## **Ferrari Tractor CIE** *"Appropriate Technology for Agriculture"*

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## **Olive Oil using a Vertical Press**

The traditional Olive press was a vertical screw turned by hand and, later, by water power or animal power. The olives having first been turned to paste in an Arastra powered by animals or a water wheel or today's electric motors.



Pictured here is a traditional stone Arastra that was electrified in early 1900's and continues in use to this day. Note the dosing machine spreading Olive paste onto mats ready to be carried to vertical press.

Today this style of press instead uses a large hydraulic cylinder powered by an electric pump to create pressure to compress layers of olive pulp to extract the oil. About 80 kg of olives are processed in each batch requiring about an hour to extract oil. A separate machine grinds olives into a paste and spreads it on circular, woven mats alternating with steel plates. These are threaded over central shaft. These mats hold pulp in place under pressure but allow oil to run out into surrounding basin. Originally mats were woven of reeds then sisal and now nylon or stainless steel. All steel parts that contact oil are made of stainless steel.

The oil then goes into a decanter where water and sediments settle out and are separated by gravity.



This is a 2,000 year old Olive press where olive paste was placed in stone basin lined with reeds. Flat stone weights were stacked on to press out oil that flowed into another stone basin to settle out sediment and let oil and water separate. It is thought that olives were first turned to a paste using a large stone mortar and pestle.



Here is an ultra modern press using hydraulic pressure and electronic controls to keep constant pressure as oil begins to run out of paste.



This Olive tree is on the island of Crete and is thought to be 2,500 years old.