

FARM-FIELD AND GARDEN

IN THE APIARY.

Shallow Frames Versus Deep Frames For Wintering Honey Bees.

First.—Irrespective of the depth or shallowness of the frames, does the amount of comb which the cluster of a colony covers at the beginning of winter, if about four-fifths filled with honey, suffice for its needs, without the cluster moving lengthwise until the season enables it to do so readily?

Second.—Is there any essential contradiction between the maxim "Deep frames are better for wintering" and the fact that colonies have wintered well in very shallow hives, such as the Bingham?

The beekeeper who asked the foregoing questions of *The American Bee Journal*, also gave his own idea in the matter. He said: "My idea is that very shallow frames succeed when they are filled with honey, or nearly so, and deep frames succeed because they have enough honey in their tops, and that in neither case the cluster moves lengthwise in severe weather."

The reply from Charles Dadant and son was: "If the place occupied by the cluster, in a shallow hive, was filled four-fifths with honey, there would be no room for the bees either to breed or to cluster, as they do not like to cluster on the honey, probably owing to the fact that it is much colder than the empty comb. The back part of the hive would then be filled all the way down, and we would consider that the colony was running some risk, more so than a colony that had less honey under the cluster."

In addition to this we will say that we do not believe that a colony can have a hive as full as mentioned above and be strong, as the bees must necessarily have filled this space during the honey flow, and there is usually about two months between that date and the opening of the cold weather in which they breed more or less to keep up numbers. Bees in very shallow frames with us do not winter so well as in large ones, as a rule, and the fact that "they have wintered well" is not an evidence that they winter as well as in the deeper ones.

C. H. Dibbels replied: "I think so. 2. No; the severity of the weather, strength of colony and the quality of food have more to do with successful wintering than the shape of the hive."

M. Mahin said: "I. Yes and no; it depends on the latitude and the character of the weather; in some cases the honey in reach, if there were none above the cluster, would be all consumed, and the bees would starve. 2. I do not see any."

Dr. J. P. H. Brown and G. M. Doolittle thought the questions had been well answered by the proponent of them. Professor A. J. Cook's experience tallied with the questioning beekeeper's conclusions.

W. K. Graham said: "1. It is all sufficient in this locality. 2. I would prefer deep frames for wintering."

Wide Range of Tobacco.

Probably the tobacco crop this season has proved as profitable as any farm product. The markets have been very firm and active all this fall, and the prices realized are very satisfactory, especially for the best grades of Havana leaf and seed. Tobacco can be cultivated over a much wider range of territory than many seem to expect. Twenty years ago very few northern states raised tobacco, except in isolated parts of Connecticut, but today Pennsylvania, New York and Wisconsin tobacco is in considerable demand. More recently southern Ohio, Indiana, Illinois and Missouri have come to the front as good tobacco states, and thousands of farmers are making a good living from the plant.

But, as a writer in *The American Cultivator* explained, it does not pay to raise inferior tobacco, for the taste of smokers is becoming more critical every year. "The labor required to put the tobacco into marketable shape is great, but as this comes chiefly in the winter season no farmer should complain. A farmer should consequently raise at least two crops, one of tobacco and one of some other profitable plant. The soils that give the best results with tobacco are sandy loam, well drained and very rich. The soil must be deep and warm, and consequently well drained."

Fertilizing Guano.

A tree which lives for years and is slow in its action needs to be fertilized some time ahead for fruit. The potash is not really needed so long beforehand, but it is well to have it there so that the rains may bring it to the rootlets and enable it to get thoroughly incorporated into the sap. Scientific men tell us that potash is one of the least vanishing of the manurial elements and remains in the soil a long time. The working required to cover potash and bone is so very shallow that it need not set the tree to growing prematurely. If you apply nitrogen, either in the form of nitrate of soda or sulphate of ammonia, this should be well covered. This is principally useful for forcing bloom and making it strong and prolific, and we believe the guano is not deficient in this respect.—Florida Fruit Grower.

The Bollworm.

An old cotton planter, writing from McKinney, Tex., in the *Texas Farm and Ranch*, says: "I never tested the plan of planting peas to protect cotton from the bollworm, but in 1879, when the bollworm did the greatest damage to the cotton crop in this section, I planted a trial patch of three acres, planting 20 rows cotton April 1, and May 1 two

rows late corn alternately, and I made three bales of cotton, while the corn was literally devoured by the worm.

Early planting, rapid cultivation and plenty distance in drill have proved one of the safest remedies.

SIX CROPS IN ONE YEAR.

Three of Corn, Two of Potatoes and One of Turnips.

To grow and harvest six crops of grain and vegetables on the same field in one season is a triumph in farming that does not come to many. But an Alabama farmer tells in *The American Agriculturist* that he has a neighbor who grows annually six crops of corn, potatoes and turnips on the same piece of ground. He manures heavily with stable manure and plows deep in February, planting first Early Rose potatoes in rows 2 feet apart. As soon as the young vines are large enough, he gives them a good working with a plow, leaving an open furrow between the rows. In this furrow early corn is planted, the ground being again well fertilized in the fall.

The potatoes begin to mature in May, and as these are gathered, a second planting of corn is made in the rows from which the potatoes have been taken. In the digging of the latter the early planted corn is given a good working. By the time the second planting is ready to plow, the first one has matured in roasting ears, and the stalks are cut up and fed to live stock, or cured and stored for winter forage. The ground upon which this first corn crop is grown is now opened again with the plow, the second planting given a good working, and a third corn crop is planted between the two foot rows, a good manuring in the hills being given as before.

When the second planting of corn comes into maturity and the roasting ears and stalks have been harvested, the ground is plowed again, and in the rows where the second crop of corn grew is planted a second crop of Irish potatoes in furrows well filled again with good fertilizers. This planting is usually made early in September, the crop maturing in November. The third planting of corn comes in as late roasting ears. When this crop has been gathered as before, the ground is again fertilized and plowed, and turnips are sown between the potatoes. This crop is ready for harvesting in December, thus making six crops in one year, three of corn, two of potatoes and one of turnips.

This system has been kept up without variation for five years, and the ground has shown no deterioration. On the contrary, it appears to be steadily increasing in fertility and productiveness, the result of six annual fertilizations and the deep and thorough tillage given in the various croppings. The system, however, is possible only in a low latitude and where killing frosts seldom appear between the middle of March and the 10th of November.

Water Protection From Frost.

The Country Gentleman calls attention to a suggestive fact stated in connection with the Florida freeze which may prove of considerable practical importance in subtropical cultivation. It is stated that the 55 acre orange grove of White & Leonard, near Hastings station, in northeastern Florida, was saved by flooding the ditches with artesian water. Mr. J. C. White was one of the first farmers in Florida to put down artesian wells, and he found that he could raise the temperature of his fields eight degrees by flooding his ditches. A grove near by, which also had water protection, was slightly damaged, because the water had not been turned on in time. Other groves in the neighborhood without such protection suffered severely. An artesian well in that region costs but little, as an immense volume of water, believed to be from underground drainage of the Appalachian chain of mountains, underlies Florida, forces itself to the surface in springs that are rivers, flows southward and inundates all southern Florida with flowing, fresh water, producing the distinguishing characteristics of the Everglades.

If a difference of eight degrees in temperature can be produced in this way, it may obviate damage by frost over a large area in all but extremely exceptional cases occurring at long intervals and involving only the northern part of Florida. Nine years ago was the last injurious frost, which was the worst in 51 previous winters, and the settlers, after such exemption, were courageous enough to go on with planting and cultivation, with results that have proved very successful.

Clubfoot In Cabbages.

For club root, or foot, as it is variously called, in cabbages, turnips, etc., no remedy or sure prevention has yet been discovered save strict rotation. Never plant cabbages or any other member of the same family twice on the same land except it be in old gardens or in calcareous soils. The New Jersey experiment station says that in its experiments air slacked stone lime gave sufficient evidence of its usefulness as a preventive of clubfoot of turnips to warrant it being recommended for that purpose. But no less than 75 bushels should be applied per acre and at least three months previous to the time of planting. The soil on which these experiments were made was probably a light sandy loam. Undoubtedly even a smaller quantity of lime would answer for some other soils.

A summary of the department of agriculture estimates gives the acreage and production of the United States for 1895 as of wheat 88,944,850 acres and 424,231,000 bushels, and of corn 81,990,800 acres and 2,161,857,000 bushels. In 1894 there were 1,212,770,052 bushels of corn.

Choice apples, especially red varieties, are in good demand.

Harper's Magazine

IN 1896.

Brisels, a novel by William Black, written with all the author's well-known charm of manner, will begin in the December Number, 1895, and continue until May. A new novel by Geo. Du Maurier, entitled *The Martian*, will also begin during the year. It is not too much to say that no novel has ever been awaited with such great expectation as the successor to *Tribby*. The Personal recollections of Joan of Arc will continue and will relate the story of the failure and martyrdom of the Maid of Orleans. Other important fiction of the year will be a novelette by Mark Twain, under the title, *Tom Sawyer, Detective*; a humorous three-part tale called *Two Mormons from Mud-diet*, by Langdon Elwyn Mitchell; and short stories by Octave Thanet, Richard Harding Davis, Mary E. Wilkins, Julian Ralph, Brander Matthews, Owen Wister, and other well-known writers.

Prof. Woodrow Wilson will contribute six papers on George Washington and his times, with illustrations by Howard Pyle. Poulton Bigelow's history of *The German Struggle for Liberty*, illustrated by R. Canton Woodville, will be continued through the winter. Two papers on St. Clair's defeat and Mad Anthony Wayne's victory by Theodore Roosevelt, with graphic illustrations will be printed during the year.

A noteworthy feature of the MAGAZINE during 1896 will be a series of articles by Casper W. Whitney, describing his trip of 2600 miles on snow shoes and with dog-sledge trains into the unexplored Barren Grounds of British North America in pursuit of wood-bison and musk oxen. Mr. Whitney's series will have the added interest of being illustrated from photographs taken by himself.

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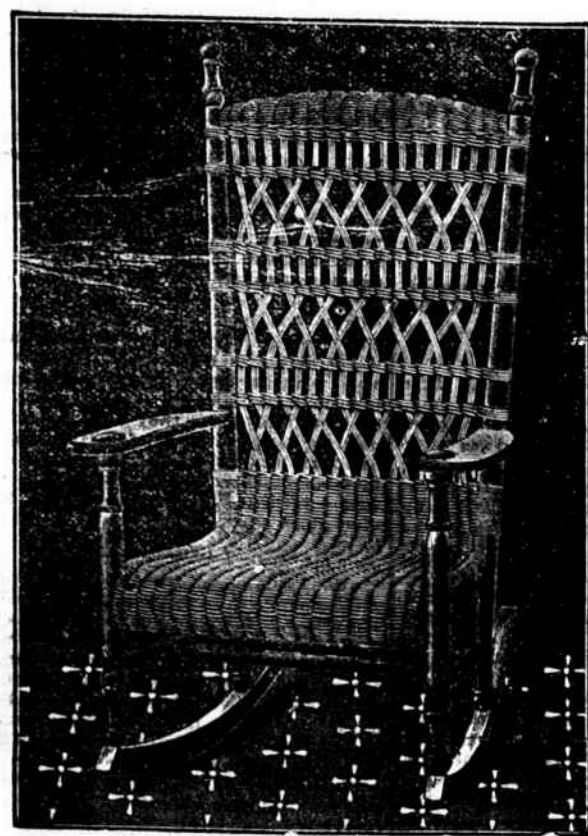
Rules for Fall 1895

- 1—Every patron shall have uniform attention.
- 2—500 pounds or less is reckoned a bale of cotton.
- 3—Services may be paid in seed at highest market price.
- 4—For every 100 lbs. of lint cotton in bale 6 bushels of seed is allowed.
- 5—When patron desires he may handle and weigh his own seed.
- 6—We will buy seed cotton.
- 7—We will buy cotton seed.
- 8—We will exchange 100 lbs. of meal for 200 lbs. of seed.
- 9—We will exchange 200 lbs. of hulls for 100 lbs. of seed.

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Contemporary Review.	Andrew Lang.
Fortnightly Review.	Prof. Max Mueller.
Nineteenth Century.	J. Norman Lockyer.
Science Review.	James Bryce, M. P.
Blackwood's Magazine.	William Black.
Cornhill Magazine.	W. H. Mallock.
Macmillan's Magazine.	Herbert Spencer.
New Review.	T. P. Mahaffy.
National Review.	Sir Robert Ball.
Chamber's Journal.	Prince Kropotkin.
Temple Bar.	Archdeacon Farrar.
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