

**THE EFFECT OF 2-CHLORO-4,6 BIS (ETHYLAMINO)-S-TRIAZINE
AND 3-(3,4-DICHLOROPHENYL)-1, 1-DIMETHYL UREA ON
MOSAIC-INFECTED B.37161 SUGARCANE**

In a preliminary note¹ recently published in this JOURNAL attention was called to an apparently injurious effect observed on some mosaic-diseased canes of variety B.34104 grown in flats in the greenhouse, when treated with 2-chloro-4,6 bis(ethylamino) s-triazine for the routine control of weeds. It was decided to experiment further with the effects of 2-chloro-4,6 bis(ethylamino)-s-triazine, and some other herbicides on mosaic-infected canes, especially variety B.37161, of which we still have a large mosaic-infected acreage planted in the Island.

Healthy and mosaic-infected canes of the variety B.37161 were planted separately in metal flats with eight cuttings per flat. The mosaic-infected canes were divided into two groups, one of which was treated with 2-chloro-4,6 bis(ethylamino)-s-triazine at the rates of 4, 8, 12 pounds per acre, including an untreated check, and the other with 3-(3,4-dichlorophenyl)-1,1-dimethyl urea at the same rates with an untreated check also included. The healthy canes were treated in the same manner as above with both 2-chloro-4,6,bis(ethylamino)-s-triazine and 3-(3,4-dichlorophenyl)-1,1-dimethyl urea. Four flats were included in each treatment and the weedicides at the desired concentration were applied to each flat with a 500-ml. beaker 40 days after the cuttings were planted.

¹ Adsuar, J., Deleterious effect of simazine on mosaic-infected sugarcane *J. Agr., Univ. P.R.* **45** (3) 191, 1961.

The results of the experiment this time were not in accord with our previous observations on the susceptibility of mosaic-affected canes to 2-chloro-4,6 bis(ethylamino)-s-triazine. Three months after treatment all mosaic-infected, as well as the healthy canes, treated with 2-chloro-4,6 bis(ethylamino)-s-triazine, at the rates of 4 and 8 pounds per acre, were growing normally as compared with the untreated checks and without any outward symptoms of toxicity. In canes treated at a rate of 12 pounds of 2-chloro-4,6 bis(ethylamino)-s-triazine per acre, a very slight retardation of growth was noticed. The results were somewhat different for the 3-(3,4 dichlorophenyl)-1,1-dimethyl urea-treated canes. Even at the rate of 4 pounds of 3-(3,4-dichlorophenyl)-1,1-dimethyl urea per acre a slight retardation of growth was observed in both the mosaic-infected and the healthy canes. At the rate of 12 pounds of 3-(3,4-dichlorophenyl)-1,1-dimethyl urea per acre a marked toxic effect occurred in both mosaic-affected and healthy plants, which was manifested by yellowing, necrosis, and retardation of growth. At this rate the symptoms were first seen on mosaic-affected plants as early as 1 month after treatment.

One interesting observation was the high incidence and severe appearance of "brown stripe" disease noticed on healthy and mosaic-affected canes treated with 3-(3,4-dichlorophenyl)-1,1-dimethyl urea at 12 pounds per acre.

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