

## ARE HYBRID AND BLACK BEES WORTH IMPROVING.

**I** WAS greatly surprised to see, in the answers to Query 867, how many there were who said, in effect as well as in words, "Let well enough alone." I would have little fault to find with those who take the drift of the enquiry to be whether or not the bees have degenerated, or are likely to degenerate or "run out" through close in-breeding.

Although in-and-in often produces bad effects with other animals I do not think it is probable that bees under ordinary circumstances will breed so closely within a certain strain that deterioration will result. Nature has guarded against this by providing that the mating of the queen and drone shall take place in the air at a distance from the hive.

I think it is an entirely unwarranted assumption that the bees in question have re-queened themselves for years from their own progeny. All of the queens might have been reared by the bees themselves, but the drones with which they mated may have come from several miles away. It is for this reason that I would not apprehend any degeneracy from in-and-in breeding. Still, it is often the case with bees as with other animals, that an infusion of new blood gives renewed vigor. This is especially the case when different varieties are crossed.

What I specially deplore in these answers is the advice to "let well enough alone." Where would the world be if men had been satisfied to work on this principle? There is scarcely an animal or plant that man makes use of for his pleasure or profit that has not been greatly improved by breeding or selection. Within the memory of the present generation, careful selection, crossing and breeding have greatly improved our domestic animals, and added millions of dollars to our national wealth.

The long, lean, slab-sided, razor-backed hog of a few years ago was considered good enough by his owner, but the modern hog is a far more valuable and profitable animal.

See how the cow has been improved as a producer of milk and butter as well as beef.

Witness how the standard of horses has been raised, both for speed and draught animals.

The same improvement may be noticed all along the line of our domestic animals, to say nothing of fruits, grains and vegetables. Are we to conclude that any mongrel breed of bees are "good enough?"

It would seem, from the language of the querist, that he has paid little or no attention to the breeding of his bees. It is a fair inference that he has had no bees of improved strains with which to compare them. How, then, is he to know that his bees are as good, comparatively speaking, as he thinks they are? He says they are prolific, healthy and good workers. This may be truthfully said of almost any lot of bees, but a trial of them in comparison with the best bred strains might show that as compared with these they were very inferior.

"Every crow thinks his own crowling whitest," and the owner of live stock of any kind, if it is only a yellow dog, is very apt to consider it about as good as there is. The men who are wedded to such ideas as that must expect to be left behind in the march of progress.

The bee-keeper has the advantage over the breeder of stock of almost any other kind in that he may make a comparative test for himself of the different varieties, at only a trifling cost. If the breeder of cattle or horses should wish to make a complete change in the breed of his stock, he must go to a great deal of expense in disposing of every animal and getting others in their place. If he adopts the usual plan of "grading up," he must still go to a considerable expense for pure-bred sires.

The bee-keeper can make a complete change in his stock at comparatively small expense, and have every bee of the new variety within less than three months. With a money outlay that is really insignificant, he can have all of his bees reared from superior stock, and having nearly all the good qualities of the improved race. For two or three dollars, or less, he may test improved varieties for himself alongside of his old ones. In this way he may gain knowledge from practical experience, which is always the best of teachers.

The best way for the inquirer to do would be to procure from some reliable breeder one of his best breeding queens, and rear queens from this. It is almost certain that that stock would be an improvement on what he has, so he would probably be safe in rearing from them enough queens to supply his whole apiary. Unless he is certain that his breeding stock is desirable in every way, it might be safe for him to buy two or three queens of each of several breeders, and, after a thorough test, get a good breeding queen of the stock that suited him best.

If he can afford the money better than the time required to rear the queens, let him get from reliable breeders several dozen queens, which, at the proper season, may