

of the fruit matured. All the flowers pollinated from another variety set fruit.

**Plums**—A certain number of the blossoms enclosed in bags and left untouched set fruit, and still more set fruit when artificially pollinated with their own pollen. All the varieties, except perhaps "Victoria," seemed to set finer fruit more plentifully when pollinated from another variety.

**Pears**—The tests with these were not carried as far as in the case of the other fruit, but two varieties, Duchess d'Angoulême and Colmar d'Été, pollinated from the same variety, set and matured fruits. A few others set fruit, but it did not mature.

**Apples**—Out of sixty-three varieties of apples on which unopened blossoms were enclosed and left untouched, the only one on which fruit set and matured was Irish Peach. Of those enclosed and pollinated with their own pollen by brush, only a few set and matured fruit. Others failed to set or mature fruit when pollinated with pollen of the same variety. In nearly all the crosses good fruits resulted. Of the 64 crosses made, 48 were successful.

**Strawberries** seem to be less dependent on insect agency than any other of our hardy fruits. Enclosed blossoms set fruit as well, or nearly as well, as those not enclosed.

**Raspberries** set fruit when flowers were enclosed in muslin bags, but the results were not so good as with flowers unenclosed.

It is concluded that fruit blossoms generally are dependent on the visits of insects, and for want of these many fruit plantations do not yield their best. Where there are no hives near, and where wild bees are not plentiful, a number of hives should be placed in fruit plantations. In the case of most varieties of apples, pears, plums, and cherries it is advantageous to have in close proximity a different variety flowering at about the same time.

## BEES RESISTANT TO FOUL BROOD

In a former note which appeared in our columns on this subject, we commented upon Dr. Miller's statement in the American Bee Journal that Italians resisted disease, not because they were yellow, but because they were vigorous. Our own contention was that immunity did not necessarily mean vigor, or that vigor implied the power to resist disease. Dr. Miller's reply is at once interesting and instructive, and our readers will be glad to have it quoted in full:

These words are well worth considering. It may as well be conceded that immunity to any given disease is something separate and apart from vigor. A man who has been vaccinated is immune to smallpox, no matter how much of a weakling he may be, while a man of giant strength succumbs to it because not vaccinated. And so it may be that a particular race of bees, or a particular strain of bees, may be immune to a given disease, while a stronger race or strain may yield to it.

It may as well be confessed that this sort of immunity was not in mind when the article was written which our contemporary discusses. The thought, rather, was that one set of bees would actively clean out the dead brood, while another would allow it to remain. At any rate, it is a fact that a strong colony with a mild attack of European foul brood will often clean up the disease entirely, while a weak colony in the same condition will grow worse and worse. So it is hard to believe that the strength of the colony is not an important factor in the premises; and it may not be far out of the way to believe that the vigor of the individual members of the colony is of still more importance than the mere strength of numbers.

Possibly this is hardly the view that should have been taken, instead of the view of immunity our contemporary has in mind. An excuse, if an excuse is needed, lies in the fact that those who urge that Italians are better than other bees for those who want to be rid of foul brood not uncommonly use the expression, "Italians are better at cleaning up the disease."

Others, however, and our contempor-

ary among the are not considering the best at clean are considering to catch it." And must be cheerful tion then comes, nearly immune to than others?" tion, it may be a have had a better to become immu have Italians been the disease than longer time in v mune? Certainly, is no novelty to blacks. Possibly enlighten us as regard.

A more important relates to actual cans and Australians that Italians are the fear foul brood. the other way, es land. Is one wrong or is there a difference blacks and America there is a fair chance opinion, and more li on the question. be found in this l

As to the practical there need be little ion. If any one l strain of hybrids c above the average, the fact that the ge this country is that vigorous than black so in 99 cases out c good advice to urge of pure Italians.

As to the Doctor Italians more nearly pean foul brood than bound frankly to a not know, our own e mainly been with brood, or what we us Old Country, the vi those parts of Euroj predominate and are find them displaying t ity to disease that is Italians in America. this is clear, at least the course of ages, the