



A New Device for Small Scale Cottonseed Acid Delinting

A. Doitsinis¹ and G. Baziotis²

¹National Agricultural Research Foundation, Cotton and Industrial Plants Institute, Sindos, Greece

²Myron Nikolaidis S.A. Manufacturers of Machinery for Agricultural Product Processing

ABSTRACT

The inefficiency of large scale delinting units to delint small amounts of cottonseed for the experiments conducted by research institutes has lead to the construction of a small experimental cottonseed delinting unit.

The experimental delinting device was constructed at the premises of the company Myron Nikolaidis. Stainless steel was used for the construction and seed was delinted with concentrated Sulphuric Acid (95-98 percent). The main parts making up the unit are the seed feeding section, the section where seeds are steeped in acid, the seed washing and acid neutralizing section and finally the drying and seed cleaning section. The ability to re-cycle the sulphuric acid reduces the amount consumed.

The total output of the unit is approximately 60 kilos of seed per hour. The seed processed is fully delinted with moisture content of approximately 8.5 – 9.5 percent. It maintains high viability. The other advantages are quick and easy cleaning during the change between different varieties, limited labour requirement to operate the unit (two workers needed) and the small area it occupies (30 – 40 m²).

General view of the new device for small scale cottonseed delinting.

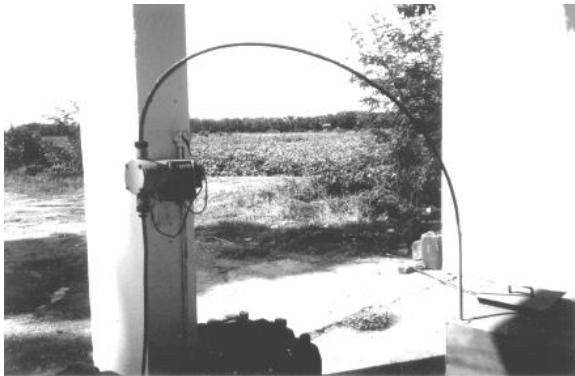


Analytical description of the new device for small scale cottonseed delinting.



1. Sulphuric Acid transfuse section
2. Storage and Recycling Acid Section
3. Seed Feeding Section
4. Acid Spraying Section
5. Seed Washing and Acid Neutralising Section
6. Seed Drying Section
7. Seed Cleaning and Sieving Section

Picture 1. Sulphuric acid safety transfuse.



Picture 2. Acid recycling and storage system.



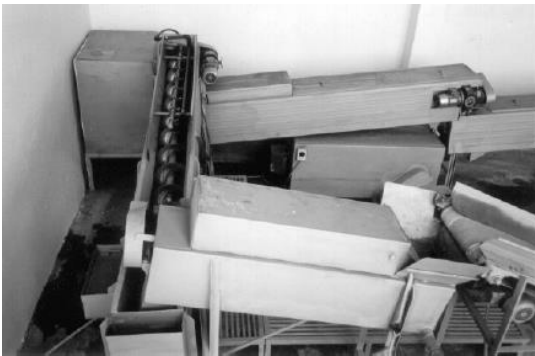
Picture 3. Seed feeding system.



Picture 4. Acid spraying system.



Picture 5 and 6. Two views of the seed washing and acid neutralising system.



Picture 7. Seed drying system.



Picture 8. Seed cleaning and sieving system.

