

RATIONALE

In line with the national program to eliminate the use of the long banned, highly toxic chemicals in fishponds, the National Tobacco Administration is continuing its efforts to develop technologies for the different aquaculture systems.

While tobacco is principally grown for cigars and cigarettes, it has a variety of other uses. In fact, as early as 1975, tobacco dust, a mixture of different wastes for cigarette manufacturing plants had been used for the control of fishpond snails and predator fishes (BFAR Fisheries Extension Officers Manual, 1975).

Apart from its effectiveness in eradicating pond pests, tobacco dust doubles as organic fertilizer in the growth of lab-lab, the natural food of fishes. Tobacco dust being organic in nature is likewise environment-friendly.

OBJECTIVES

General: To improve the productivity and income of fish farmers, and to enhance the global competitiveness of the local fish industry through the use of environment-friendly technology.

Specific:

- ☉ To develop a protocol on the use of Tobacco Dust Plus (TD^{Plus}) to control fishpond snails and other fish predators
- ☉ To formulate location-specific technology recommendations on the use of TD^{Plus} as botanical toxicant and as botanical fertilizer in fishponds.
- ☉ To generate data to support the registration of TD^{Plus} as toxicant in fishponds with the Fertilizer & Pesticide Authority (FPA).

TREATMENTS

Rate of Application

- ☉ 0 - control
- ☉ 400 kg/ha TD^{Plus}
- ☉ 500 kg/ha TD^{Plus}
- ☉ 200 kg/ha Tea seed

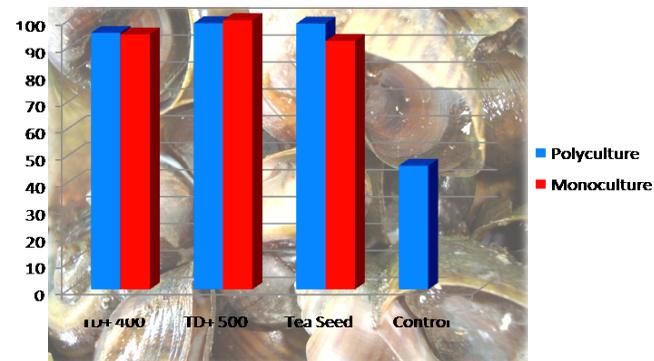
Culture System

- ☉ Monoculture of Vannamei
- ☉ Polyculture of Vannamei and Tilapia

RESULTS

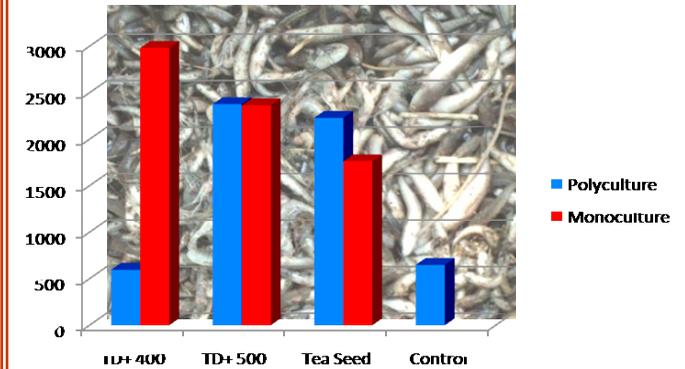
TD^{Plus} is proven effective (Table 1) in the control of golden apple snails with a percent reduction of 95.24% and 98.84%, respectively at recommended rate of 400kg/ha and 500 kg/ha in freshwater ponds

Table 1. Percent effectiveness on the reduction of snails after treatment application. NTA. CY 2009-2010.



TD^{Plus} likewise effectively eradicates a variety of fishes that are considered predators during stocking (Table 2). Gurami, mudfish, catfish, million fish, and liwalo were some of the predators present in the ponds. They eat newly stocked fingerlings and compete for food, space and oxygen; hence, depriving the nutrients needed by the stocked fingerlings.

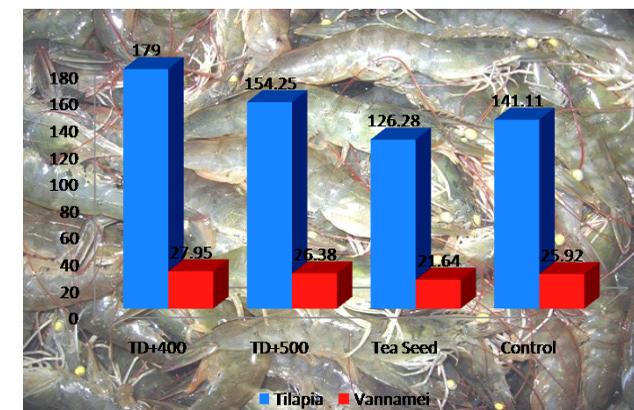
Table 2. Average number of predator fishes eradicated after treatment application. NTA. CY 2009-2010.



Generally, results show (Table 3) that tilapia and Vannamei in ponds treated with TD^{Plus} at the rate of 400kg/ha consistently had the highest weight taken at different stages of growth until 105 days after stocking (DAS).

The introduction of supplemental feed was done at 60 DAS. With the application of TD^{Plus}, it enhanced the growth of natural foods on the pond.

Table 3. Average weight (gm) of tilapia and vannamei at harvest (105 DAS). NTA. CY 2009-2010.



DESCRIPTION OF TD^{Plus}



The National Tobacco Administration developed the technology for a scientifically and hygienically organic fertilizer from pure tobacco leaves to replace the toxic pesticides which are hazardous to the environment and mankind; hence, the Tobacco Dust ^{Plus}.

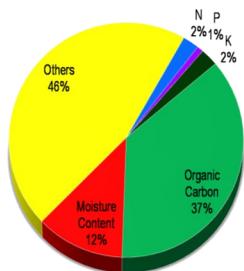
It is a mixture of finely ground sundried tobacco leaves containing the desired level of nicotine content that is potent enough to kill unwanted predators in fishponds.



It has 1% nicotine obtained from the mixture of low and high nicotine tobacco and ground into particle size about 4 mm. The tobacco leaves are grown under a specific package of technology.

PROPERTIES OF TD^{Plus}

The properties of TD^{Plus} is based from the analysis of the Bureau of Soils & Water Management (BSWM).



FPA Registration No. 1-2LP-1136
Net Weight: 25-kg / bag

Manufactured by:
National Tobacco Administration
Tobacco Dust Plant
Brgy. Fernando, Sto. Tomas
La Union, Philippines

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Tobacco Dust ^{Plus} as Botanical Toxicant in Freshwater Fishponds

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