INTRODUCTION.

The climate of Trinidad is insular tropical, the rainfall being from 50 to 150 inches a year. This falls usually during the months May to December, though the so-called dry season of January to April is a very variable quantity. During the wet season all plant growth is extremely rapid, and particularly is this the case with weeds. Two of the worst weeds of arable land are nut grass (Cyperus rotundus) and bajee (Amarantus spinosus). On the College Farm bajee is taken out by hand during the growth of the crop, and horse-hoeing and hand-hoeing are used to combat nut grass. The most effective way of controlling them, however, is to keep them shaded, never leaving the land uncropped for any length of time. This can be done satisfactorily when the crop in question is a green manure, for it will be ploughed under when it is at the zenith of its vegetative development. However, if the crop is being grown for seed, before it finally matures it will shed its leaves, allowing sufficient air and light to reach the soil and stimulate weed growth. For example, Woolly Pyrol (Phaseolus mungo) provides an excellent cover, keeping most of the weeds in check until about one month before the seed is fully ripe. The leaves then begin to die and drop off. This gives

the weeds an opportunity, and during the final month they will grow rapidly, flower and set seed, thoroughly inoculating the ground for the next crop. If the crop could be cut earlier, and still give good seed, it might be possible to control the weed infestation by never allowing them to seed. It was hoped that if the plants were harvested when the seeds were full-sized, but still green, they might ripen off under the action of the sun. Much of the harvesting has to be done during the wet season, so that it would not be easy to dry out the plants, by merely spreading them on the ground. Therefore the possibility of using some kind of rack or frame was considered, which frames should hold the plants off the ground, and enable them to dry out satisfactorily, in spite of wet weather.

Threshing on the College Farm is normally done by spreading the harvested plants on a concrete floor for some seven to ten days, to dry in the sun, afterwards rolling them with a Cambridge roller. This sun drying presents many difficulties during the wet season when there is likely to be rain at any time during the day, but more particularly at noon. Consequently a crop may be spread out to dry, and taken back under shelter again many times, before it can finally be rolled. This may increase the costs to a marked extent. The crop when stacked on the drying frames should shed the rain water easily, and dry in a few minutes after the rain has finished. If a portable hand-threshing

machine could be devised, this might be taken into the field, and the threshing done in between showers. As soon as the crop is cut, the field could be ploughed or cutlassed, in order to prevent the weeds seeding. The drying frames could either be left in lines down the field, or else carried to one side, where they would all stand together. Ploughing the field as soon as the crop is removed, would probably reduce the weed trouble considerably. If the object - weed control - is to be achieved, the crop must be removed before it has ceased to serve as a cover crop: that is, while it still retains its leaves. This means that it will exhibit some of the characteristics of, and experience some of the difficulties attendant on the growing of a crop for dry fodder.

Frames have been used extensively for drying various fodders such as soybeans, clover, clover-grass mixtures, potato tops etc. The evidence accumulated from a considerable amount of research in, and practical experience of this method, is useful when starting work on the drying of pulses for seed.