STORGARD® DOME™
Beetle Monitoring System
Technical Bulletin

The continued, primary focus of the new DOME system is "high performance" activity against the flour beetles, *Tribolium* sp. It also exhibits excellent capabilities for trapping other "pantry" beetle pests, including, but not limited to the warehouse beetle, *Trogoderma variable* and its relatives, the cigarette beetle, *Lasioderma serricorne,* the sawtoothed grain beetle, *Oryzaephilus surinamensis* and maize weevil, *Sitophilus zeamais.* The DOME's high-performance activity against Tribolium spp. is due to the scientifically proven synergy between the kairomone (veg oil based food lure) and the aggregation pheromone. The kairomone also acts as a non-toxic "suffocant". Recent improvements in the trap design featuring an improved climbing surface have resulted in a significant increase in flour beetle capture efficacy (Fig. 1a). In addition, a newly discovered kairomone component increases flour beetle attractiveness dramatically (Fig 1b).

DOME's Purpose:

The DOME trap features a dust resistant design and a molded climbing surface and can be used in a variety of situations for pantry beetle monitoring. The DOME system is designed to hold up to three (3) separate pheromone lures. The system is most effective when used in retail outlets, warehouses and food processing facilities.

DOME Where to Place:

Distribute the DOME be used in the following manner to maximize insect capture:

- Place in a grid pattern at 10-20 meter intervals
- Near walls to maximize insect capture
- Around pallets of infestable materials
- Near building posts
- Around processing, filling and packaging equipment
- In retail outlets traps should be used on or around shelving and in storage areas
- Trap locations should be recorded on a facility map.
- Avoid high traffic areas where traps can be easily dislodged or damaged.

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DOME When to Use:

- Insects are most active at warmer temperatures above 15°C. Trap results are best when temperatures are at or above this temperature.
- Traps should be placed as described above before insect activity becomes apparent.

DOME Data Collection:

- Traps should be checked at least weekly for insect activity and more frequently when insect activity increases or when temperatures are highest.
- Trapped insects should be removed, identified and numbers carefully recorded.
- Records of trap catch should include date, location, species, number of insects as well species, and dates of lure change.

DOME Maintenance:

- Care should be taken not to damage the “rim” of the traps
- Clean trap reservoir with soapy water when fouled.

DOME Lure Longevity and Replacement:

The pheromone lures should be replaced according to the following schedule:

- *Tribolium sp* every 4-6 weeks
- *L. Serricorne* every 8 weeks
- *Trogoderma sp* every 6-8 weeks
- Unused lures should be stored at temperatures not to exceed 24°C (75°F) in unopened factory sealed packages
- The kairomone should be replenished by adding 4-6 droplets to the pad every time the trap is checked and should be replaced when fouled or when the pheromone lure is changed. The pad should always be saturated but with no free standing liquid.

DOME Interpretation and IPM:

- Occasional capture: may be an indication of a future problem and indicates the need for more intensive observations.
- As numbers increase the trap grid should be tightened and infested product should be removed.
- High capture: in localized areas indicates should be treated by identifying and removing infested product followed by increased sanitation. Treatment with insecticides may be indicated.
- Consistent high capture: indicates a need for increased sanitation program and a broad treatment such as fumigation.

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DOME Improvements:

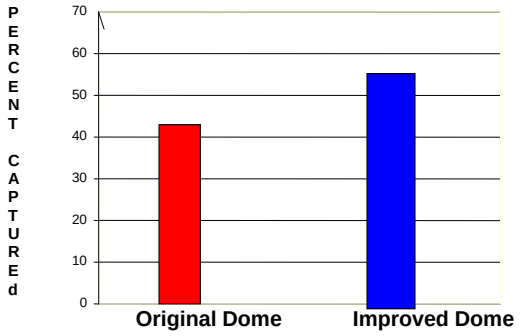

Fig. 1a Comparative capture of red flour beetles in STORGARD® DOME™ traps with and without the newly molded climbing surface.

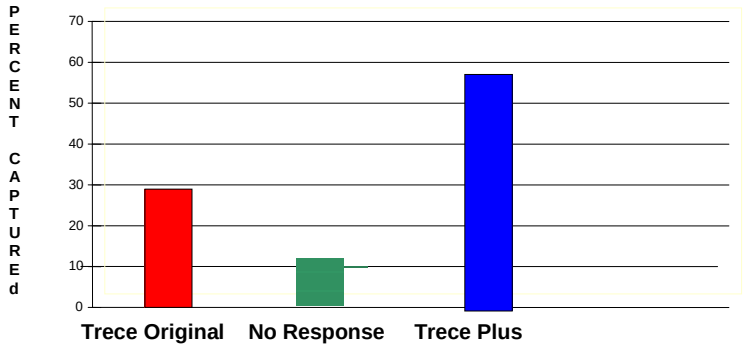

Fig. 1b New Trece "Plus" kairomone oil compared to the original Trece Kairomone oil.

The information presented in this bulletin are based on the most recent results from studies conducted by the U.S. Department of Agriculture