

as the possible solution of well-nigh hopeless conditions." While it may seem contrary to good business ethics, yet in all cases where co-operation has been adopted, just such conditions have been the "why and wherefore." While I may be greatly mistaken, yet I venture to make the assertion that as regards co-operation in the bee-keeping industry, history will again repeat itself.

In Gleanings Dec. 11th issue, Dr. Miller takes exception to my statement wherein I say that I see no advantage in feeding for winter stores, syrup as thin as equal parts of sugar and water; and he points out that with the thin syrup the bees make certain chemical changes that make it more fit for winter food than is the case when syrup of the "two to one" consistency is fed. Both the "Doctor" and Editor Root remind me that syrup fed of the proportion of two pounds of sugar to one of water is apt to granulate unless acid is added, and they wonder if I can add the acid as well as the bees can. To be frank, I believe that a whole lot of "bosh" has been written about the liability of thick syrup granulating in the combs. Under certain conditions I have noticed some granulation with sugar syrup and also many times noticed the same thing with stores of good clover honey. Can anyone make the positive assertion that the thin syrup NEVER granulated? Personally I will have to admit that my experience has been so limited with the "thin" article that I can make no statement along that line. The main one however is the fact that I have fed thousands of pounds of this

thick syrup to hundreds of colonies and have never yet lost a SINGLE COLONY so fed. In fact I have often thought it would pay me to feed heavy with sugar every fall, as the only severe winter losses I have ever had was when there was a percentage of honey dew in the hives. As to acid, I have never fed a single oz. of it in any form in all the feeding I have done. In the face of these actual results, is it any wonder that I regard the granulation of thick syrup as an insignificant factor as far as wintering is concerned?

Without doing any thinking I could name at least half a dozen extensive apiarists who feed the thick syrup with good results. As a "clincher" let me quote from the pen of so good an authority as our esteemed friend W. Z. Hutchinson, in November Review, "Sugar syrup for feeding bees does not need the addition of tartaric acid, vinegar or honey, as recommended by some, to prevent granulation; at least that has been my experience and I have fed barrels and barrels of sugar, beginning as early as October 1st and continuing the work until the middle of November, when it is necessary to use a feeder UNDER the hive, and use the feed hot to warm and rouse up the bees to get them to come down after the syrup. Theoretically early feeding is preferable, but I have yet to see that the time of feeding has any great bearing, and the crystalization of pure sugar syrup has never proven any obstacle." While nothing is said about THICK syrup, for obvious reasons no THIN syrup would be fed in November.