

height of the plant, number of suckers produced, the colour of the leaves at the time of ripening, and, if possible, the colour of the cured leaves. Plants with long internodes or large coarse veins are undesirable. After the preliminary selection the field should be gone over at least twice more and any plants developing undesirable characteristics discarded.

Care of the seed plants.—Tobacco is naturally a self-fertilized plant and ordinarily does not cross. However, bees and other insects flying from flower to flower will carry the pollen from one plant to another; and if a poor plant or a plant of another variety should bloom out near the selected plants, there is danger of them being crossed and the benefit of the selection lost unless the seed head is protected in some way. Just before the first flowers open, each seed head should be trimmed up until only the five top branches remain; this insures the grower obtaining the seed from the earliest flowers which form, and the plant food which would be distributed over the whole seed head, were it left untrimmed, is reserved for the development of the earlier pods, which results in plumper seed of greater vitality. The seed head should then be covered with a fourteen-pound manila bag the mouth of which is tied loosely around the stalk just below the lowest remaining branches. About every ten days these bags should be removed and all suckers, late pods, and fallen blossoms taken out and the bags raised a little. When the seed pods have all formed and begin to turn brown, the bags should be removed and the seed heads allowed to ripen in the open. This causes the seed to ripen earlier and give a higher germination test.

After the greater portion of the seed pods turn brown and before frost, they should be harvested and hung up in a dry place for about two months to finish ripening and to cure. After this they may be hulled.

It usually requires from twenty-five to thirty seed heads trimmed up as previously described to produce a pound of cleaned seed.

Usually about ten leaves should be left on a seed plant.

CLEANING TOBACCO SEED.

The weight or specific gravity of dry seed is a clear indication of the amount of plant food contained in that seed for the nourishment of the young seedling while it is becoming established and developing the root system necessary for its future growth. This has been clearly demonstrated in experiments with light and heavy seed, in which it was conclusively shown that larger yields and more uniform crops of better quality were obtained from large, plump seed than from small, light seed.

While the general farmer has not been slow in recognizing the value of good heavy seed in producing his crops, using various methods of separating out the heaviest seed before planting, the tobacco grower, as a rule, has overlooked the importance of this point. And in tobacco growing, when we take into consideration the short growing season, the comparatively few plants on an acre, and the relative value per acre as compared to other crops, it is readily seen that plump, heavy seed for the production of strong, vigorous seedlings is really more important than in producing practically any other crop.

It has been found that the heaviest seeds do not always germinate first, neither do the plants from those seeds always attain the proper size for transplanting first; however, the seedlings from the heaviest seeds are always more robust and vigorous than those produced from light seeds, and, when transplanted, the most vigorous plants produce the heaviest yields and the most uniform crops.

It is practically impossible, in selecting plants at the bed, to discard all of the weak seedlings produced from small, light seed; therefore, this selection must be done by cleaning the seed before it is sown. Furthermore, the average germination percentage of uncleaned seed is about fifty while well cleaned seed should give a germina-