

A close second is an apiary of fourteen colonies in the Dry Belt, which gave a crop of 919 lb. in the same season. Both of these apiaries are managed by young women; one is under twenty, the other a few years older—both born and raised on the ranch. They have chosen an open-air life, have given bee-keeping as much study as the would-be typewriter gives to stenography, and are now well on the way to owning a remunerative occupation, one that is not overexacting. Most of the other lady bee-keepers are in the beginners' class, but will probably be heard from later. In all, six women bee-keepers reported the crop of 1914; they owned fifty-eight colonies and produced 3,240 lb. of honey, an average of 58 lb. to the hive.

CHAPTER XIX.

Painting Bee-hives.

Most bee-keepers appear to think that hives are painted either for the sake of appearance or to preserve the woodwork, but, so far as the writer is concerned, his chief reason for painting hives is to safeguard the welfare of the bees. During wet weather the unpainted woodwork absorbs considerable water, which, during evaporation, carries away a great deal of heat from the hive. For most months of the year this interior warmth is the one thing above all others we should be trying to conserve. What we really must have is a home for the bees that is water-proof in every respect, even to the surface of the wood. That a hive be well painted is a practical necessity, not a luxury.

The principal material used in hive-painting is either white lead or oxide of zinc, ground in raw (unboiled) linseed-oil, by a mill, to the consistency of a thick paste. In this condition it is sold by the manufacturers in small cans or in kegs of various weights. To prepare it for actual use, one merely adds more linseed-oil to thin it sufficiently for one's purpose.

Three coats of paint should be applied to each hive. The writer's own practice is to consider the first coat as being largely an oil filler, so after stirring the contents of the can thoroughly, he pours some out into another can and adds at least an equal bulk of raw linseed-oil. The paint will be so thin that it will show only a slight tint of white after it has been applied. The oil will seek its way well into the wood, carrying with it the fine particles of zinc or lead, and on drying will block up most of the pores and so prevent the absorption of water during rain. In clear summer days this thin coat will dry in a day or two, but in damp weather drying may take over a week. In any case the second coat must not be applied until the first has become thoroughly hard.

The second coat should be thicker than the first, the added oil being only half the bulk of the paint as it comes from the can. As the pores of the wood have been filled by the first coat, the second application of the paint will work much easier than the first, and will dry more speedily. The third coat should be prepared like the second.

Many painters use a little turpentine in the first coat when working on resinous wood like our Douglas fir, as it has a beneficial influence on the resin, but turpentine penetrates ordinary wood with great rapidity, and leaves the zinc or white lead on the surface, where it soon develops a tendency to crumble off. The writer does not recommend the addition of turpentine when the painted article is to be exposed outdoors. Turpentine in paint dulls its surface, gives a flat finish; raw oil makes a glossy surface, which is preferable for outdoor work.

In working on a small job like a bee-hive, a good plan is to start on the end wood, which will soak up quite a considerable quantity of the paint; then to proceed to the smooth surfaces, giving the end wood further applications as the previous