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AMERICAN FRUIT IN FOREIGN MARKETS.

Hitherto, for the most part, the least profitable seasons for fruit-growers have been those of most abundant crops. Not unfrequently the waste of fruit for lack of means for getting it to market, or to markets not already over-stocked, has amounted to millions of dollars' worth in a single season; a recent and intelligent estimate puts the loss for such seasons as high as \$15,000,000.

Thanks, however, to the ingenuity of our inventors, American fruit-growers no longer need to see the best fruits of their labors, the most bountiful gifts of Nature, made practically valueless by local plethora, while half the world is longing for a taste and willing to pay a good price for the unattainable luxury. Rapid transit, refrigerating ships and cars, and other means of forwarding fresh fruits to great distances have widened enormously the market for such products; while contrivances for drying, preserving, canning, and so on have lately been so multiplied and improved as to make it possible not only to prevent wholesale waste of fruit, but to secure for distant or future use the whole crop of the most abundant years. As a natural consequence, fruit raising promises to furnish from year to year a wider and more regular source of profit; and every year's inventions will help to make the industry more and more remunerative and sure.

The home market for fruit, fresh and canned, is already co-extensive with the whole country, and the fruit season lasts the entire year; the foreign market widens almost as rapidly. The following figures, from an extended review of the condition and prospects of the export trade, printed in the Tribune, shows the progress made during the past sixteen years, the years severally ending July 1st.

Table with 3 columns: Year, Amount, and another column. Data points for years 1861-1869.

This for the exportation of fruit to Europe. Considerable quantities go also to Australia, South America, and the West Indies. The large figures for 1865 are owing, in part, to the exportation of fresh apples, which was then begun on a considerable scale; the business being fairly established in 1873. Since October, 1876, the shipments to England—mostly Baldwin's, greenings, russets, and Newtown pippins—have amounted to nearly four hundred thousand barrels, always at remunerative prices. Circulars recently issued from Liverpool state that as a result of the season's trade a preference for American apples has been established in England, and that hereafter, whether the English crop is large or small, large supplies of well selected American fruit are likely to find a good market there. The capacity of the English market for fresh peaches and pears has not yet been tested. There is reason to believe, however, that it will be limited solely by the capacity of our refrigerative ships to land supplies in good condition. The foreign market for canned peaches is almost unlimited, upwards of seven hundred thousand dollars worth having found a lively demand abroad during the first ten months of the season of 1876-7. And dealers are unanimous that, for the present, peach-growers will do better to can their surplus crop rather than dry it. The foreign market for dried peaches has yet to be tested. If the recently invented evaporators prove capable of drying large quantities cheaply and well, the demand for dried peaches abroad may be indefinitely increased. At present the price is too high to tempt the working classes to buy, and they are our principal customers for dried fruit, particularly those of Germany. The poor people of England and Russia buy to a limited extent; France is also a buyer, but whether for domestic use or for distillation is not positively known. The miners of Australia are also large buyers, but there is not much reason to count largely on a permanent market there. Fruit growing is increasing rapidly in Australia, and before many years the colonies in that quarter of the world must be able to supply at home the home demand. The demand for dried apples in Europe and Australia is now very great, so long as the price does not exceed seven cents a pound; at five cents the market is practically unlimited. Last year something like fourteen million pounds were exported. Curiously sliced apples, though really better than the quartered, will not sell at all abroad. Foreign buyers want them cut in pieces as large as possible, the larger the better. The manner of packing is also important. For the European market the packages must not be smaller than barrels, and hogheads are preferred. Australia, on the contrary, will not have packages as large as barrels. For that market the apples must be put up in 55 lb. and 100 lb. kegs, suitable for transportation to the interior on the backs of mules. Venezuela also demands small packages.

INDIGESTIBLE MEDICINES.

It is not an uncommon blunder for young or ignorant physicians to write prescriptions, the ingredients of which chemically reacting upon each other produce substances wholly different in nature and physiological effect to those intended to be administered. Not long ago we noted an instance of how two harmless drugs when combined formed a highly poisonous mixture, and it may so happen that innocent medicaments may unite to produce a compound dangerously explosive. For the knowledge that still another danger lurks in the apothecary's vial we are indebted to Dr. J. W. Compton, of Evansville, Indiana, who has called the attention of physicians to the frequent indigestibility of their

curative potions. If medicines are not dissolved in the digestive fluids of the stomach and intestines they can never be absorbed; if not absorbed they can never enter the circulation and hence cannot produce the results intended. There are various diseases which affect these fluids. Thus, they may be carried off by hæmorrhage and sweats, in some maladies the saliva may be withheld, in others the gastric juice becomes deprived of its solvent principles or may be arrested, liver ailments may withhold the alkaline bile, and so on; so that the medicine, especially if solid, instead of producing the slightest good, acts merely as an irritant and foreign substance, and occasions at best loss of valuable time. Dr. Comstock gives several striking instances of invalids rejecting medicines in an unaltered state, the drugs being in all instances given in the form of pills, and he calls especial notice to the fact hitherto apparently overlooked that if, in a depraved state of digestion from disease, solid food cannot be digested for the nourishment of the patient, solid medicines cannot be digested and appropriated to the cause of disease. Dr. Comstock, we think, might have gone a step further and questioned how far all large doses are beneficial, or in other words how much of the dose does the work and how much is simply excess and consequently foreign matter. The homeopathic practice of medicine furnishes any number of instances where infinitesimal quantities of specifics produce the most marked effect, certainly an effect as plainly apparent as that resulting from a large dose allopathically given. Now if the combining equivalents, so to speak, for a given result are present in one case, they are equally so in the other, the end reached being the same. Hence in the latter example it follows that a very large proportion of the dose is useless if not harmful, while it usually has the further demerits of being expensive and distasteful.

THE SUGAR INTEREST IN PERU.

BY PROFESSOR JAMES ORTON.

It is singular how exotics are becoming the ruling objects in Peru—Europeans, horses, sheep, sugar-cane, coffee, oranges, grapes, bananas, wheat, eucalyptus tree, etc. Peru, though rich in minerals, was never plentifully supplied with useful animals and plants; but possessed of every conceivable variety of climate and soil, she has shown herself capable of giving a congenial home to every form of life. Northern and Southern Europe can meet in this little Republic.

Among the foreign introductions, always excepting the immigration of Europeans, the sugar-cane is the most important. Better than guano or saliter, it is destined to be the surest and most inexhaustible source of the wealth of Peru. The annual yield of sugar and spirits is estimated at \$20,000,000. The recent rise in the price of sugar has given a new impulse to its cultivation, and the prospect is that Peru will ere long be a formidable rival of Cuba and the other Indies. The usual cane crop in the West Indies is 1,130,000 tons; in Java, 200,000; in Brazil, 170,000; in Louisiana, 75,000; in Egypt, 40,000. The crop in Cuba last year was thirty per cent below that of 1875, while the beet crop in France and Germany was well nigh a failure. In 1875, Peru exported 60,000 tons; in 1876, over 70,000. That amount will be greatly increased this year, provided laborers can be obtained. But thousands of acres are lying idle for want of hands. In fact, the commerce of Peru is diminishing for lack of labor and capital, and Peruvian statesmen are anxiously looking to China for the one and to Mr. Meiggs for the other. The squint-eyed Celestials outbid and outdo the mongrel races along the coast, and the mountaineers cannot endure the lowlands. But Chinamen must be better treated than they have been. Even now, great as is the demand for foreign labor, the natives, as in Trujillo, would persecute the Asiatics and drive them from their shore.

In no other country, save Egypt, is the cane crop so sure as in Peru. Occasionally, as in 1871, the crop may suffer by drought from want of the supply of water from the sierras; but in the course of ten years, the decrease would not amount on the average to more than twenty-five per cent. As the cultivation is regulated by irrigation as in Egypt, Peru has an advantage over Cuba, where planters depend on the weather. At present, Peru can compete with any other country, save Egypt, since she can grow the cane without intermission. The slave labor of Cuba cannot produce it so cheaply. The cane grows more slowly than in Louisiana, and hence is richer in saccharine matter. The amount of juice to the cane is about sixty-five per cent, and its average density is 10°. In Northern Peru, two tons of cane give four hundred gallons of juice, each gallon yielding 1.35 lb. of sugar. The best season for planting the cane is November, and the yellow variety (originally from India) is preferred to the red, being richer. The first planting takes fifteen months to mature; after that, the crops ripen every twelve months. This is true only of Northern Peru, where the soil is thinner but more tropical than at the south; in Cañete, for example, it takes fully two years for the first crop to mature. Three or four crops are obtained before replanting is necessary. The green and ripe cane are seen in the same field; there is cutting on one end and planting at the other; so that the ground is never idle. The actual time spent in the manufacture of sugar is eight months; the rest of the year is occupied in repairing acequias, etc. From the small establishments, the sugar is exported in the crude "concrete," in the larger mills, it is first refined. For inland transportation, western Bolivia being supplied from Peru, it is put up in conical loaves, weighing 45 lbs. each