

WEED MANAGEMENT IN FRUIT CROPS

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The diversity in soil and climatic conditions prevailing in India provide ample opportunities for growing large variety of fruits in different regions. The major fruits grown in the drylands of India are custard apple, amla, ber, jamun, karonda, pomegranate, wood apple etc. Wide range of weed species affect the productivity of fruit crops through competition for light, water and mineral nutrient. Apart from this, they act as alternate host for many pests and pathogens which cause heavy yield losses. The weeds besides competing with the trees, interfere with the plant protection measures, harvesting, pruning and other cultural operations. Thus, effective weed control is imperative for the profitable fruit production.

Dominant weeds in fruit crops:

Scientific name	Family
Grasses	
<i>Dactyloctenium aegyptium</i>	Poaceae
<i>Perotis indica</i>	Poaceae
<i>Heteropogon contortus</i>	Poaceae
<i>Cynodon dactylon</i>	Poaceae
<i>Chloris barbata</i>	Poaceae
Broad leaved	
<i>Aristolochia bracteata</i>	Aristolochiaceae
<i>Abutilon indicum</i>	Malvaceae
<i>Celosia argentea</i>	Amaranthaceae
<i>Hibiscus micranthus</i>	Malvaceae
<i>Leucas aspera</i>	Labiatae
<i>Leucas utricaeifolia</i>	Labiatae
<i>Ocimum canum</i>	Labiatae
<i>Oldenlandia umbellata</i>	Rubiaceae
<i>Phyllanthus maderaspatensis</i>	Euphorbiaceae
<i>Trichodesma indicum</i>	Boraginaceae
<i>Tridax procumbens</i>	Asteraceae
<i>Cyanotis culculata</i>	Commelinaceae
<i>Tephrosia purpurea</i>	Leguminosae
<i>Mimosa pudica</i>	Mimosoideae
<i>Vicoa indica</i>	Asteraceae
<i>Gompherena decumbens</i>	Amaranthaceae
Sedges	
<i>Cyperus rotundus</i>	Cyperaceae

Methods of weed control:

Tillage: Tillage is done in row crops by cultivators after planting to control weed growth. This method is more effective and economical.

Hoeing: It is highly effective means of weed control.

This method is not economical as it demands more labour.

Mulching: Mulching materials, such as hay, grass clippings, straw, sawdust, rice hull and plastic film are applied, which exclude light thereby preventing photosynthesis and growth of weeds.

Intercropping: Raising of cover crops, intercrops and green manure crops are helpful in checking the weeds. But, intercropping or cover cropping in the orchards is not desirable during blooming and fruiting periods, during that time the fruit trees require maximum moisture and nutrients.

Biological control: The population of certain weeds can be reduced below the level of economic injury by using their natural enemies.

Chemical control: In this method the herbicides are applied as pre and post emergence for controlling weeds

in fruit crops. This method of control is highly effective and economical as the other methods demand more labour and cost.

Integrated weed management: Integrated weed management is basically an integration of effective, dependable and workable weed management practices that can be used economically as a part of sound farm management system. Such an approach is the most attractive alternative from agronomic, economic and ecological point of view.

IWM is the application of numerous alternative technologies to reduce the weed population, abundance, including cultural, genetic, mechanical, biological and chemical control. This system help to produce optimum crop yield at a minimum cost in consideration with ecological and socio-economic constraints under a given agro-ecosystem. The methods used for the effective weed control are as follows:

1. Direct methods	2. Indirect methods
1. Cultural methods	1. Land preparation
2. Mechanical control	2. Selection of fruit crops and varieties
3. Chemical control	3. Plant density
4. Biological control	4. Fertilizer application

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