

Stakes—Sunday and Monday, June 16th and 17th, 1889; and Sunday and Monday, September 15th and 16th, 1889.

Parowan, Beaver and Maricopa Stakes—Sunday and Monday, June 23rd and 24th, 1889; and Sunday and Monday, September 22nd and 23rd, 1889.

FRANKLIN D. RICHARDS,
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THE SUGAR QUESTION.

Referring to telegrams from Washington giving a synopsis of Chemist Wiley's report of experiments in sugar making from sorghum, there appears to be a remarkable stultification, gross ignorance, and egregious incompetency, for although he says that 80 or 90 pounds of sugar may be expected, yet he realized only 19 pounds in his experiments. Side by side with this report I have Prof. Swenson's report of the campaign of 1888 in which he realized an actual output of 80 pounds, notwithstanding he was compelled to run for syrup alone one-fourth of the season because of the failure on the part of a centrifugal manufacturer to furnish new centrifugals according to agreement. I am forced to the conclusion that the reports of Wiley emphasize into truthfulness the following charges made against him by Hon. Floyd King in Congress as found in page 2982 *Congressional Record*.

After stating, "This immense European sugar interest, representing two-thirds of the world's entire production, makes no secret of its hostility towards our sugar growers, or of its desire to crush us out," he further states: "The chief chemist of the Agricultural Department (H. W. Wiley) having been permitted during the past few years to usurp the charge of almost everything relating to the sugar industry and having sole control of the Government sugar making experiments, has every opportunity to serve secretly these foreign sugar interests which are in every possible way antagonizing ours; and I say here and now that Prof. Wiley improves his opportunities wonderfully well."

"I charge that he is, in my judgment, in the employ of French and German beet root sugar manufacturers and sugar machine builders, and London refiners, whose sole object is to stagnate all efforts of the government to aid in developing our cane sugar industry by the introduction of the diffusion process."

"That he is working in European sugar interests and against our own his every official and unofficial act since 1882 shows."

In addition to this construction of his failures is one that may be more charitable and that is that as Professor Swenson really discovered the secret necessary to the securing of the sugar by this process. Mr. Wiley, with the natural jealousy of a rival chemist, declines to use it and is wandering around in the

realms of ignorance while Swenson is making a splendid success.

While I have before me my own actual output of five tons of sugar at the rate of 50 pounds to the ton, on the old process of milling and open pans may be permitted to regard any man as foolish or venal who claims only 19 pounds as the result of his experiments with the advantages of a new principle capable of giving, and which has already given in a whole season's run nearly twice that amount. ARTHUR STAYNER.

SALT LAKE CITY, April 11, 1889.

THE SWARMING OF BEES.

Within the last forty years apiculture has taken a mighty stride in advance of its previous known history. The interior of a beehive is no longer a mystery, for with the movable frame beehive the brood, the combs, the queen and all her subjects can be examined; and if anything is wrong with the colony of bees it can be righted. The honey can be taken from the combs without resorting to the cruel process of killing the industrious little workers with brimstone; but for that plan the day has passed, and the apiarist has learned to manipulate his bees with success and profit. Many persons undertake to manage an apiary without studying the habits and workings of the bees. Hence they make a failure of their work, blame the present mode of handling bees, and say the old plan is the best.

Now I wish to give the plan of artificial swarming, or dividing, that I have used for many years, and which I have found to work well. All the hives that are used in the apiary I have of the same size, and when I find the drones flying around from the hives I know that the bees are preparing to swarm. I then open the strongest colonies and select about eight frames of honey from the three best banded Italian bees, taking only two frames from a hive, and place them with all adhering bees into a new hive. I am careful to remove the queen from her own hive, and also examine the frames closely, for she may hide herself among the bees on the frames. I return the empty frames (or combs if I have them) into the four hives from which the eight frames have been taken. These the bees will soon fill again. I next remove another hive, and put the new one in its place. This will receive all the bees that are out at work, and ensure a very strong and populous swarm. The bees from the different hives will soon become reconciled to each other, and, finding they have no queen, will commence immediately to make queen cells. In about twelve days it is advisable to examine the new colony, and it will then be found that there are many queen cells. I have discovered no fewer than twenty in one hive. Thus there are queen cells to make many artificial swarms or divisions. By taking two or three frames of honey, brood, and bees from the strongest colonies, and placing them in the

new hive, a person can make one new swarm from two old ones. Give them a queen cell from the first prepared hive, and there will be a swarm started in better condition than on the old plan. This method can be repeated through all the hives, until the queen cells have been used or all the bees divided. The second day is the best time to give them the queen cells. They will accept of them and not destroy them; cut the piece of comb containing the queen cell wedge shape, and insert it within the comb of the newly-divided swarm, about the centre.

My advice is, do not try to get rich in one season by dividing your bees too much, or before they are ready to be divided. If you divide a good strong colony you get two halves; if you divide a half or poor colony you get two quarters, and thus injure them. My plan has been to keep them strong.

By taking out two or three frames from each hive in making your divisions you do not discourage the bees, and they work with a will to replace what you have taken away. You can repeat this dividing about every two weeks, if desired, without injury. If you do not remove the old queen from the hive you will find a lot of new worker comb built in the frames of the hives. Do not allow drone comb to be in the centre of the hives containing hybrids or dark queens, but raise the drones from your best Italian queens; by so doing you will improve or keep them pure. It is quite necessary to have a bright yellow banded drone to mate with the young yellow Italian queen, or your stock of bees will soon run down to hybrids, which are very cross and will sting more than the pure Italians. If you have black drones in your apiary, at even ing contract the entrance with a piece of tin in order to keep the drones in the hive, allowing the bees to go in and out. This they can do through an eighth of an inch opening. There are other modes of dividing, but I have found this plan work very well, and I can control the swarming to any required number of new swarms.

Natural swarming is all right if you only knew what time the bees were going to swarm, and where they were going to cluster, on what tree or bush, or whether they had concluded to go to the mountains, for it is very provoking to remain at home several days, or even weeks, watching for the bees to swarm. They fly in and out, or cluster on or under the hive for days. Then all of a sudden out they come and away they go.

In an apiary of fifty to a hundred hives, if you depend on natural swarming to secure your increase, you may have several swarms issue out at the same time. I have had five swarms come out within two hours. Then you have your hands full of work to secure them, especially if they cluster in the top of a tree. I have known bees to be placed in an empty hive, remain two days in their new home, then swarm out again, and leave for parts unknown. Therefore I think that a certainty