Even though the number of plants used in this study is small it seems evident that with respect to yield, these crossed plants exhibit hybrid vigor or heterosis to a marked extent.

**SUMMARY**

Hybrid vigor has been reported for many species of plants by numerous plant breeders.

The rice crop is grown under conditions which makes hybridization in the field difficult. Rice flowers are delicate and easily injured, which makes artificial crossing a difficult process.

Data are reported in this paper on the hybrid vigor of F1 plants in comparison with the parental plants for four crosses of rice. Height of plant, length of panicles, culms per plant, and yield per plant are used as a basis for comparing the relative vigor of the F1 and parental plants.

In the data presented there is some evidence of hybrid vigor for height of plants, little evidence with regard to length of panicles, but marked evidence of hybrid vigor for number of culms and yield per plant of the F1 in comparison with the parental plants.

Feterita is an important grain sorghum in the semiarid region of the Great Plains area because of its ability to produce a crop with limited rainfall. Its popularity is lessened, however, by the fact that it is not always possible to secure good germination comparable with that of most other crops under unfavorable weather conditions. If cold and rainy weather follows the planting of this crop, germination and the resultant stand are often so reduced that it is necessary to replant. Observation, on the other hand, indicates that feterita can be planted in a drier seedbed than many of the other sorghums and still produce a good stand. All of these considerations led to an investigation of the permeability and structure of the seed coat of feterita in comparison with that of several other sorghums, and of its

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