

SUMMARY.

An exploratory, non-replicated field experiment was laid out to determine the tolerance of yams to various herbicides (nineteen in all) when applied as both pre and post-emergence treatments. It was found that fourteen of the herbicides appeared to give promising results when applied as either, or both, of the two treatments.

Of the fourteen selected herbicides, the six that appeared most promising when applied as post-emergence treatments were tested further in the field using a triple lattice design. On the basis of weed infestation scores, health scores and yield, CIPC at 8.0 lb/ac and Butyl Ester 2,4-D at 2.0 lb/ac were found to be the most promising of the treatments. None of the six herbicides appeared to control weeds more than five weeks after spraying and the yams appeared to recover from the effects of most of the herbicides as early as 3 - 5 weeks after spraying. The susceptibility of different weed species to the six herbicides is discussed.

A completely randomised design carried out in the greenhouse revealed that two separate doses of CIPC at 8 lb/ac applied at two-weekly intervals did not adversely affect the health, growth rate and the yield of the yams at ten weeks after emergence of the crops. Repetitive doses of Butyl Ester 2,4-D at 2.0 lb/ac did not, however, appear to be promising.

It has been suggested that two or three separate doses of CIPC at 8.0 lb/ac have possibilities in yam weed control and an experiment designed to confirm this under field conditions has been suggested.

It is pointed out that repetitive doses of herbicides would probably be more economic when used in controlling

yam weeds on large farms than when used on small peasant holdings. In the light of these experiments, the possible ways of using herbicides in controlling yam weeds have been mentioned and suggestions have been made for future work.