

ROTHAMSTED EXPERIMENTAL STATION,
HARPENDEN, HERTS.

Director:
SIR JOHN RUSSELL, D.Sc., F.R.S.

STATISTICAL DEPT.
R. A. FISHER, Sc.D., F.R.S.
J. WISHART, D.Sc.
J. O. IRWIN, M.A., M.Sc.

1st. March, 1930.

Dear Dr Harland,

I enclose a brief summary of what you had to tell me about the Crinkled Dwarf crosses, and in order that I may be sure of my facts, will you look through the enclosed, correcting what is wrong, and filling in the results of other backcrosses etc., which you had not time yesterday to discuss.

Yours sincerely,

R. A. Fisher

*Empire Cotton Growing Corporation,
Millbank House
2 Wood St.,
Millbank,
London, S.W. 1.*

(Victoria 2811).

Dr S.C. Harland.

Crinkled Dwarf is a complete recessive in Sea Island, but when crossed with other Peruvian species gives more or less slight crinkle in F_1 seedlings according to degree of affinity with Sea Island.

Crossed with Upland, F_1 is clearly intermediate. F_2 shows great variability in degree of crinkling. F_1 x Upland gave half normal and half nearly fully crinkled. Six highly crinkled plants of these were crossed again to Upland and gave six large families all apparently normal. It is not yet certain that any of these are heterozygotes; this will be tested. No cross yet of F_1 with Crinkled Dwarf.

Tomentosum x Crinkled Dwarf gave very mild crinkle in F_1 . F_2 showed some normal and others crinkled in varying degrees but less variable than corresponding Upland F_2 . F_1 x Tomentosum gave nearly normal (? half Normal and half very mild crinkle) offspring. *These have not yet been further backcrossed.* F_1 x Crinkled Sea Island gave half normal and half Crinkle in two groups, Crinkled and Semi-crinkled, i.e., half the homozygous Crinkled from this cross are modified to Semi-crinkled, while the heterozygotes appear normal. Harland now thinks Tomentosum more nearly allied to Sea Island than is Upland.