

Thanasorn Rukdontri 2006: A Study of an Integration of Water Morning Glory (*Ipomoea aquatica*) and Snakeskin Gourami (*Trichogaster pectoralis*) Culture in Pond: a Comparison Study between Inorganic and Organic Farming Systems. Master of Science (Aquaculture), Major Field: Aquaculture, Department of Aquaculture. Thesis Advisor: Mr. Rungvit Yoonpundh, D.Tech.Sc. 153 pages.  
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To study an Integration between water morning glory (*Ipomoea aquatica*) and snakeskin Gourami (*Trichogaster pectoralis*) culture with a comparison between inorganic and organic farming systems, experimental design via Randomized Complete Block Design (RBD) is chosen. The experiment is composed of 2 blocks, 2 treatments, 3 repetitions. The first and second treatments are water morning glory cultivation without and with snakeskin Gourami integration respectively. The second treatment has a snakeskin Gourami at 1 fish/m<sup>2</sup> stocking rate in 180 m<sup>2</sup>/pond.

Production of water morning glory can be collected in 8 weeks. The total yield from each treatment is recorded as 345±40, 315±43, 176±30 and 181±45 kg/pond respectively. The water morning glory production of inorganic systems are significantly higher than organic system (P<0.05) but there is no statistically different between treatments (with and without snakeskin Gourami). The production of snakeskin Gourami from each culture systems is reported as 3.0±1.2 and 2.7±0.2 kg/pond respectively with no statistically different between systems. The net profit from inorganic system is 1,304±24 Baht/pond compared to an organic system which is 522±71 Baht/pond. Despite the higher net profit obtained in inorganic system, however, the excessive level of Ometroate has been detected with 1.85 mg/kg compared to the 0.2 mg/kg standard of maximum residue limit. Meanwhile, the water morning glory production from organic system has been reported with no residue. An adaptation form inorganic to organic systems has been recommended to increase a food safety level for all consumers.

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