

corn, beets, onions, beans and sunflowers. Meat and ground bone will be ordered in due season, and I have my eye on a buckwheat man, not an effigy made of straw and grain, like so many in the agricultural parts of our great fair, but a man who raises buckwheat. If, as is often said, this is woman's century, in which she first learned her possibilities and powers, it is equally the hen's century. Worthy biddy is becoming one of the chief ladies in the land, and would be better than our rare and rapacious eagle for a national emblem.

DAIRY.

The Dairy Industry of Ontario.

ITS VALUE, PROGRESS MADE AND IMPROVEMENTS NEEDED—THE VALUE OF DAIRYING.

BY PROF. H. H. DEAN.

It is common to reckon the value of an industry by what it brings in dollars and cents. Taking this narrow view of the matter we find that this province, in 1892, produced cheese to the value of \$8,959,933, and butter to the value of \$384,576 (creameries only.) Now, if we add to this the value of the cows which are used to produce this amount of butter and cheese, then add to it the amount of money invested in factories and plant, and to this again the value of cows and plant used in supplying towns and cities with milk and butter, not to mention the dairy products used at home on the farms of Ontario, we have some idea of the value of dairying from a dollars-and-cents standpoint. But it is not of this value that I wish to speak more particularly, but of other values which are not usually reckoned in speaking or writing on this theme.

The first value I shall mention is that of the dairymen themselves. (And when the word *dairymen* is used, it is intended to include the women also, for how could the men succeed in this business without the help of the good wives and daughters, who set an example of neatness, tidiness and gentleness—things so essential for success in a dairy?)

Without saying one word against the men who are engaged in other branches of agriculture, take the dairymen out of this province and the farmers would rate rather low; and Ontario, instead of being known as the gem of the continent in agricultural pursuits, would be as the gravel stone in value. I would rank the classes of agriculturists of the province in the following order as to intelligence, skill, good farming, good buildings and fences, and wealth according to numbers:—(1) Dairymen; (2) Fruit Growers; (3) Live Stock Breeders and Feeders; (4) Grain Growers; (5) Lazy farmers, non-readers and non-thinkers. (Of the latter class we have but a few representatives in Ontario.)

The dairy industry is further valuable because the prosperity of the beef business is dependent largely on it. Good steers require good milk, on which they may be fed for the most critical part of their lives. Good calves mean good beefers, which mean good milk properly fed; while poor beefers indicate little or no milk at a time when it should have been fed. If we extend the term to its widest meaning, the value of our sheep, swine, horses and men depends upon a plentiful and wholesome milk supply. It is valuable because it utilizes waste land, which otherwise would bring little or no revenue to its owners; because it makes possible the employment of skilled labor, and the use of that system known as co-operation, which will do much to make business men of farmers. It is also valuable owing to the fact that it enables farmers to become manufacturers, and to reap the profit of manufacturers. He who produces none but raw, rough material never grows very wealthy out of these goods alone. The man who manufactures rough boards into fine furniture makes greater profits than the man who swings an axe, pulls a saw, or rolls a saw-log, and, as a rule, lives in a finer house and wears better clothing. The person who makes gloves, fine boots and shoes, or fur clothing, makes more money than the men who raise the animals, take off the hides, or tan them. So the farmer who manufactures his hay, straw, corn-stalks and grain into milk, and this again into butter and cheese, will reap the profits that come to a manufacturer. "In all labor (if wisely directed) there is profit," says an old proverb, and the more effectual labor we put into a business, the greater will be the profits. In making milk, butter and cheese, the farmer not only benefits himself, but all mankind, creating a demand for labor and satisfying the mouth with good things.

Lastly, dairying is valuable, because it keeps the land from becoming poor, and enriches that which is already on the road to poverty. If farmers would but consider that every time a load of grain, hay or straw is sold from the farm, and nothing returned to take its place, the farm is poorer by the amount of plant-food contained in that load, and that if this drain is continued, the time will come when there shall be no more loads to sell, there would be even more anxious inquiry than there is at present as to how the farm may be kept in good condition and a good living made, with something left over to pay shoe bills, store bills, blacksmith bills, notes on farm machinery, or interest on a mortgage; and after this has been done, something laid by for a rainy day.

As to how this has been done, and how it may be done more effectually, I shall write in succeeding numbers.

APIARY.

The North American Beekeepers' Association.

BY ALLEN PRINGLE.

The annual meeting of this Association was held on the 11th, 12th and 13th of October, at the Louisiana Hotel, Chicago, with a very large attendance—probably the largest since its organization, about a quarter of a century ago. Canada was well represented at the convention, about a dozen Canadians being present. Various questions of supreme interest and importance to the beekeeper were discussed; but, as usual, there was a wide divergence of opinion on some essential points, and many not so essential. This difference obtained among the "authorities" and experts as well as the rank and file, and not infrequently serves as a sort of stumbling block to the novice. Practical bee culture is not yet an exact science. Moreover, differences, minor and fundamental, are caused largely by different circumstances and environments, as well as by the constitutional differences of the subjects themselves.

An interesting event of the meeting, which ended rather dramatically, was the presence of the noted Prof. Wiley, of "artificial comb honey" fame, who addressed the convention on honey adulteration, giving the results of his analyses, and urging the imperative necessity of taking vigorous measures for the suppression of all food adulteration. His address was well received, though, as was evident from the cross-examination of him which followed, not a few still had it "in for him" because of that unfortunate "scientific pleasantries" which he wrote in the Popular Science Monthly several years ago, to the effect that "comb honey was now (then) manufactured by man complete, without the mediation of the bees at all, the comb being made by machinery, filled with glucose, or something else, by machinery, and finally capped over and finished by machinery." Of course, as there was not a word of truth in this, it stirred up a regular hornet's nest among the beekeepers. The bee journals, especially the American Bee Journal, vehemently denied the assertion, denounced it as a slander, and called upon Prof. Wiley to either furnish the proof of his extraordinary statement or retract. For reasons best known to himself, he did neither the one nor the other. The noise among the beekeepers waxed warmer and louder, and Thomas G. Newman, then editor of the American Bee Journal, pitched into the Professor in vigorous fashion. Meanwhile the "pleasantries" was industriously going the rounds of the press and doing the bee-keeping industry incalculable injury, though so pointedly refuted, for, you know, the average man is said to believe a lie much more readily than the truth. It must be said here that the Popular Science Monthly was not to blame in the matter, for as soon as it found out the true state of the case it was not only willing to undo the wrong as far as possible, but set itself about it. The writer of this was requested by the editor of the Popular Science Monthly to prepare an article for its pages, dealing with the whole matter and refuting the assertions of Prof. Wiley touching the artificial manufacture of comb honey. This was done, and the article promptly appeared in that magazine some two or three years ago. A prominent American apiarist had offered \$1,000 to Prof. Wiley, or anyone else who would furnish the proof of the Professor's statement, and the writer of this had also subsequently offered one hundred colonies of bees to any such person. Neither offer was ever accepted by anyone. Prof. Wiley at last weakened, and admitted that the assertion he had made was merely a "scientific pleasantries," and ultimately that it was entirely without substantial foundation. A sort of reconciliation has, in consequence, been effected between him and the beekeepers; and following Prof. Wiley's address to the convention the chairman, Dr. Miller, very happily brought Mr. Newman, the Professor's most inveterate and persistent assailant, who sat on his left, and the Professor, who sat on his right, together in a hearty hand-shake, and the old hatchet was buried amid a tumultuous outburst of applause from the audience. Prof. Wiley is official chemist in the agricultural department at Washington.

Prof. Riley, official entomologist and assistant chemist in the same department, was also present at the convention, and delivered a brief address. Altogether the meeting was the most successful held for many years. E. D. Abbott was elected President; F. Benton, re-elected Secretary; and St. Joseph, Missouri, selected as the next place of meeting.

A DIFFERENCE OF OPINION.

Mr. G. W. Ferguson labors hard through two columns and upwards in the ADVOCATE of Oct. 1st, to show that he is right about "transferring" and that I am wrong. Nevertheless, my positions are unaffected, and my opinions about transferring remain just the same. I, too, might write two or three columns of rejoinder, but forbear, as I think I can employ my time and pen more profitably. Mr. F. quotes authorities which he thinks "Mr. P. will not question;" to all of which I beg to say, briefly, that I accept no man's authority. I am my own authority, and authority only for any others who may choose to accept it; and any man who asks my opinion or advice gets it, whether he falls in with it or not. Mr. F. is quite welcome to his opinions on the question at issue, and anybody is free, I suppose, to follow his advice who is fool enough to do so.

I shall just direct the reader's attention to a single sample of Mr. F.'s criticism in his last long effort, and leave all the rest where it properly belongs. He says:—"In Mr. Pringle's first article, May 15th, he tells 'Subscriber' it would certainly be a little difficult to get extracted honey from box hives; you must, therefore, transfer your bees from the old box hives to movable frame hives before you can use a honey extractor on them. That is, he must transfer before he extracts; now he says he must extract before he transfers. Is not this a contradiction?" Now, let the reader just observe the meaning this very clever critic puts upon my language quoted above! Could anybody not in search of a "contradiction," or a peg on which to hang a puerile criticism, get such a meaning out of it? I have only this to say more: Any one so obtuse as not to understand the meaning of the writer above, or so tricky as not to want to understand, but twist it in that style, is worthy of no further attention.

The Apiary.

CONDUCTED BY ALLAN PRINGLE.

WINTERING.

No subject in connection with bee-culture has taken a more prominent place in bee-literature than that of wintering, and no wonder, for in Canada and the Northern States wintering is the most perplexing and difficult part of the business. That the bee-keepers have wrestled with the problem late and early, summer and winter, in season and out of season, with their hands and their heads, is, therefore, not strange, for their biggest losses have arisen from winter and spring mortality. While great progress has been made in the art of successful wintering and in spring management among the specialists and more advanced apiarists, there is still much winter mortality and "spring dwindling" among the rank and file.

IN OR OUT, WHICH?

The question as to whether it is best to winter in cellars and other repositories or in the open air, properly protected, is also far from settled. The truth is, either method may be successful or either may be a failure. Bees may be wintered successfully outside if properly prepared, and with equal success inside when the conditions are right. While inside wintering is no doubt the safer method in the eastern and northern parts of Ontario and in Quebec, it is probably true that outside wintering is the better way in some parts of Western Ontario, in the Niagara Peninsula, where the climate is somewhat milder and the spring earlier. This is doubtless true also of British Columbia and parts of the North-West, while Manitoba and the Maritime Provinces must winter inside to insure a fair degree of success.

OUTSIDE WINTERING.

The preparation of the colonies for a winter sojourn outside must depend, in part, on the climate, locality, and the surrounding conditions. The chief ends to be attained are stores, temperature, ventilation and dryness. In outside wintering especially, the stores should be excellent and ample. The packing should be such as to secure a comfortable temperature without overheating, as the latter leads to premature brooding, undue consumption of stores, and an abnormal activity in the hives when the bees should be in a quiescent or semi-torpid state. The ventilation should be such as to secure purity of the atmosphere within the hive, and preserve the combs from mould. But, as the bee breathes but little in the quiescent state, and therefore requires but little air of any kind, there need be no heroic ventilation in outside wintering. Dryness is an essential. The hive and packing should be so protected by roofing and otherwise that neither rain nor snow may reach them to wet them. The entrance must be kept clear. Chaff-straw or dry sawdust may be used for packing. Corkdust is better than either, and should be used wherever possible, especially in the filling-in of double-walled hives. For packing around the hive, between the walls and the outside "skeleton," the other articles named do very well; also dry leaves, which are greatly preferred by some successful out-door-wintering men.