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Apples and beets
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therefore be said that beets have a slightly higher nutritive value than apples.

The next question is, What about the average produce per acre? This is not so easily decided, the variations being so great that it would be difficult to strike an average which would be acceptable to a majority of our farmers and fruit growers. However, we have followed the best evidence which we have been able to procure,—taking farmers' averages, not those of fruit growers.

A bushel of apples weighs about 48 lbs.; 11 bushels per tree are a fair average for a moderately productive variety, and 40 trees can be set out on an acre, making a total product of 10½ tons per acre for each season. A fair average of beets is about 400 bushels, or 12 tons per acre. In this comparison we make due allowance for the full fruiting of apple trees only in alternate seasons; but when it is considered that a full grown tree, in a productive season, will yield 10 to 20 barrels of apples—calculating a barrel to be 2½ bushels—this vastly exceeds any yield that can be obtained from beets, it may be reasonably concluded that apples are at least as productive as beets, and in an orchard of the most productive varieties, it may justly be asserted that apples are the more productive crop. However, let it be concluded that, taking both yield and nutritive value into the calculation, both are equally valuable, we have yet to consider the market variations and the difference in the cost of production.

Beets can only be utilized on the farm, there being few or no local markets, and the farmer cannot manufacture them into any saleable product. They demand much more labor than apple orchards, and the risks are at least as great.

Apples, on the other hand, can be shipped to home and foreign markets. The highest grades can be sold at immensely higher profits than can be obtained from feeding beets, and the inferior grades can be fed as exact substitutes for beets. They may also be converted into cider, and the refuse, pound for pound, have a higher feeding value than beets. They may also be dried, canned, or converted into apple butter or apple vinegar, and there is an ever-increasing demand for the manufactured products of apples, thereby furnishing winter employment for farmers in their own houses. But this objection should here be noted, that apples will not keep as well as beets, and when fed to stock, it must usually be done in the fall

of the winter months. However, as they can be fed with profit and safety to all classes of domestic animals, considerable quantities can be disposed of in a short time.

Another important consideration is the utilization of the orchard for other purposes. While waiting for the trees to bear, the ground can be plowed and cropped for several years after setting out the trees, and afterwards, if it is considered objectionable to include it in the ordinary rotation of crops, it will make an excellent pasture for calves, sheep and hogs.

The Apiary.

Marketing Honey and Winter Care.

The same general rules which guide us in marketing extracted honey are applicable in

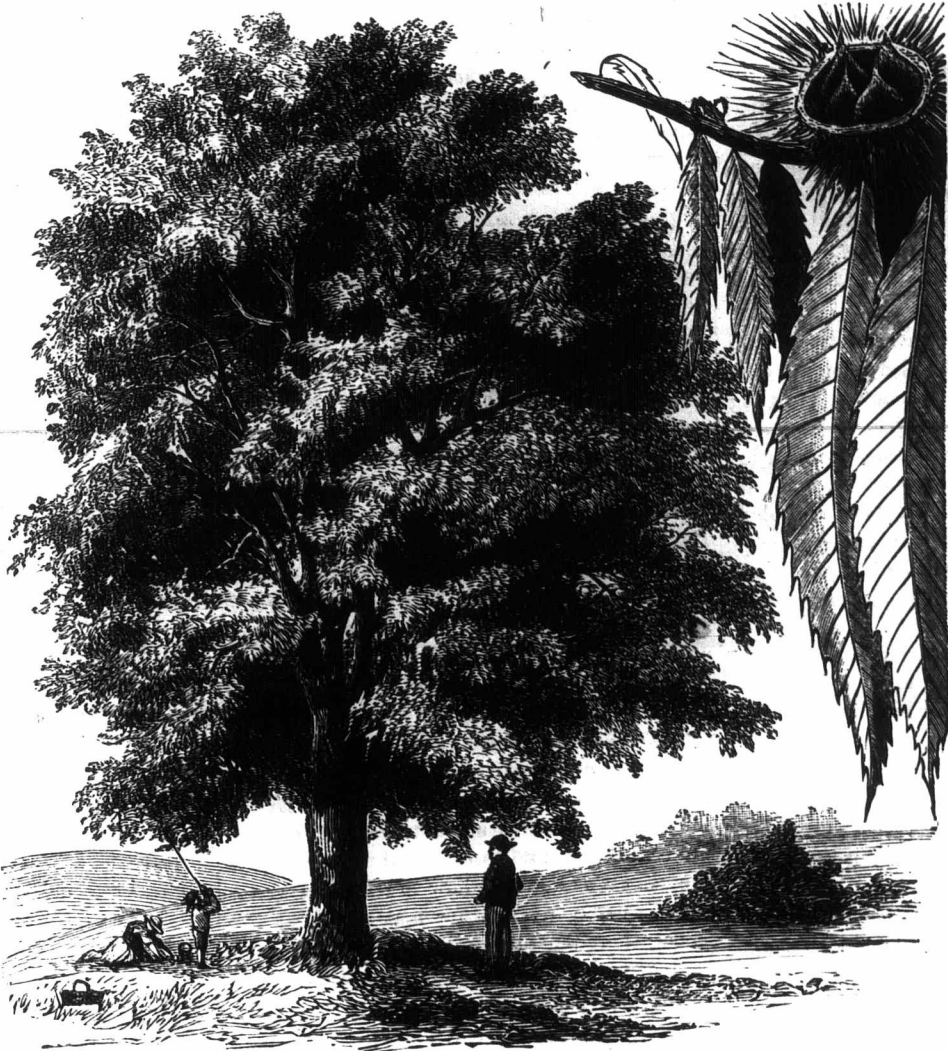
the more of these crates piled up in a window the better, because the honey is made more attractive, as also more conspicuous.

The winter care of honey is important. Extracted honey, if not kept in a constantly warm place, will granulate, that is, will become hard and white, and appear much like lard. Many people think this change in honey a sure sign of adulteration and begin to talk of "sugar." (Such poor creatures do really deserve our pity; but we must overcome a just contempt on our part before we can bestow such a sympathy). The granulation of honey is the best test of its purity; if adulterated with glucose honey will not become solid; or if with granulated sugar it will become cakey and have crystals through it and likely a hard crust on top. To reliquify honey it is only necessary to warm it slowly and thoroughly. Proceed as follows:—Take a tin or iron vessel of sufficient size and place inside it a wooden block or light iron grating of some kind about half an inch high, and large enough to support the vessel containing the honey. Place this latter vessel upon its support and fill the outer one with luke warm water as high as possible without covering the honey. Remove the lid from the honey and place the whole affair over a slow fire; keep the water just under the boiling point till the honey is all melted. Seal up again while warm.

Section honey should be kept where it is dark, dry and warm. The light will spoil the color of the capping; damp will burst the cells and sour the honey; and cold will granulate the honey. Since last winter was so severe the bees neither required nor could get much care. Should the coming one be mild they must be carefully tended or heavy losses will occur. The greatest trouble in open winters is on account of the tendency bees have to fly when the weather is unsuitable, and the constant uneasiness among them. They are disturbed every few days by the heat and do not really settle down quietly enough to winter well. As a consequence of all this they consume far more honey

than is good for themselves or their owner, and often before the latter is aware the honey is all used up and the bees starve. Another trouble consequent upon the large consumption of honey is a great tendency to dysentery.

Our endeavor should be to keep the temperature of the air within the hive as unvarying as possible. With bees packed in the cellar or bee house we will have little trouble but with those in the clamp it is another matter. During severely cold spells the hive entrances should be kept almost closed; in "reasonable" weather they should be wide open, and during mild spells—open and shaded from the sun so as to keep the air as cool as possible inside the hive. During warm spells, when there is no wind and when the air is really warm, leave the entrances open and unshaded for a few hours each day that the bees may fly. At all times keep the entrances clear of dead bees, snow, ice, &c., protect from all winds, and find the bees candy during flying spells when short of stores. Don't let them starve.



CHESTNUT TREE. See page 355.

the case of section honey. It should be made attractive to the eye and satisfying to the taste; and should bear the name of the producer upon each package of this kind, however small.

The greatest care should be taken to prevent the surface of the comb being soiled or broken. If so disfigured it should not be put upon the market unless it can be sold without the producer's name. The sections themselves should be scraped and sandpapered till they shine, and the crates should be either white and clean or nicely stained or painted. Each package should "set off" its contents. Honey should not be sent to market in the half stories or cases of the hives, but in nice white crates made for the purpose with glass at one side at least. There is a great deal in a show of honey, and so