

NOTES ON AGRICULTURE (IV.)

ARTIFICIAL POLLINATION OF SQUASHES.

MR. L. C. CORBITT in his Bulletin (No. 42 South Dakota Experiment Station) upon squashes observes that in Dakota there is an abundant production of flowers of the squash plants, but 'an almost complete failure of fruit.' For two years he has been experimenting to find the cause and concludes that the failure is due to an absence of insects capable of transferring the pollen from the male to the female flowers. In their absence it is further demonstrated that profitable crops of squashes can be grown by resorting to artificial pollination. This pollination is best effected in the early morning and consists in touching the stamens of a male flower, picked off and held in the hand to the large fleshy stigmas of the pistillate flowers, which are, of course, left on the vines. It was found that 62 per cent. of the flowers thus treated produced fruit, while practically none will grow if left dependent upon nature for the transfer of the pollen.

PEANUT CULTURE.

THE Office of Experiment Stations of the U. S. Department of Agriculture has reached the 25th number of its Farmers' Bulletin, and Mr. Handy in this issue condenses a large mass of facts upon peanut culture and uses. It is only within a few years that the peanut has become an important crop in this country, the climate of the Atlantic seaboard and the Mississippi Valley proving very congenial to it. Peanuts desire a fine soil, kept loose and free from all weeds. After the vines are lifted, the growers stack them for two weeks, when the pods are removed, placed in bags and stored in well ventilated sheds. The larger portion of the crop is sold by street venders, while some are used in extracting a peanut

oil. The peanut is an interesting plant in that the pods mature underground while the ordinary pea does not.

SOME PLANTS THAT LOOK LIKE THE RUSSIAN THISTLE.

IN Bulletin No. 39 of the Illinois Experiment Station, Mr. Clinton, the assistant botanist, brings out by means of text and engravings, some of the plant rogues that resemble the Russian Thistle, mentioned in a late issue of SCIENCE.

Among those of special mention are the winged pigweed (*Cycloloma atriplicifolium* (Sp.) Coult.), one of the plants of the Plains. It is easily distinguished from the Russian Thistle by its flat leaves of the ordinary sort. In the autumn this plant by breaking away from the soil at the root becomes one of the noted 'tumble weeds.' Another species of weed quite closely related to the last, and likewise a 'tumbler,' is the *Amarantus albus* L. It is not confined to the West, but may be found in many an Eastern neglected field. This Amaranth has a first cousin that is spinose (*A. spinosus*, L.), and for this reason is easily mistaken for the Russian pest. Somewhat more remote as regards botanical relationship is the Horse Nettle (*Solanum Carolinense*, L.), which is akin to the tomato, egg plant and potato. It has yellow pickles and berries. The Texan horse nettle or 'sand bur' is even worse than the last, to which it is closely related. It is *Solanum rostratum*, Dun. Of course, it would be a fault of omission not to mention the Canada Thistle in this connection, as it is one of the most despised of the prickly weeds. There is a prickly lettuce (*Lactuca Scariola*, L.), common in the West, that is like the Russian intruder, but easily distinguished from it by the flat leaves, which are polar, and the species is a compass plant.

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