

Food and Agriculture Organization of the United Nations (FAO) conducted an evaluation of chemical utilization in agricultural practices within Thailand and discovered that the concentrations are significantly higher than those observed in developed nations, consequently leading to the presence of chemical residues within the human body of consumers. The analysis revealed that the frequency of outpatients seeking medical intervention for pesticide-induced poisoning is 12.25 per 100,000 individuals. As per the report concerning disease and health risks associated with occupational and environmental determinants published by the Department of Disease Control under the Ministry of Public Health, there were 6,075 documented instances of pesticide poisoning, which corresponds to an incidence rate of 10.04 per 100,000 individuals. The highest prevalence of cases was recorded within the demographic of individuals aged 15-59 years, totaling 4,079 instances, which accounts for 67.14%, and there exists a discernible trend indicating an escalation in the number of reported cases.

Ban Thung Jud is situated within the jurisdiction of Tam Phannara District, in the Nakhon Si Thammarat Province, encompassing an extensive area of 1,761 rai. The population comprises 91 households, aggregating a total demographic count of 294 individuals. A predominant number of community inhabitants are engaged in agricultural activities, which include the cultivation of rubber trees, oil palm plantations, the husbandry of indigenous cattle breeds, and the cultivation of various fruits. Additionally, the community has established organized groups dedicated to the performance of traditional long drum music and the preparation of curry paste. An evaluation indicates that the community is confronted with pressing challenges, notably the degradation of soil fertility attributable to prolonged chemical applications. Presently, there exist fruit orchards, including a durian plantation extending over 65 rai, wherein the prevalence of chemical utilization in agricultural practices is rampant, particularly within economically-driven farming sectors and monoculture systems. Furthermore, agricultural practices at the household level also exhibit a tendency towards the excessive application of chemicals. Specific chemical agents, including paraquat, chlorpyrifos, and glyphosate, are associated with detrimental health consequences, resulting in the inadvertent absorption of these substances by the residents of Ban Thung Jud while they are engaged in agricultural labor within the durian fields of investors who routinely apply pesticides, as documented by a survey conducted by community health volunteers. It has been observed that several individuals within the community experience dermatological irritations and bodily discomfort, while others have neglected to participate in annual health assessments. Moreover, blood examinations to measure cholinesterase levels are not routinely

performed, which could result in the accumulation of certain chemicals within the human body, manifesting in symptoms such as nausea, vomiting, cephalalgia, myalgia, reduced appetite, thoracic constriction, and vertigo. Prolonged accumulation of these substances may precipitate chronic toxicity, potentially culminating in serious health conditions, including malignancies, diabetes, and paralysis, among others.

In consideration of the previously discussed circumstances, the community has embarked upon the Thung Jud Community Health Promotion Initiative, which is intended to safeguard individuals from the adverse effects of chemical utilization. This initiative is constructed to equip citizens with the requisite knowledge and comprehension pertaining to the appropriate application of chemicals, self-protective measures, and personal health maintenance.

Results

- A collaborative working group consisting of 15 individuals has been established, accompanied by a well-defined action plan.
- The aforementioned group comprises 80 members who represent the target demographic comprehensively.
- A significant 80% of the group's members participate in annual health assessments, demonstrating a reduction in cholinesterase levels, alongside evidence of adequate nutritional status among the members.