PISUM-CROSSES V: INHERITED ABORTION AND ITS LINKAGE-RELATIONS

by

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DESCRIPTION OF CHARACTER

In two $F_2$'s, having the "Pois à cosse jaune" in common as one of the parents, a rather remarkable character was observed to which hitherto no attention has been paid by any of the Pisum workers. After its discovery in the above mentioned $F_2$'s, the character was also found in pure lines of the Pois à cosse jaune and in $F_1$'s with such a line as one of the parents.

The character in question demonstrates itself in a constriction of the pod in one or more places (fig. 1). When such pods are opened it is observed that one or more seeds are missing and the places, where the missing seeds would have developed in normal cases, correspond to the places of constriction in the pod-wall (fig. 2, right half of right pod). Closer inspection at different stages of development shows that abortion of seeds has taken place and this evidently causes the constrictions. In normal pods one or more of the seeds may remain abnormally small — especially at the top of the pod —, but these seeds usually have quite a normal appearance (fig. 2, left half of left pod), while the abortive seeds are shrunken and drop off rather early (fig. 3).

We indicate the character as "inherited abortion", since we deal with a heritable character as will be demonstrated in the following.

In pods, lacking the strong sclerenchymatous membrane at the innerside of the pod-wall, the abortion is not so easily observable as in pods where this membrane is well developed. This is brought about by the fact that the former already have a constricted form owing to
Fig. 1. A the left a normal pod; the others have some abortive seeds.

Fig. 2. Left: inside of a normal pod; right: inside of a pod with aborted seeds.