

Inter-row cultivation in vegetable crops

Inter-row cultivation is still an essential tool for weed management in vegetable crops. Inter row cultivators can be equipped with different working tools, according with the different agri-environmental contexts.

DID YOU KNOW?
Inter-row cultivation can reduce water evaporation from soil.

Readiness for use: 

Efficacy: 

How it works

Inter-row cultivation in field vegetables crops aims to obtain physical weed control by uprooting, cutting, and covering the unwanted spontaneous plants with soil

- Inter-row cultivators are provided with rigid element (different tools and conformation are available) performing a shallow tillage (2-3 cm) in the inter-row space.
- Inter-row cultivators can be equipped with flexible elements (vibrating tines or torsion weeders) or ground driven star shaped disc provided with rubber tools mounted peripherally (finger weeder). In this conformation a selective mechanical weed control can be achieved also in the intra-row space. The selectiveness of the treatments is based on the different development of the crop and weeds root apparatus, small weeds can be easily uprooted.
- All the elements and tools of each working unit are mounted on an articulated parallelogram equipped with a ground wheel; in this way a constant tillage depth is ensured.
- To increase weed control efficacy, inter-row cultivation should be performed when the weeds are at the first stages of their development (from the emergence up to 2-4 true leaves).
- In order to precisely follow the inter-rows avoiding crop damages, inter-row cultivators are provided with guidance system (mechanic or hydraulic assisted), figure 1. In this case two operators are required to perform the work.
- High-tech inter-row cultivators are available on market, with image-based row detection systems, weed detection systems, and with automatic working tools moving out of the way when running in to the crop plants



Figure 1. Inter-row cultivator provided with hydraulic assisted manual steering systems

Read more

[Innovative Strategies and Machines for Physical Weed Control in Organic and Integrated Vegetable Crops](#)

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