Ferrari Tractor CIE

"Appropriate Technology for Agriculture"

Walk Behind Tractors

The first stage of mechanization for large scale gardening for sufficiency or market generally is a powered tiller often referred to merely as a rototiller. Originally a brand of tillage tool, rototiller has come to refer to a (2) wheel unit with a horizontal tiller with rotating tines. Something on the order of a "Troybuilt" to name a well known brand but generally a single purpose machine.

A more useful class of (2) wheel cultivators are the European "motorcultivators" known in USA as walk behind tractors. They differ from mere "rototillers" because they are far more versatile doing a great many tasks with implements mounted at rear of machine as well as the ability to rotate handlebars 180 degrees so that still more types of implements can be driven in front of the machine widening the kinds of work that can be done effectively.

The Grillo 131 is a 13 HP diesel engine well suited for farming and landscaping use. It is designed for prolonged use at heavy loads. It's engine is fuel efficient, easy starting and meets all the clean air rules currently in effect. It has (5) forward speeds and (2) reverse speeds and can be equipped with every kind of implement that can be run by a walking tractor.


Farm scale walking tractors from Ferrari, Goldoni, Pasquali and Valpandana have been sold in USA for many years. Recent changes in EPA air pollution control rules now prevent importing them because their diesel engines do not meet new specifications.

A question is often asked about how much ground can be farmed with a walking tractor. The answer depends on the crop mix and the taste for walking of the operator. In my opinion two acres of actual tillage is about the limit, if one is mowing orchard or vineyards you might add a couple of acres. Similarly if haying or grain growing is the function again 4 or 5 acres is max. This all assumes reasonably good long growing season. Shorter seasons reduce acreages.

As your acreage worked increases you must balance cost of walking tractor equipment with that of Micro tractors because moving up to a 4 wheel tractor requires duplicating a major investment because most implements used by walking tractors _can not_ be utilized by the small 4 wheel tractors. The costs of walking tractor implements is very similar to those for small 4 wheel tractors.

Walking tractor tillage tools consists of mouldboard plows both one way and two ways (i.e. rolloverplows) and powered rotary plows. These systems permit one to dig furrows, build ridges and raise beds.
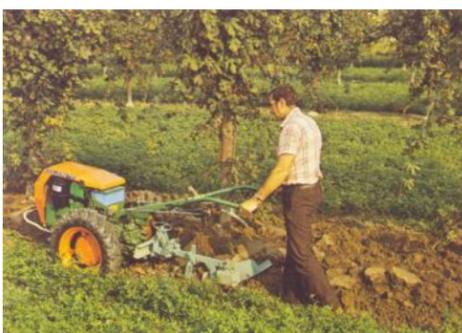
Primary tillage tools like reciprocating spaders Imats "rotary spaders" work a maximum of 24" wide digging respectively 6" and 10" deep.

Secondary tillage tools like power harrows break clods left by primary tillage tools or flatten seed beds, breakup crusts and incorporate soil amendments or bury stones or debris and generally finish a seedbed.
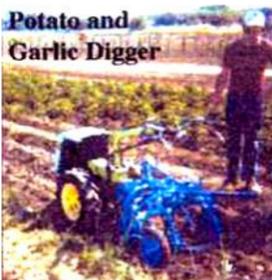

Walking tractors can also perform seeding and transplanting functions using specialized implements like these.

Once crop is growing an interrow cultivator can be used with a walking tractor - to clean weeds on either side of growing row.

When a variety of crops are ready for harvest the walking tractor can again come into action.

At harvest time a trailer can turn walking tractors into a transporter of produce from the garden, fruit from the orchard or hay from the far field. Hitched to a small compost spreader its ready to recycle organic matter.

When crops are in the walking tractor again takes to the field to chop crop residues for incorporation into soil or in preparation for over seeding with a cover crop and adding soil amendments.

When the Garden field crops and pastures have been put to bed for the winter your walking tractor still has work to do to haul in prunings and windfall and apply dormant oils in the orchard.

Even when there is no more reason to go to the field the parked walking tractor can shell the corn and grind the feed. Is that all the walking tractor can do? No - just a sample your imagination can fill in the rest.