

1983 UPDATE ON THE USE OF "ATTRACT & CONTROL" TECHNOLOGY IN BOLL WEEVIL CONTROL, PREVENTION, SUPPRESSION & ERADICATION PROGRAMS IN LATIN AMERICA

Mr. Thomas A. Plato , Plato Industries Ltd., Houston, TX
Dr. Timothy B. Johnson , Plato Industries Ltd., Langhorne, PA
Mr. Oscar G. Manessi , Manessi Research, Santa Fe, Argentina
Mr. Meyer Margulis , Plato Brazil, Rio de Janeiro, Brazil
Mr. J. Scott Plato , Plato Industries Ltd., Houston, TX
Ms. Stacy E. Plato , Plato Industries Ltd., Houston, TX
Mr. Roberto S. Sanz , Sanz Research, Bogota, Colombia

ABSTRACT

An "attract & control" product, based on the USDA - ARS invention of the "bait stick" technology, is expanding in use in boll weevil control, prevention, suppression and eradication programs in Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, El Salvador and Paraguay. The expansion is partly due to an increase in the boll weevil populations and to the utilization of transgenic BT Cotton in many countries; as a result, this has resulted in a greater interest in the "bait stick" technology.

The "bait stick" (known as the BWACT[®] in the USA, the Tubo Mata Bicudo or TMB[®] in Brazil and the Tubo Mata Picudo or TMP[®] in Spanish speaking Latin America) has been successfully used in IPM Programs for more than 15 years in Central America and for about 11 years in Brazil. In national cotton programs, it has been sporadically deployed for 11 years in Paraguay (in program hectares varying from 200,000 to 340,000 hectares) and in Colombia for 8 years (annually in about 40,000 program hectares). For 12 years, the country of Argentina has successfully used pheromone traps and TMPs as part of their National Program to detect, eradicate and prevent the establishment of boll weevils in their major cotton zones (currently in about 350,000 program hectares) and in Bolivia, a similar program is in its third year of implementation.

The "Bait Stick" or TMB/TMP usage in the national and/or regional area wide programs and in IPM programs in Argentina, Bolivia, Brazil, Central America, Colombia, Paraguay and the USA has been validated in each country as a viable alternative, preventive approach for managing the boll weevil. Where used correctly, as a complement to good production practices, the boll weevil has been removed from the production scheme, weevil populations have been reduced by 95+%, seed cotton yields have been increased an average of 400 kilograms per hectare and the requirements for massive insecticide usage for boll weevil control have been substantially reduced. In production operations with transgenic cotton, the reduction of economically damaging boll weevil populations is critical to obtaining maximum yields and maximum benefits from the technology. When used according to Plato Industries recommendations, the TMB/TMP, as an additive to IPM programs, has greatly contributed to the elimination of economic damage from boll weevils at an approximate per hectare cost of US \$22 per crop cycle and resulted in an average "cost to benefit" ratio of "\$1 to \$12".

Index terms: *Anthonomus grandis*, boll weevil eradication, BWACT, Grandlure.