

THE SEED PRODUCTION OF 33 PISUM GENOTYPES UNDER PERMANENT LIGHT PHYTOTRON CONDITIONS.

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Many genotypes appear to yield poorly when grown in permanent light. The initial variety in our radiation trials, 'Dippes Gelbe Viktoria' (DGV), and recombinant R 46C both yield fewer seeds in permanent light than in long days (Fig. 1). However, the data in Fig. 1 show that some genotypes can still perform relatively well in permanent light. Recombinant RM 1122B, selected from cross R 46C x 489C, is particularly notable in this respect. In the field RM 1122B produced a 30 to 50% higher yield than DGV in three different trials. However, under permanent light in the phytotron, RM 1122B out-yielded both DGV and R 46C by about 500%.

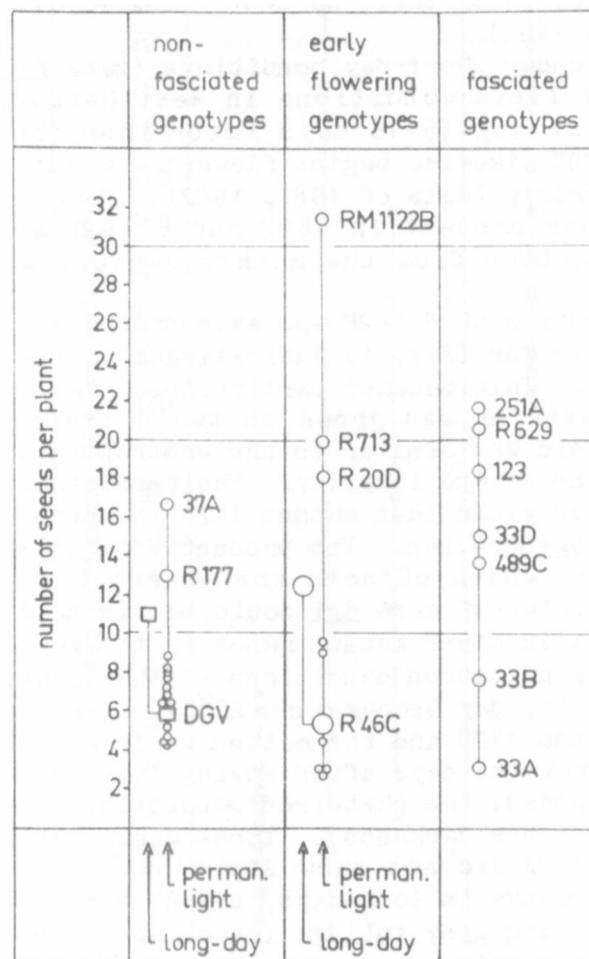


Fig. 1. The seed production of 20 mutants, 12 recombinants and the initial line 'Dippes Gelbe Viktoria' (DGV) under permanent light phytotron conditions. Generally, each dot represents the mean value of 8 plants. In the control material (DGV and R 46C), the number of plants was higher. For these 2 genotypes, the long-day phytotron values also are given.