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Weed Control by Chemicals Trails with Extra "A" (Sandoz)

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Introduction : Control of weeds in cultivated crops by the use of selective herbicides has become increasingly popular. A good measure of success in this direction has been reported by workers in India and elsewhere. The active chemical ingredients of the many commercial formulations in the market mainly consist of 10% of sodium –4 chloro–2 methyl phenoxyacetate, 80% of the sodium salt of 2·4–D, 40% of the butyl ester of 2 4–D, sodium and ammonium trichloracetates and dinitro - ortho - cresol.

Samai (Panicum miliar, Lam) is an important goodgrain crop raised on the Nilgiri hills in rotation with potato and forms the staple diet. Being a slow - growing millet it is overpowered very quickly by spurry *(Spergula arvensis)*, a pernicious weed of the region. Very often the entire crop succumbs to this and other common local weeds like *Oxalis* and *Polygonums* Handweeding is not always possible, due to scarcity and high cost of labour.

Materials and Methods : During the year. 1949, a supply of EXTRA "A" (Sandoz) was received from Messrs. Shaw Wallace & Co, Ltd., Madras, for trials. This water - soluble preparation, containing dinitro - ortho - cresol as its active ingredient, was claimed to be very effective as a weedicide in cereal fields.

In the same year a 1% aqueous solution of the chemical was sprayed, purely as an observational measure, on bulk fields of *Ragi* and *Samai* infested with spurry. During harvest, it was found that there were appreciable yield increases for grain and straw in the sprayed treatments.

For the next two crop years, 1950—'51 and 1951—'52, the treatments were enlarged to four in number as follows :

A : Control (Unsprayed).

B : 1% of the chemical applied as a single dose, 50 days after sowing *Samai*.

C : 1% of the chemical applied twice, 50 and 75 days after sowing.

D: 2% of the chemical applied as a single dose, 60 days after sowing.

The treatments were run on replicated basis over randomised plots. Detailed field observations were maintained, the effect of the chemical on the crop and the weed critically studied and the yield data statistically examined.

The percentage increases for the spray treatments, over the unsprayed control, for both the yields of grain and straw, were spectacularly high ranging from 38–583 and 400–997 respectively

Conclusion: The chemical proved very useful not only for the total destruction of weeds, but also in returning very high values for yields of grain and straw. Within eight hours after the sprayings, it was found that the weeds had wilted off. They were dead in 24 hours and, after three days, completely dried up. The preparation did not in any way affect the growth and yield of the potato crop that succeeded the treated *Samai*. It was further found that treatment B (spraying with 1% of the chemical once) was enough to give an effective kill of nearly 80% of the weed populaiion, the total cost of chemical and labour amounting to only Rs. 34/- per acre as against Rs. 50/- that will have to be spent for hand-weeding, which would not be so effective.

Summary: The results proved that EXTRA "A" is a handy and effective weedicide and may be very usefully employed in cereal fields, The destruction of broadleaved weeds is thorough, quick and complete and it does not leave any deleterious residual effects on the soil for the next crop. Its use is also cheaper when compared with charges of hand weeding.

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