

The Sugar Industry.

[Special Los Angeles (Cal.) Letter.]

Sugar-making was one of the earliest industries of California, and before the Hawaiian article was permitted to come in duty free the sugar cane was looked upon as one of the "growing industries." There were cane fields in the marsh lands and bottoms, where the climate is moist and the land not too rich. The weather being hot, and frost an unknown quantity, the lowlands were uniformly utilized. Each sugar ranch had its primitive mill, something like those used by the ancients. The "industry" was at its height just before the completion of the first transcontinental railroad. This somewhat depressed the industry by bringing in cheaper eastern sugar. Some of these cane-growers were from the south, who had emigrated during the late rebellion, and had brought along their negro slaves. Understanding the raising of cane and cotton, they located on the marsh lands and sought to raise their familiar southern product. Cotton not thriving well was abandoned, and their undivided attention was turned to the sugar-cane. These southern refugees actually kept these negroes at work for five and six years after the close of the war as slaves. They were made to believe that the subjection of the rebellion had nothing to do with their freedom. The negroes who had been held in bondage so long after the war had ended were somewhat surprised on being told that they had been free for some time.

The majority of them, by suits, and threatened suits, recovered payment for this sharp practice. A planter had a small "farm" down in the marsh lands of the Agua Mansa settlement, in San Bernardino county, where he "worked" five or six "slaves" and had built a very primitive sugar mill, similar to those used in the poor settlements of Louisiana and Arkansas.

After these slaves were again freed, the southerners, who were more accustomed to slave labor, "impressed" a number of Indians, after the early California fashion, but the Indians, too, were told that they were free, and Indian slavery also became a thing of the past. So the refugees, in their remote settlements, almost beyond civilization, now reduced their sugar farms to "patches," and gradually the "growing industry" became a lost art, for with sugar duty free from the Hawaiian islands, these refugees found it cheaper to buy it (on credit) than to work, more especially as they no longer had slaves.

Next came some wise men from the east who began to make sorghum from the amber cane, which grows profusely and is richly laden with the sweet gravelly substance of which sugar is made. They employ cheap Chinese labor, and are more successful than were their predecessors with negro and Indian slave labor. The Chinese understand this cane in all its gradations. They claim that it was the original "plant" or substance from which sugar was made, and that the sugar-cane, now so universally grown, is an off-shoot from the sorghum cane, and that China grafted it upon her neighbors, when it found its way west to the new world.

Certain it is that they are the best sugar makers, and can get more saccharine from a cane than any other people. They cut it lengthwise, instead of running it through a crusher, and crush it lengthwise, like driving a pile-driver on the top of a post. The sugar-cane is a lazy man's plant, in that it will grow for half a century from the same roots, requiring, however, nearly two years to develop from a cutting. The sorghum is of a yearly growth, maturing in three or four months, and requires much more care. It is taller, more slender and graceful than the heavy knitted sugar cane. Sorghum does not exhaust the soil for ten or fifteen years, which is another advantage over the newer methods of making sugar from beets, maize, Indian corn and even from the honey

bee, all of which experiments are being tried in southern California.

The first sorghum cane to this country about forty years ago. It received its first encouragement a few years afterwards when the civil war began, and Louisiana sugar was blockaded from the north and the west. In California the oriental crusher was used, because of its simplicity of manufacture, cheap material and easy method of working it—the motive power being a horse and two girls. A "trough" is hollowed from a tree stump, within is the grinding pestle, worked by a mule blindfolded, treading as in an old-fashioned treadmill, propelling the arm of the crooked wooden bar. A girl follows in the wake of the mule, pushing him along, with a "Gee, Whoa, git up thar, Jim!" varying the monotony by thumping him with a club. Another woman feeds it the cane, each one separately, the canes passing through to the opposite side when the life or substance has been squeezed out of them. The process is very slow, but it was then an infant industry. The farmer, it is supposed, was near by lying down in the shade, overseeing his daughters doing the work.

Now this work is done by machinery, and the old primitive mills are relegated to the woodshed as curiosities. As is well known, the modern machine crushers are large cast iron rollers, two or three in a set, with a pressure of about fifty pounds to the square inch. Instead of the cane being put in by hand, one at a time, they are fed in on an endless belt, and after the life, or sugar, is crushed out, the splinters of the cane come out on the other side, and are fed to the furnace to make steam for the crushing machinery. The farmer of a generation ago looks with amazement upon this improvement, and his little wooden cider-press arrangement does look rather comical in contrast. The department of agriculture has done more to develop the sorghum industry than have the farmer sugar makers. They were content to produce enough for home consumption, with a small surplus to lend to their neighbors. However, the greater portion of their sugar crop was sirup. They would exhaust the molasses before it reached the sugar stage. These small farmers do not care for improved machinery. By the old method they feed the refuse of the cane to the hogs instead of to the furnace. The pigs get fat on the saccharine substance that the old crude wooden roller does not crush out, so the old-fashioned farmer has found an economy in nature, and nothing is lost save time and muscular labor, both of which seem to be abundant.

A superior article of sugar is made by the bees, but in very small quantities. It is estimated that the little busy bee must tap from one million to two millions of flowers before he extracts more than one pound of sugar. By the aid of chemical science, some of our advanced ranchers are making a superior grade of sugar from the water-melon.

But the beet sugar industry is about to supersede all others of that nature. The beet from which sugar is made is not of the type that the old fashioned New England dinner is made, but is a big beet, weighing ordinarily two pounds, from an acre of which about twenty tons of sugar is made. The beet contains much less sugar, relatively, than does the cane, and as the molasses of the beet is rather indigestible, the beet is laboring somewhat under disadvantages, but the scheme is to have the government give a subsidy. The beet molasses is made into a rum, which is sold to the Indians, and they seem to like it. The object is to get as much sugar and as little molasses as possible from a stated quantity of beets, especially as the molasses can be utilized only to a small extent. Sirup is what is left after the sugar is made, and molasses is the uncrystallized sugar, and to this latter refuse quality the sugar-beet runs. The Chinese grow these beets in their garden patches, and eat them raw.

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