

## SYNOPSIS

The purpose in making a detailed study of Cyperus rotundus, nut-grass, was to ascertain its habit under Trinidad conditions, and to compare such findings with those already reported from other parts of the Tropics. Such work, it was hoped, would further clarify the problem which nut-grass presents as a pan-tropical weed.

A morphological study of the weed is reported with details of the subterranean parts and also of the inflorescence. No real differences were found, to those reported elsewhere in the tropics, but it was decided to refer to the swelling at the junction of the leaves and rhizome as cormlike rather than use the misleading term 'basal bulb'. A life history from a single tuber was studied and the importance of local spread by means of underground rhizomes and tubers is stressed. The most encouraging methods of controlling underground spread by cultural and herbicidal methods are summarised as well as the difficulties involved in attempting such control. Tuber distribution in the soil at the College compared favourably with that found elsewhere in the tropics, the majority occurring in the top six inches, and only rarely below nine inches.

Under favourable growing conditions flowering took place in one month from a previously dormant tuber. The rate of seed production was low, being approximately one seed per inflorescence. Freshly collected seed could not be induced to germinate, but viability of 50-60% was demonstrated by use of the Tetrazolium salt test. Efforts to gain an assessment of pollen viability were unsuccessful and such work must be repeated.

The competitive effect of the weed was tested against radish and millet plants in a pot experiment. The radish appeared to withstand the competition better, but for both crops considerable reduction in plant yield resulted with increasing nut-grass population. More fertile soil resulted in more rapid production of tubers though tuber weight and size always remained fairly constant.

Possible associations of nut-grass with other plants (Cynodon dactylon and Cleome spp.) are reported, but such ecological work needs further study. Other recommendations for future work are also given.