

Oat Experiments.

The Arkansas Experiment speaks as follows regarding its extended series of experiments with the oat crop:

While in many localities further north timothy and clover may be the most profitable hay plants, it does not follow that the same is true further south; nor does it follow that the Southern farmer must depend on these two crops for his hay. When a Southern farmer whose soil is only moderately fertile depends upon annual instead of perennial plants for his hay, he will find the road to success far less difficult, since there are a number of such plants adapted to Southern conditions capable of producing high grade hay, and many of them may be harvested before the sowing of a fall crop, or after the harvest of a spring crop, thus facilitating rotation and diversity.

After giving experiments of various kinds in the preparation of the soil, quantity of seed used, fertilizing effects of different crops upon the yield, etc., the following conclusions are reached:

1. The following crops may be sown after oats are harvested, and give profitable returns: Cowpeas, Spanish peanuts, soja beans, sorghum, corn, Kaffir corn, German millet, sweet potatoes and second crop Irish potatoes.
2. Thorough preparation for oats gives an increased yield of from 50 to 100 per cent, as compared with sorry preparation.
3. Breaking the soil eight and ten inches deep gave the better results than breaking six inches or less.
4. Breaking the soil in fall and re-breaking in spring gave better results than one breaking either in fall or spring.
5. Harrowing and discing after breaking and just before sowing, and covering with double shovel, seems to be the best method of planting.
6. Two and two and a half bushels of seed per acre gave the best yields.
7. Oats following legumes gave an increased yield of from 33 to 49 per cent of grain and from 32 to 59 per cent of hay, as compared with oats grown upon soils where the preceding crop was other than a legume.
8. Plowing under moderately heavy crop of legumes gave a greater increased yield of oats than the application of 1,000 pounds of a complete fertilizer to preceding crop.
9. Where oats followed oats, an intervening crop of cowpeas increased the yield of the second crop 33.76 per cent.
10. Pea stubble increased the yield of oats 22.4 per cent over oat stubble, and the whole pea plant plowed in gave an increase of 51.9 per cent over oat stubble and 24 per cent over pea stubble.
11. The whole pea plant plowed under in September gave an increased yield of 74.8 per cent over oat stubble in March.
12. Rye and vetch plowed under and followed by cowpeas plowed under gave an increase of 99.8 per cent of oats, as compared with oats following a crop of sorghum.

13. Three varieties of fall-sown oats gave an increased yield of 75.2 per cent over twenty varieties of spring-grown oats.

14. Culberson and Virginia Gray (Winter Turf) oats gave highest yield from fall sowing, and averaged over forty bushels per acre.

HORTICULTURE

Harvesting Apples and Pears.

Correspondence of The Progressive Farmer.

The proper picking of apples and pears has more to do with their keeping than many imagine. On a large orchard where thousands of bushels of these fruits are harvested the work is apt to be rushed, and haste generally spoils a good deal of the crop. Poor, ignorant and careless pickers are also responsible for the spoiling of a good deal of the fruit. From two to five per cent of the crop is generally figured out as injured by the picking and packing. The experienced apple picker who works by the day is worth more to the farmer than two inexperienced men working by the piece. The latter, in order to count a great number of bushels for the day's work, will grow careless and indifferent. He will injure more fruit than his services are worth.

I prefer experienced pickers employed by the day every time, especially in an orchard where fine fruits are raised. For the export trade you cannot afford any other kind of picker. Apples intended for this trade should be raised on trees where the fruit has been thinned out systematically, in order to make each apple grow its largest. Now on such a tree you cannot afford to lose an apple by careless picking. Yet this may be done by careless pickers so easily that the profits will be seriously cut into. I have seen beginners in their haste to fill their baskets shake the limbs where a few choice apples were just beyond their reach. They not only dislodge these fruits, but injure many more on other branches. So important is the picking that I always begin early and employ only a few pickers at a time. They work under my supervision, and if the limbs are shaken or the fruit unduly bruised and pricked, some explanation must be given. The apples are all large and choice, and I expect each one to be harvested without a bruise. There is no reason why more than half a dozen or so apples should be dropped from each tree. If more are dislodged there is some trouble—carelessness or ignorance on the part of the pickers. The employment of boys to pick apples is generally a great mistake unless the apples are small and intended for the cider mill or some local market. While the boys cost only half the amount paid to expert men pickers, the difference will be found in the favor of the latter at the end, especially where choice apples or pears are raised. So much depends upon the proper harvesting of apples and pears that it may be said the packing and shipping are of only secondary importance. No bruised and pricked fruits can be packed and shipped to keep. First of all the fruits must be sound and free from all injury.

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THE APIARY

HOW TO MAKE BEES PAY.

No. III—To Control Swarming.

Correspondence of The Progressive Farmer.

As before stated, to get good results from your bees, it is absolutely necessary to control swarming. There are several methods. Some practice one, some another.

Clipping the queen's wing, cutting out queen cells, and the use of excluders, are the three methods most commonly practiced.

EXCLUDERS AND THEIR USE.

Now, where a man hasn't a sufficient number of colonies to justify him in giving them his entire time during the swarming season, I would advise the use of excluders, but under no other circumstances. These are made of perforated zinc, and are placed before the entrance of the box about the time you think your bees are getting ready to swarm. The perforations in the zinc are just large enough to allow the worker bees to pass through, but too small for the queen to pass through. Therefore, when a swarm issues she is held a prisoner in the box. The bees, after flying around for awhile, and finding the queen is not with them will return to the box. But you may be sure they will try it again the next day, and for several days to follow. Finally, finding that they cannot get the queen out, they will give it up, tear down the queen cells, and go to work. After they have gotten fairly settled and you are satisfied they are over the swarming fever, you can remove the excluder.

CLIPPING THE QUEEN'S WING.

Clipping the queen's wing is a method practiced extensively by men who run large bee farms, or apiaries. Early in the spring, as a rule before the swarming season has fairly set in, the boxes are gone through and one wing only of each queen is clipped. Then when a swarm issue later on, the queen being clipped, of course cannot fly and falls to the ground in front of the box. Where this method is practiced it is supposed that there is some one constantly on the lookout. The queen is picked up and placed in a wire-cloth box or cage, then the box from which the swarm has just issued is placed on a new stand, and a new one put in its place. The bees, of course, as soon as they discover that the queen is not with them will return to the old stand and occupy the new box, it seeming to them, and very naturally, that it is the one they left. When they are going in the queen can be dropped among them at the entrance and she will go in also. The bees after their flight, will at once go to work, and no more swarms will issue, as a rule, from this box during the season. The old box being moved to a new stand there is no likelihood of any swarms from that either.

CUTTING OUT QUEEN CELLS.

Now, if you have all the colonies you want and do not care to increase your bees and wish to throw your en-

tire force on comb honey early in the spring, you will have to practice the method of cutting out queen cells. Watch your boxes closely and as soon as you think they are on the verge of swarming, lift the frames, one by one, in the brood chamber and cut out all the queen cells. Make a note of the date of each box from which the cells are removed, for in about nine days it will be necessary for you go over them again and cut out all cells that may have been started during that time. And in about nine days more, go over them again for the third time. Three times, as a rule, will suffice, but sometimes it is even necessary to cut them out as many as four times.

SOME GENERAL OBSERVATIONS

"But isn't this rather hard work?" you will ask. Certainly, and very disagreeable, too; but the adage, "There is no royal road to wealth," applies to bee keeping just as much as to anything else. But if you want honey, and lots of honey, this is the way you will have to go about getting it. If you go into the bee business with the object of getting anything out of it, you have got to work, and work hard, not only your muscles but your brains as well (and occasionally your legs also). In fact, there is not a member of your body you will not need at times.

To keep your boxes strong and a large working force on hand just at the time they are most needed, is the secret of success in the production of large quantities of honey—a secret the best of bee-keepers have only partially learned as yet. But to control swarming perfectly has more to do with keeping the colony strong and in good shape than any other method yet discovered. Next week I will have something to say about drone-laying queens, fertile workers, etc.

A CORRECTION.

In reading over my first article I find the printer has made a slight error in regard to the number of acres that should be planted for a hundred boxes of bees. The sentence reads as printed: "Then the first thing you should do is to plant 15 or 200 acres in honey-bearing crops for them." It should read, "15 or 20 acres." The honey crop, of California, according to statistics, is 5,000,000 pounds annually instead of 3,000,000 pounds as printed.

WALTER L. WOMBLE.

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The recent experimental shipment of a couple of carloads of peaches from Fort Valley, Ga., to England was highly successful. The fruit arrived in fine shape and brought handsome profits. Those who expect the European markets to be opened to Georgia fruits are elated.

Crops of all kinds are above the average in most sections of the county, and old Richmond will have some hog and plenty of hominy for next year. Cotton is opening and the harvest will begin in a few days.—Rockingham Headlight.