

**IMPROVEMENTS IN THE NEW BOLL WEEVIL TRAP**  
**J.C. Plato, J. Scott Plato, Stacy E. Plato and Thomas A. Plato**  
**Plato Industries, Ltd.**  
**Houston, TX**

**Abstract**

The boll weevil trap and Grandlure pheromone are key components in IPM, prevention, suppression and eradication programs (BWEPs) for boll weevils. The Southeast Boll Weevil Eradication Foundation's (SEBWEF) trap became the most widely used trap in the Americas and has become a mainstay for detection and spray decisions in IPM and US BWEPs.

Without this trap, Grandlure pheromone and insecticide dispensers, the US BWEPs probably would not be possible with the technology being employed by most states; also, early season "pinhead" spray programs would not be as accurate in many IPM programs. The SEBWEF trap as currently manufactured has many operational deficiencies and a "new and improved" trap, as designed, patented and developed by Plato Industries, Ltd., (Plato Trap) eliminates practically all of the deficiencies. Consequently, the new Plato Trap provides financial savings in labor and replacements. It was designed to be as effective as the SEBWEF traps, but with more "user friendly" characteristics and with more functionality during installation and servicing-monitoring-inspections. The Plato Trap has more than 26 improvements when compared to the SEBWEF trap.

**Introduction**

Plato Industries, Ltd. is proud to announce the commercial availability of the "new and improved," more user-friendly boll weevil trap for detecting and monitoring boll weevils in eradication and IPM programs. The new trap has only three parts, the Base Cup, Cone and Capture Cylinder. These parts are durable, color-fast, UV resistant, recyclable and easier to assemble, load, clean out, stack, and disassemble.

**Key Features and Improvements of the Cylinder**

- Bases will not stick together.
- Entire component is more flexible and will not become brittle over time.
- Inside flat surface provides for quicker and easier "bar coding".
- Color will not fade.
- Base is designed with durable and improved "holders" for wooden stakes, broomsticks, bamboo stakes or fiber-glass rods.
- Base has a "nail-head X slot" for wooden stakes and "tie-down holes" for bamboo.

**Positive Locking System to the Cylinder**

- One piece construction.
- Easier to clean out.
- Does not "rust", deform or lose orifice dimensions.
- "Tamper-tie" holes.

**Positive Locking System to the Base that Does Not become 'Brittle'**

- 85% more top ventilation holes for pheromone liberation.
- 14% more capture area in Cylinder.
- Positive Cylinder locking system with Cone
- One piece construction
- Much more easier "to see" weevils
- Four holder clips for pheromone and insecticide dispensers
- One holder slot for the "chip" insecticide dispenser
- Three slots for weevil "snuggle spots"
- "Tamper-tie" holes.

### **Comparison between the New Plato Trap and the Old Trap**

In general, the data collected by various researchers and extension specialists in the Mid South and Southwest States compare the Plato Trap to the Precision Plastic (PP) Trap from biological, operational and economical aspects. Their results illustrate that:

- The Plato Trap is statistically equivalent to the PP Trap in weevil captures (data from a large scale Rio Grande Valley and Upper Gulf Texas Coast).
- Operationally, the Plato Trap has a 40% more “user friendly” rating.
- From “Time and Motion studies conducted, it was concluded that in the case of the USA BWEPs ( with an approximate 3,600 trappers), the use of the new Plato Trap in 2002 could provide significant a “labor” cost savings.

### **Specifications**

UV protection and stabilized color are added to respective parts.

- Packaged for 100 complete traps per case.
- Polypropylene Base and Cone sections, Acrylic Cylinder and Tamper indicator.

Part	Diameter-Top	Diameter-Bottom	Height	Weight
Cone	0.3”	4.5”	4.0”	21 gm
Cylinder	1.75”	2.2”	2.5”	20 gm
Base	3.4”	4.5”	5.5”	59 gm

### **Acknowledgments**

Special thanks go out to all of the Boll Weevil Eradication Boards, Management and their respective Technical Advisory Committees, independent researchers, academia, consultants and cotton producers that participated in the field testing and evaluations during 2001 of the new Plato Trap.



Figure 1. Improvements to the cylinder.

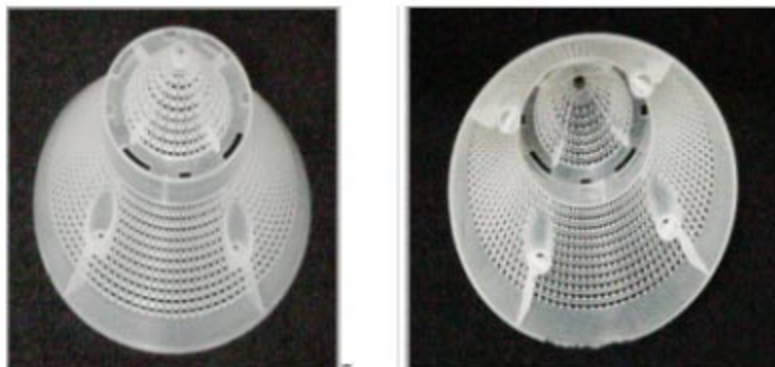


Figure 2. Key Features and Improvements of the Cone.

### ASSEMBLY



Figure 3. Assembly is easy with only three working parts.