

A Review

Integrated weed management in vegetable crops

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ABSTRACT

Integrated weed management (IWM) is an important component of a total integrated pest management program. IWM of vegetable crops combines a variety of approaches to suppress weeds and reduce herbicide use. IWM is important for vegetable crops because of their high value, intensive culture, and lack of competitiveness. Combining different weed management approaches reduces the dependence on chemical control and increases the likelihood that control will be successful.

Key words: Weed ,Vegetable Crops, Integrated.

Weed management is utmost importance in the successful production of vegetable crops. The term weed is a word loaded with values endowed by human beings in relation to their own activities. It is an anthropocentric concept rather than an absolute quality. Weed means a plant which persists in growing where it is not wanted or any plant that is found out of its place. Weed is any plant that is hazard nuisance or causes injury to man, his animals or his desired crops. Thus almost any plant can be a weed under certain circumstances. For example, carrot and cauliflower are crops and neither is generally considered a weed. However a carrot is being grown in a field, then cauliflower present in such a field is a weed. To farmers, it means an unwanted plant, interfering with crop growth. Weeds are that species of plants which grow unwanted or are not useful, often profuse and persistent, interfere, with agricultural operation, increase labour cost and reduce the crop yields. Thus, weeds are unwanted plants whose economic importance is not known.

Why weed control :

Agricultural production depends on various factors which interact either to enhance output or to limit production, Genetic make up of the crop interacting with environmental factors {macro and micro} influence largely the production of the crops. The edaphic factors influence growth of the root while the environmental factors modify growth of the top portion of the plant. Any setback in these factors will severely affect either root system or aerial portion of the plant (which indirectly affect each other) and eventually alter yield of the total estimated losses caused in production by pests, insects,

diseases and weeds in the world weeds alone are responsible for one third of the fields infested with weeds produce fewer vegetables because the weeds compete for the available soil nutrients water air and sunlight weeds also provide a home for insects and disease thus decline production and productivity and increasing the cost of cultivation of crops and of produce. Only a few vegetables are good competitors with weed flora because they quickly cover the soil, topping the weed growth. Examples are cabbage (*Brassica* spp.) or artichokes. But most vegetables, such as *Liliaceae*, carrots or peppers in temperate latitudes, grow slowly and they cover the soil very sparsely, suffering strong weed competition not only for water, nutrients and light, but even for space. Thus, if weed control is not carried out timely, there will be no production at all. There are many examples of problems in crop-yield reduction (Labrada, 1996) that indicate the great sensibility of vegetables to early weed competition and the need to control weeds at early crop stages. Weed competition is especially dramatic when a direct-seeded vegetable is grown. The critical period of weed competition (i.e. the period during which weed control has to be carried out) is usually longer in direct-seeded than in transplanted crops. For example, if transplanted pepper has to be weeded from the second week until the third month after transplant to prevent a 10 per cent yield loss, direct-seeded pepper must be weeded during the first four months after emergence to prevent the same loss (Medina, 1995). Some traditional techniques are thought to increase crop competitiveness (e.g. transplant, earthing-up). Obviously, weather conditions and weed density have a great influence on the length of critical periods. A cold wave affecting spring vegetables can provoke slow growth, higher competition and greater yield