Turn Off the Pesticides
& Turn on The Vacuum

NANCY HUDSON, CHINCH BUG RESEARCH PROJECT, NL HORTICULTURE PRODUCERS COUNCIL

An OTS Highlight Article. Agricultural vacuums were first used in the 1950s to protect US cotton crops from insect damage. By the 1960s the use of vacuums expanded into other field crops to provide protection from certain insect pests such as whiteflies, aphids, tarnished plant bugs and Colorado potato beetles. Treatment results ranged from excellent to poor depending on the type of vacuum used. Discontentment with agricultural vacuums may have been driven by the high initial cost of machinery, limited use, soil compaction, and plant losses from mechanical damage.

In the meantime, chemical pesticide manufacturers created new pest control products for use by farmers which ultimately led to the abandonment of agricultural vacuums. Chemical pesticides were touted as a technological wonder because they were so economical and effective at increasing crop yields. However, the perceived miracle ceased when greater amounts of pesticides were needed to achieve treatment results, and when insect pests such as the Colorado potato beetles became chemically resistant. Voices from science, academia, and the public began to surface conveying fears of environmental degradation and human harm resulting from unrestricted pesticide use.

In response to these concerns a multi-tactical approach to pest management emerged; integrated pest management (IPM). IPM was developed to reduce the reliance on chemical pesticides by encouraging the use of other treatment methods such as biological controls, physical controls...