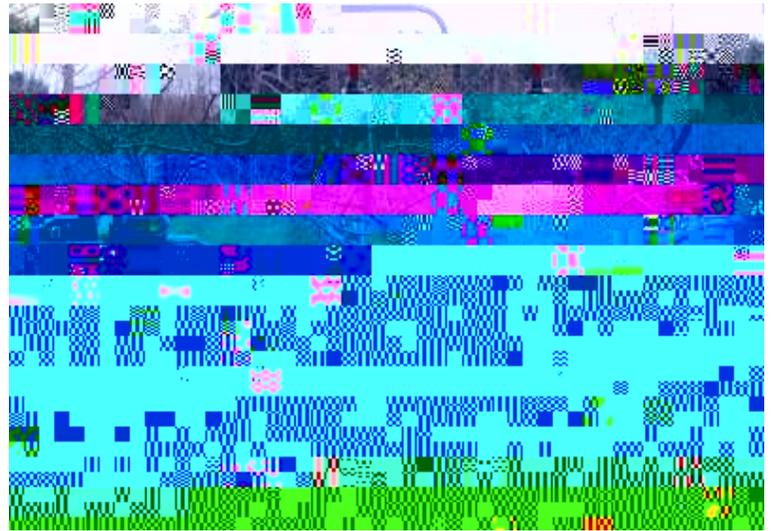


ORGANIC ORCHARD EQUIPMENT

Mowers

There are two types of mowers used in apple orchards: rotary mowers and flail mowers. Rotary mowers are useful to mow the ground cover close to the tree trunks and often are wider than flail mowers so more ground can be covered with a single pass. However, rotary mowers do not chop up prunings or leaf litter like flail mowers, which is a key practice performed in organic IPM to reduce disease inoculum. Rotary mowers usually require less tractor horsepower than flail mowers.



Small rotary mower used to mow close to trunks

Offset flail mower used to chop up leaves and winter prunings

Flail mowers use a horizontally-mounted spinning drum on which knives are mounted that shred materials during operation. This action is important in orchard sanitation, as leaf litter, dropped fruit, and prunings can be finely chopped to allow for biological degradation in the field. This can potentially reduce overwintering levels of apple scab inoculum and spotted tent form leafminers, as well as recycle nutrients from orchard debris. Flail mowers tend to have higher horsepower requirements than rotary mowers and can be narrower, thus requiring more passes through the orchard. Some flail mowers include hydraulically operated sweepers that push debris in the tree row into the mower path for better coverage. Many are also offset to extend under the dripline of the trees, with some including a hydraulically operated offset to adjust to differing tree row widths.

Tractors

When deciding what tractor(s) best fits the orchard's needs, the grower should take into consideration the horsepower requirements for orchard mowers and sprayers. There are three types of tractors necessary for orchard management, however, one tractor may span two or more of these types.







Mulch Spreader

A mulch spreader can be used in organic apple production to reapply mulch about every two years, but also can be used to apply compost. A tractor-pulled, PTO driven, automated side delivery mulch wagon is time efficient and practical when running a commercial organic apple orchard.

Tractor-pulled side delivery mulch spreader

Fertilizer Spreader

Fertilizer wagon Tractor pull spreader

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