SUMMARY

1. The need for a detailed biological study of the weed species common on our farmlands has been stressed, and an attempt has been made to illustrate one of the ways by which this study could be tackled. It is essentially the method adopted by the British Ecological Society.

2. Two weed species, Bidens pilosa L. and Cleome ciliata Schum & Thonn. were chosen for the study.

3. The account includes a detailed description (compared with what is obtained in the floras), of the two species, with a view to aiding their identification. As much as possible, the facts are supported by quantitative data obtained with regard to the most common habitats.

4. A key for the identification of the commonest species in Trinidad is included in both species.

5. The plant communities with which these species occur have been recorded, together with their relative frequencies as measured by the percentage area covered.

6. In both species, partial defoliation (50% defoliation) does not appreciably limit growth. Complete defoliation inhibits growth and, in Bidens pilosa, prevents flower formation or further development of flowers already formed.

7. Both species showed a rapid root growth in the first weeks of their life cycle when compared with the growth of the shoot. The shoot grows faster than the root after the first 3.5 weeks in Bidens pilosa and 2 weeks in Cleome ciliata.

8. In B. pilosa at least 6 pairs of leaves were formed before reproduction was initiated.

9. The seeds of both species were better stored in a calcium chloride desiccator and lost viability rapidly in phosphorus pentoxide.

10. Cleome ciliata has a strong taproot which persists throughout the life of the plant. Bidens pilosa, except in deep friable soils, tends to produce a profuse number of lateral roots with little taproot formation, and, often gives the appearance of a fibrous root system.

11. Both plants do better in the wet season. Cleome ciliata makes an almost complete cover in June to August but relatively rare in the dry season.

12. The rate of flowering in C. ciliata is very high when compared with the number of capsules eventually carried to maturity.

13. Both plants are of some economic importance in the countries in which they occur, either as food or because of some medicinal value.