and those few who excel remain uninjured. There will always be room at the top for the one who can make a success of a flock of twenty-five hens or the one who can make a success of a flock of one thousand. Is not poultry-keeping too often only something attached to a larger business and little or no thought given to it as one requiring daily attention to details or as anything in the least scientific?

When we consider that clever men have spent very many of their best years in study and experiments, and now frankly admit that there is still much more to be learned, and that they do not as yet see the possibilities of the great business, is it anything at which to wonder that so many people know very little about it.

If in the business in a small way, one must give sufficient time to do the work thoroughly, or if on a very large scale, from five hundred birds up, one's whole time may be devoted to it or it will be a partial or total failure. One must like the work as a man in a responsible position in his country was once heard to say, sufficiently well to stand by it every day. One's heart must be in the work and a constant and careful study made. It means more earnest attention to them. Even the buying of expensive fowls and the placing of them in elaborate houses and the engaging of an experienced man to care for them does not always ensure success. I had the pleasure a few years ago of being shown through a most complete row of hen-houses, built and owned by a man of vast wealth, where the equipment of the entire farm far surpassed anything else I have ever seen. It was truly a grand sight. A man had been engaged to care for this branch of the farm work, solely. Not long afterwards I heard the result, was failure and disease.

The chances are indeed few, that any of us who read these pages from week to week will live, to see the last of poultry-raising as an industry in Canada. It is as certain a business as any other, and more so than many.

If, as we believe life is too short to learn all there is to be learned of any one profession or calling, how can those who enter it only for a short time, because it may be a fad, hope for real success? There is a large class of people who enter first one kind of work and then another, staying scarcely long enough to learn its first principles and many of these are raising poultry to-day on account of its being extremely fashionable and popular, only to be gone to-morrow, leaving the steadier class to work their way up using each new experience as a rung in the ladder, firmly believing there will always be room at the top.

Durham Co., Ont.

M. H.

FARM BULLETIN.

York County Prospects Bright.

Editor "The Farmer's Advocate":

Crops, as a whole, never looked better in this part of the Province than they are looking at this present hour. The condition of the land during the seeding was ideal. The land had sufficient moisture for germinating the grain. This was followed, by fine cool days that insured an unusually fine root system. There were no frosts to do any damage. The rains of early June brought the grain to a point where it covered the ground and now the field crops are looking their very best. The roots have done splendidly. There was a prolific showing of blossom of all kinds in weather that was free from extremes of heat or cold or moisture. Every fruit tree was, during blossom time alive with bees. Fruit has