

get as much variation in groups as you will get variations after these conditions mentioned are put down.

Mr. Morrison: Mr. Fixter explained why he suggested winter feeding; it was not for the professional bee-keeper. I think there was enough last year if the moisture was going to kill them. No doubt Mr. Fixter will be quite willing to risk twelve with moisture in his experiments next time.

Mr. Webster: Have you ever tried feeding from the bottom? Get your feed warm and right close to the cluster. It works well.

Experiments With Sainfoin Clover

Sainfoin Clover has again attracted a great many bee-keepers and farmers who visited the Experimental Farm during the past year. The number of bees working on the sainfoin plots, against those working on white clover, alsike and bokhara clovers were quite noticeable in favor of the sainfoin. For fodder and as a fertilizer, it appears to be equal to alfalfa, and its habits and growth are very similar. The sainfoin being slightly finer in the stems, and having more of a scooling habit, will therefore make a much better pasture, especially for sheep.

Soil: The soil best suited for the growth of sainfoin seems to be a deep loam, containing a fair proportion of lime, with good, deep, natural drainage. It will, however, do well upon almost any soil that is well drained, providing it once becomes well rooted. It should never be sown on land in which the water level stands near the surface, or on land likely to be covered with water at any season of the year.

Seeding: The amount of seed usually sown is, to the acre, 30 or 40 pounds, that is with the hulls on. I would advise sowing the seed hulled, the same as you sow alfalfa. It is much easier sown and will germinate more quickly. With hulled seed, about 20

pounds per acre would be sufficient. If sown with oats, barley or wheat, not more than one half the ordinary amount of grain should be sown per acre, even then the young plants are apt to be killed by exposure to the sun when the nurse crop is removed, especially if hot, dry weather follows the cutting of the grain crop. Better results are usually obtained by sowing the seed alone. The best time to sow it is as soon as the ground can be got into good condition in the spring and danger of heavy frosts is passed. On the Experimental Farm sainfoin sown alone came into bloom in August, and gave a yield of one ton, 1,700 lbs. of dried fodder per acre. In the second year it came into bloom on June 1st, and lasted to the 24th of June. The second cutting bloomed July 27th to August 17th. Total cut of the two crops, four tons, 1,600 lbs. Those dates could be extended for honey gathering, but as the plants were in the best condition for fodder, it was thought best to cut on the latter dates. A third crop is usually allowed to grow for pasture, or in favorable seasons even the third crop might be cut for hay. The present sainfoin clover plots on the Experimental Farm have been grown: one plot, seven years, one plot three years, and a third plot sown in the spring of 1903. The plot that has been growing seven years is getting very thin, and should be plowed under. I would advise restoring every two or three years, as clovers are known to be one of the most valuable fertilizing plants grown.

Cultivation: Following are hints on preparation of the soil for growing clover, killing weeds of all kinds: Hay lands take a firm footed cultivator; put on narrow points, say 2 1/2-2 inches wide. Three horses will be required to draw this machine. Pass over your field first with the cultivator. In the second operation cross the cul-