



Barley is a useful soil-improving crop that will usually succeed at lower temperatures than will lupins, but to improve the soil barley must be well grown, tall, and heavy when dug in. [Green and Hohn]

colloidal matter in the soil and form soil crumbs.

In many of the smaller home gardens the need for producing vegetables continuously makes it difficult, if not impossible, to maintain the soils in good physical condition and it is in these gardens that for the best results it is imperative that additional organic matter is added to the soil each year.

Successful commercial gardeners are aware of the need to maintain the physical condition of their soils. Commercial growers who cultivate small areas intensively almost invariably make heavy applications of organic manure for every second crop besides growing green crops whenever possible. On the larger areas the physical condition of the soil is usually maintained by frequent heavy green cropping. Alternatively on the larger holdings areas are sown rotationally in grass. With a grass cover the soil surface is protected from the erosive effects of sun, wind, and rain and a thick mass of roots permeates the top 18in. to 24in. of soil, retarding the leaching of important plant food elements by absorption and effecting an improvement in the physical condition of the soil by building up organic matter.

Improvement of Cultivation

Surface cultivation to destroy weeds is very important during February and in general a tool such as a push hoe that has a sharp blade that skims just below the soil is better than a tool such as a cultivator that relies on teeth for weed killing. The toothed or tined cultivator or chop hoe is of value where the weeds are large or the ground surface rough.

The hoe is one of the most useful garden tools and for most effective weedkilling full use should be made of



Well-grown crops of lupins provide some nitrogen as well as fibrous organic matter which makes an important contribution to soil tilth. [Sparrow]