IN THE period 1957 through 1961 observations were made on the character "heading time" in various generations obtained by self-fertilization of the hybrid between 'Ramona' and 'Baart 46' wheat (Triticum aestivum, L.). The generations studied fall into three groups; (a) early generations, (b) advanced generation families derived from randomly chosen individuals, and (c) advanced generation families developed by selection for early and late heading time. The results of this study are reported for the bearing they have on the value of early generation analysis in predicting gain under selection.

Early Generation Analysis

The early generation materials included Ramona (P₀), Baart 46 (P₀), and F₁ and F₂ generations, backcrosses of

Figure 1—Observed and theoretical distributions for early generations. See text for explanation of the theoretical distributions.