

## SUMMARY AND CONCLUSIONS

1. Seven pre-emergence herbicides, amiben 1 lb/acre a.i., ametryne 1 lb/acre a.i., prometryne 1 lb/acre a.i., linuron 2 lb/acre a.i., 2,4-Des 2 lb/acre a.i., diphenamid 4 lb/acre a.i., and trifluralin 4 lb/acre a.i. were applied to okra.

The experiment produced some useful data

- (a) Okra was not tolerant to linuron at 2 lb/acre a.i. Germinated seedlings died after a few days.
- (b) All the herbicides reduced germination compared with the control. 2,4-Des caused the most significant reduction.
- (c) 2,4-Des reduced plant maturity at first harvest.
- (d) All the herbicides reduced yields compared with controls.

But of the treated plots diphenamid gave the highest and 2,4-Des the lowest yields.

2. A pre-emergence herbicide, amiben 1 lb/acre a.i., a contact herbicide, directed spray paraquat 0.5 lb/acre a.i. and a combination of the two applied subsequently, were tested on tomatoes in the wet and dry seasons, on bodi beans in the wet season and dwarf beans in the dry season.

No conclusive results were obtained.

- (a) In the wet season amiben - only treated plots with hand weeding gave the highest yields of tomatoes compared with weed free controls. Whereas in the dry season the highest yields of tomatoes were picked from the plots that were treated with paraquat-only compared with weed free controls.
- (b) The plots sprayed with amiben and later with paraquat gave the highest yields of bodi beans and of dwarf beans compared with weedfree controls.

## INTRODUCTION

(c) Paraquat at 0.5 lb/acre a.i. in combination with a pre-emergence herbicide or normal cultivation practices for the crops grown gave the most potentially useful results.

This level has been achieved with the advent of mechanisation. But from the first cultivations to the final harvesting intensive thought and ingenuity is being applied to reducing labour costs and simplifying field work. Beyond dispute the most recent single development in labour saving with vegetable crops has been the use of herbicides.

The growing of vegetables in the tropics is still very much in the hands of the small grower with his postage stamp sized garden. But the role of chemical weed killers is as important in these conditions as it is in the temperate climates. With labour costs increasing every year any developments that will reduce this expense are welcomed.

The revolution herbicides is bringing about in cultivation methods is opening many new avenues for improvement in techniques. Often a weedicide is the keystone to radical changes in the production of a crop. A more complete weedkill than is obtained with hand weeding or even mechanical weed control means that plant competition is reduced giving higher yields. There is also increasing evidence that with many crops reduced cultivation itself boosts output.

Effective chemical weed control will lead to the introduction of new varieties and cultivars more able to take advantage of the improved growth conditions. It will also enable a fresh look to be taken at the question of what are the ideal populations for different crops to give their maximum yields.