

Read at N. A. B. K. A. Convention, Detroit.

PROVIDING PASTURAGE FOR BEES.

CAREFULLY-PREPARED estimate reveals the fact that in North America (the territory covered by this Society) there are 300,000 persons who keep bees. The annual product of honey amounts to over one hundred millions of pounds, the value of which is about fifteen millions of dollars!

May not these figures give us a full comprehension of the dignity of our mission, the magnitude of the work before us, and the exalted possibilities which may inspire us to fresh zeal and grander achievements in our pursuit?

In passing—let us contemplate, for a moment, how invention, art and science, have followed every "progressive step" in apiculture! Just think of the crude methods of our fathers, and then contemplate the wonderful improvements of to-day! Instead of tubs and pails of yore, containing broken combs of honey, bee-bread and dead bees, taken from the breeding apartment of the hives, the result of murdering the bees by fumes of sulphur, and then robbing their homes of the "stores" laid up for winter—see the beautiful little sectional boxes in which we have educated the bees to build virgin combs, and then to fill them with honey from Nature's laboratory—at man's behoof and for man's nourishment! This is but one item in the long catalogue of accomplishments, but it illustrates the apicultural development of the scientific progress and art of this ever-advancing age!

Surely these *are* grand achievements! but shall we with them rest and be satisfied? No! says the impulsive and enthusiastic bee-keeper—show us the exalted *possibilities* of the future! Teach us how to obtain a crop of honey day after day, month after month, and year after year! Well, this is the duty imposed upon me by your committee—why, I know not; nor did I ask; but I will seek a solution of the problem by leading you into "green pastures" by the side of the "still waters," filled with myriads of "flowers" in which Nature distills the honey, drop by drop and invites the bees, by their gorgeous hues, to come and dip into their tiny fountains, and feast and fly, and fly and feast continually. These fields of splendor will point you to success—to shining dollars, and affluence!

Ask the breeders of stock, the shepherds, and the dairymen, for the secret of their success, and they will point you to their well-tilled fields, green pastures and mountains of hay. They will tell you that they provide corn for their hogs, rich meadows, pastures and hay for their stock, and then naturally expect good results!

Ask bee-keepers upon what they depend for

results, and they will have to confess that "luck" has a good deal to do with it; they depend upon natural forests, neighbors' clover fields, wild flowers in the fence corners, roadsides and wild lands; and if they are "lucky enough" to have these in due proportion to their bees, they will sing a song of gladness; but if not, their long visages will tell of hopes blasted and prospects blighted!

But alas, with advancing civilization comes the woodman's axe, cutting down the basswood, elm, oak, and maple trees. The farmers' plow destroys the magnificent wild floral carpet supplied by nature, and the poor bees often find nothing to gather—the wild flora is destroyed—the honey all gone—and starvation stares them in the face! Nothing remains for them but to destroy their brood, kill their drones, and if possible to hold out on half-rations, until some stray wild flowers, unmolested by the plow, in fence corners or by the roadside, replenish their scanty stores; but if these are denied, they "succumb to the inevitable"—and their owner declares he "has no luck with bees!"

Now, what is the duty of the apiarist, in this state of affairs? The answer is plain, positive and unmistakable. Pasturage for the bees *must* be provided—it is an absolute necessity. He must study the honey seasons of his locality, and supply the deficiency by planting white, Alsike or sweet clover, mignonette, borage, motherwort, cleome, mustard, rape, etc., and thus provide the bees with honey-producing flora when the natural supply is insufficient or entirely destroyed.

Good judgment must, of course, be exercised in the selection of seeds for planting. If white clover is plentiful, and fall flowers abundant, scatter mint "to fill the gap." If basswood is the main stay for honey, then sow sage, motherwort, and other early nectar-yielding plants or trees. The goldenrods, asters, buckwheat, sweet-clover, etc., will always pay to cultivate for fall honey. The latter (sweet clover) with its white, modest bloom will gladden the eye in June, and the sweet fragrance of its flowers, will linger till frost and snow comes, and the bees are safely placed in "winter quarters."

We are well aware that many who keep bees have not enough land to spare to devote to bee-pasturage: but in the immediate vicinity of every apiary, and within easy flight of every colony of bees in America, there are waste lands enough, covered with unsightly brambles, burdocks, fennels, mulleins, rag-weed, etc., which it would pay to seed with suitable plants for producing honey. Many of the best honey-plants require but little or no cultivation, after scattering the seeds; and even the poorest