Inheritance Studies in Ricinus Communis L.

The object of this work was to investigate the inheritance of various characters in the Castor Oil Plant (Ricinus Communis L.) and the method employed was by a series of back crosses. White (1) in his paper drew attention to the value of the Castor plant as a subject for inheritance studies. Many well marked types exist and crossing is readily effected.

The method of back-crossing was adopted in order to study any possible cases of linkage arising during the investigation. The material used consisted of Rose, Double bloom, Normal- leaved, spiny plants and green, laciniated, no bloom, semi- spiny plant. At the time of commencing the work these plants were at least 12 months old, the Rose plants being about 12 feet in height and the Green plant 4 feet. The Rose plants were used as female parents and the Green plant as male parent.

The inflorescences as they appeared were emasculated and the spikes bagged to ensure against intrusion of foreign pollen - White (1) in his experiments found that though the Castor plant is wind-pollinated, many of his varieties appeared, to breed true - probably not more than 5% crossing due to may be amongst other things the shelter of the foliage. The bags were removed and pollen from the male parent dusted on the developing flowers at intervals of two days and it was found that as many capsules per inflorescence were obtained by this method as normally obtain in freely pol - linated inflorescences developing freely on the same plants.

White (1) states that the pollen of Ricinus can retain its viability for some time and the writer made a series of obser - vations on this point. Male flowers were collected and kept in a dry place in an ordinary screw top specimen bottle. The experiment was continued over ten days, two emasculated inflorescences were used for each day and each pair in the series was pollinated with pollen from male flowers 1 day after plucking, 2days after ------- up to 9 days.

It was found that the pollen retained its viability to the