

Pesticides Status and Impacts in SE Asia

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THAI EDUCATION FOUNDATION



The Field Alliance

Toward the Non-Toxic Environment (2007 – 2018)

Tasks	The Field Alliance	PAN AP	FAO	Kemi (Sweden)
• Create awareness on the impacts of chemicals to health and environment	X	X		
• Capacity Building on IPM and alternatives	X		X	
• Regulatory control			X	
• Legislation				X

The Field Alliance Partners



Countries	Partners	Target sites	National partners
Cambodia	Agriculture Technology Services Association (ATSA)	Kampong Chnang , Battambang	District Education Offices & Local gov.
Lao PDR	Community Development and Environment Conservation Foundation (CDECF) Rural Development Sole, Co.Ltd.	Xaythany , Khammouan, Xieng Khuang, Huaphan	Local gov., MOE, FAO, MOH
Myanmar	Myanmar Institute for Integrated Development (MIID)	Southern Shan province	NGOs

Countries	Partners	Target sites	National partners
Philippines	Local Agricultural Extension Office	Davao De Norte	Local gov. DepEd.
Thailand	Thai Education Foundation (TEF)	Chiangmai, Prathumthani, Sakon Nakorn, Phannnga, FFS in 17 provinces	NFE, OBEC, FDA, DEQP, FAO, UNESCO, UNICEF
Vietnam	Initiatives on Community Empowerment for Rural Development (ICERD)	Phucho, Bac Giang, Quang Binh, Loa Cai, Yen Bai	Local gov., PPSD, PPD, MOES, NIEOH, FAO

Rural Ecological Agriculture for Livelihood (REAL) Purposes

- Create awareness on the importance of the Agrobiodiversity and promote sustainable conservation and utilization
- Create awareness on the impacts of pesticides to health and environment and promote reduction of pesticides uses
- Build capacity for institutions on ecological agricultural practices/ IPM/ SRI, and etc.





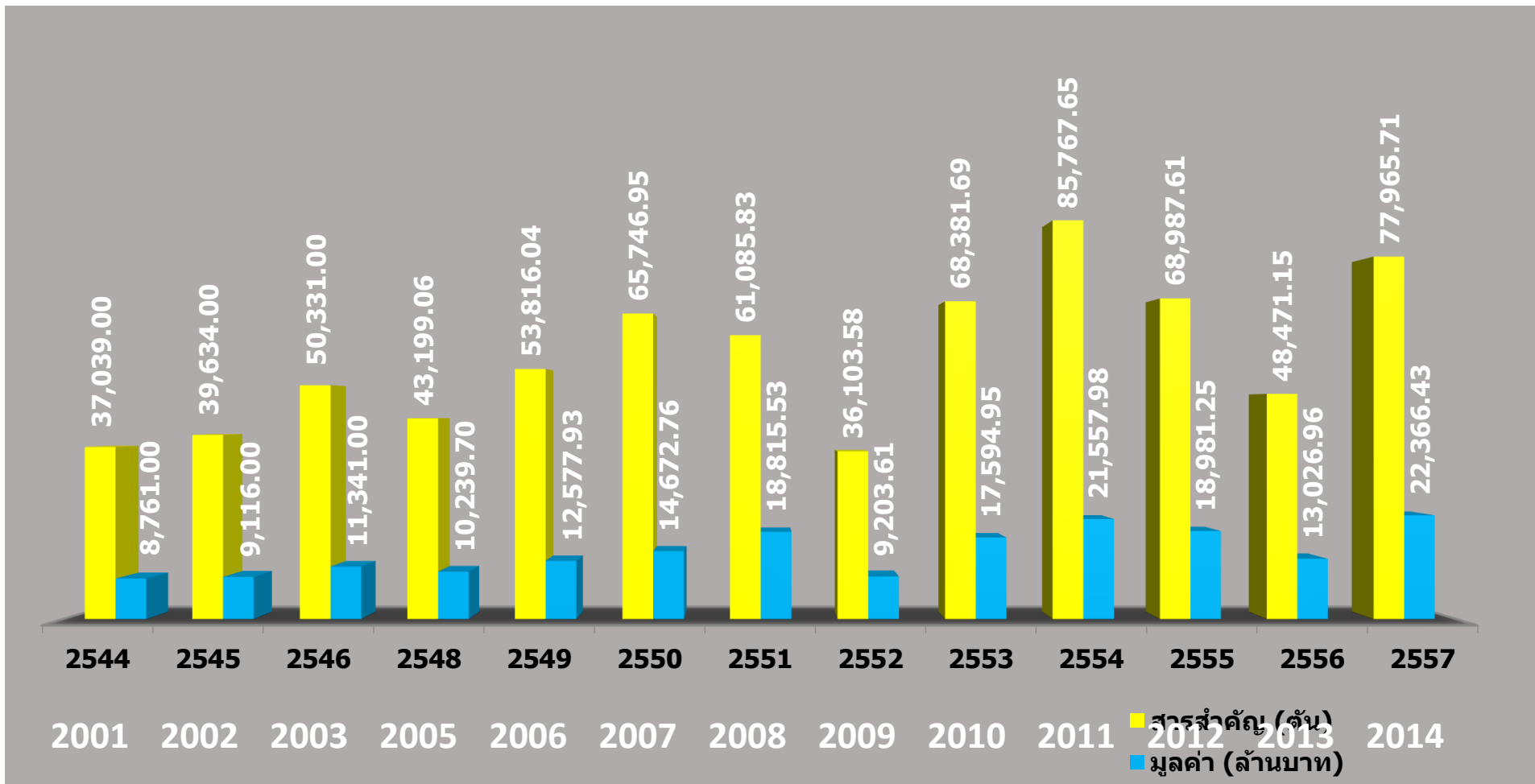
2016 REAL Sites

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Thailand's situation on pesticide demands.

More production - Pesticide imports



Source: Department of Agriculture (www.doa.go.th)

Active ingredients (tons)
Values (million bahts)

Status of Pesticides Used (2016)

Country	Total Farmers	Location	Crops	Average Pesticides Used/ Ha/ yr.	Average Liters/ person/ yr.	Average Spray Days/ Person/ Yr.
Cambodia	215	Battambang	Rice,Cabbage,Yard long bean,Chilli	2,466	3,761	12
Lao PDR	43	Sungthong, Vientiane	Chili, tomato, eggplant, and chinese mustard	8,137	6,434	28
Myanmar	85	Southern Shan	Tomato, Mustard, Pea, Cabbage, Califlower, Orange, Cut flower	3,749	4,190	34
Thailand	296	Uttaradit, Pathum Thani, Sakon Nakhon	Rice, Corn, Sugarcane, Cassava, Calendula, Soybean, Chilli, Mango, Rubber tree, Bamboo, Orange, Zucchini, Lentils, Cucumber	1,102	4,724	10
Vietnam	390	Bac Giang, Yen Bai, Lao Cai	Rice , Vegetable, Cabbage, Potato, Kohlrabi, Sweet potato	3,492	1,016	22

Status of Pesticides Used (2016)

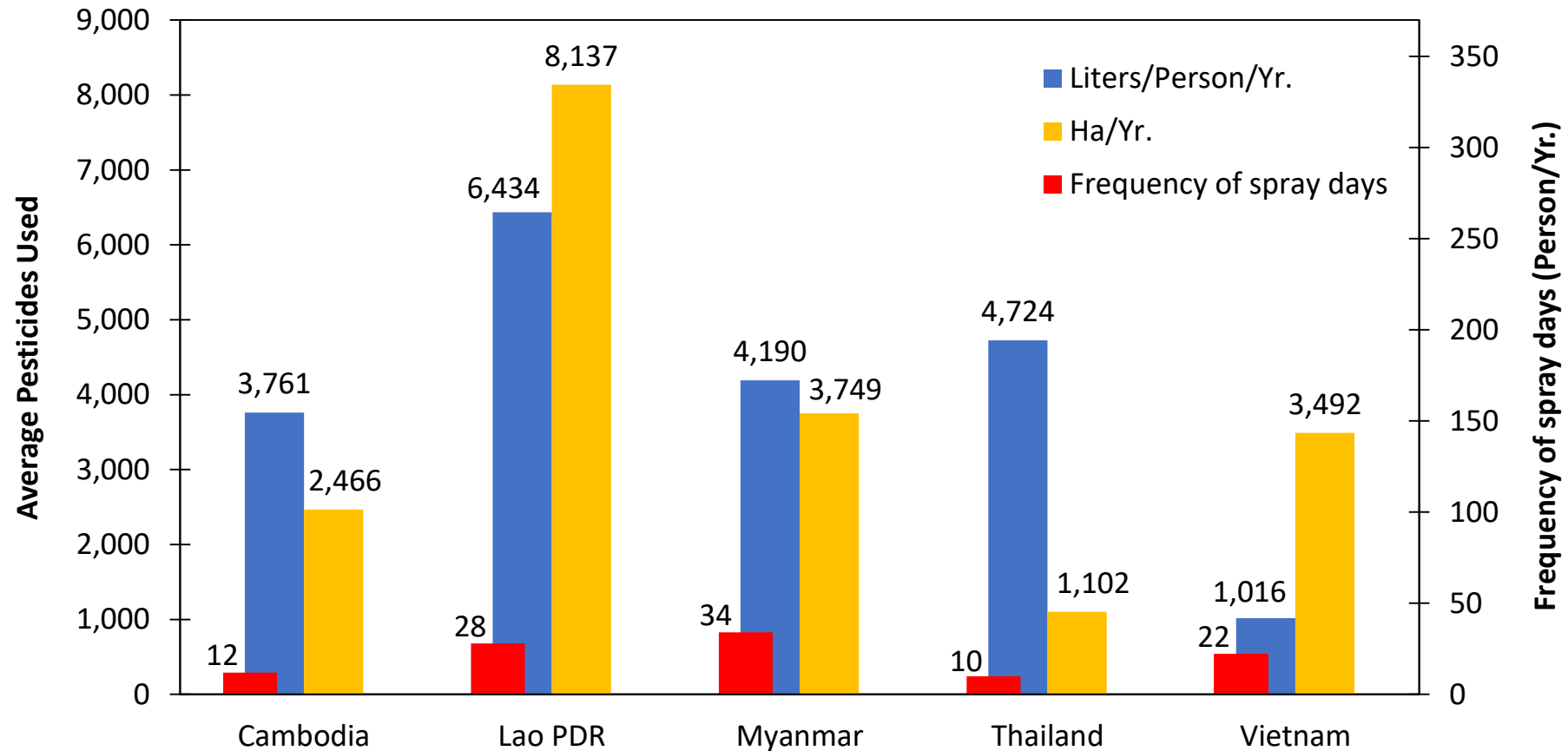
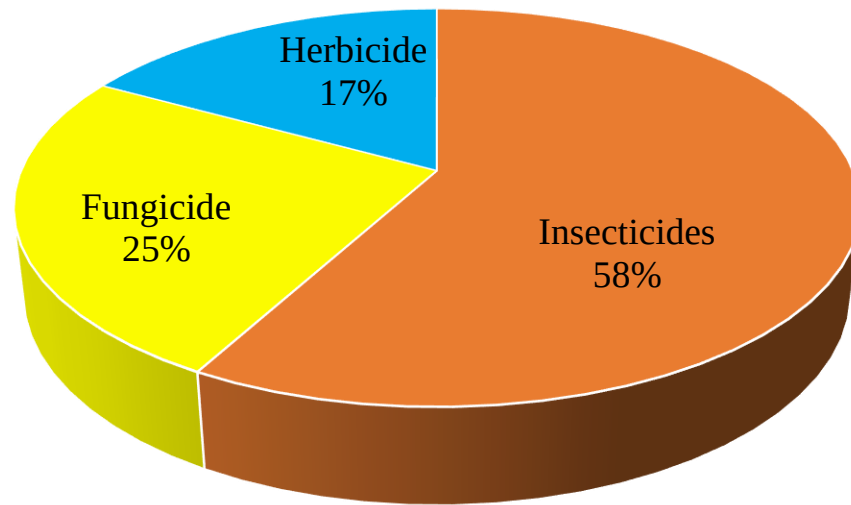


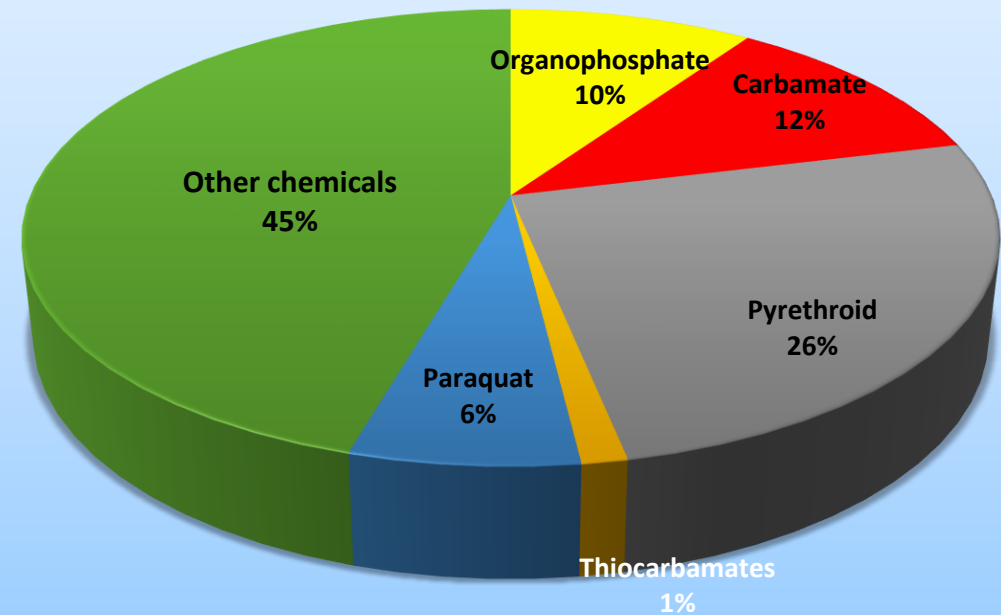
Figure 3 Average pesticides used and frequency of spray days comparison

Status of pesticides used in Thailand, 2016

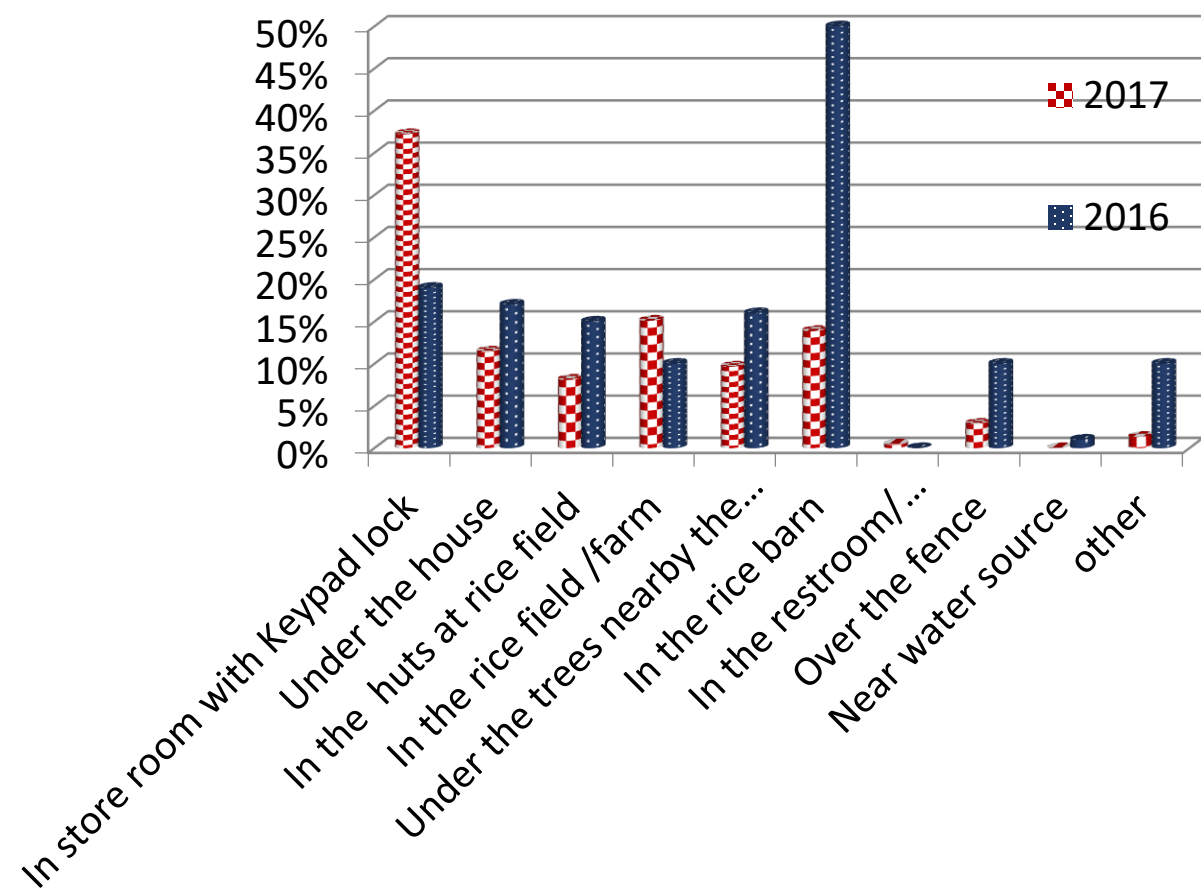
Types of Chemical 80 Farmers Used



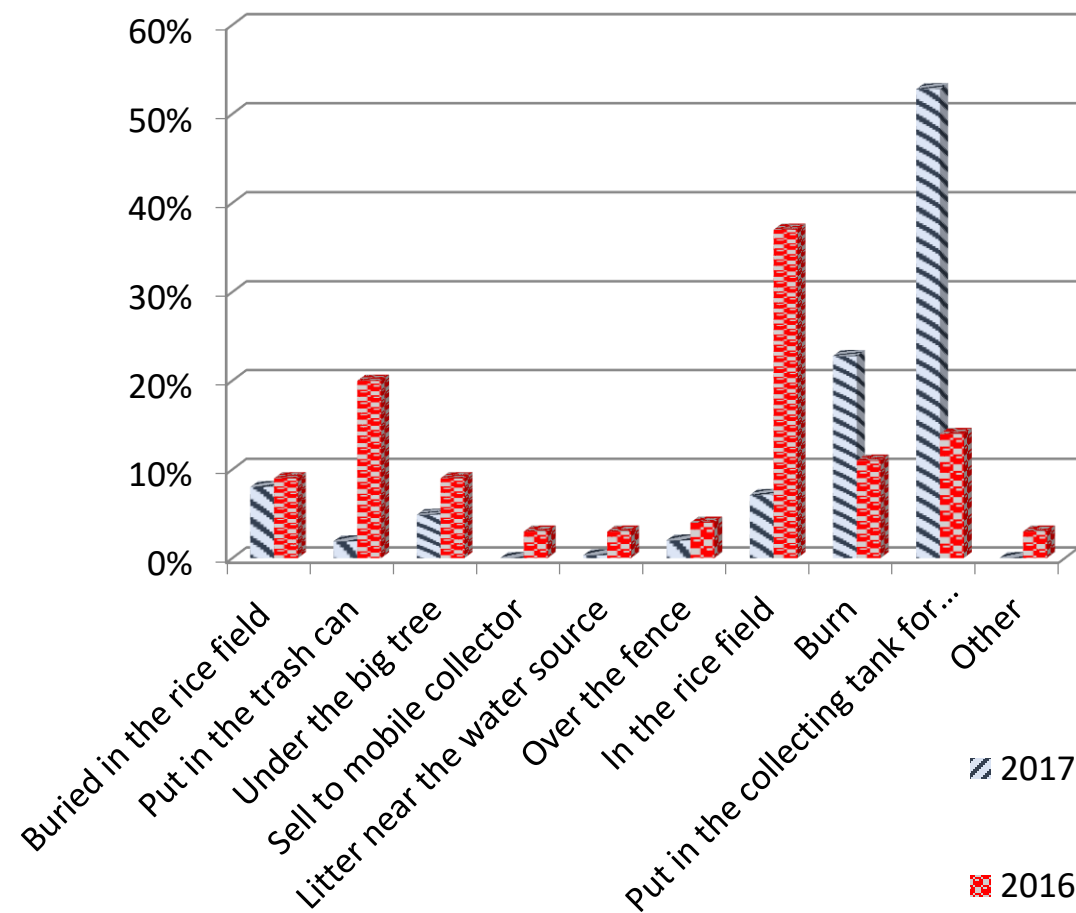
Chemical Family 80 Farmers Used



Storage



Disposal

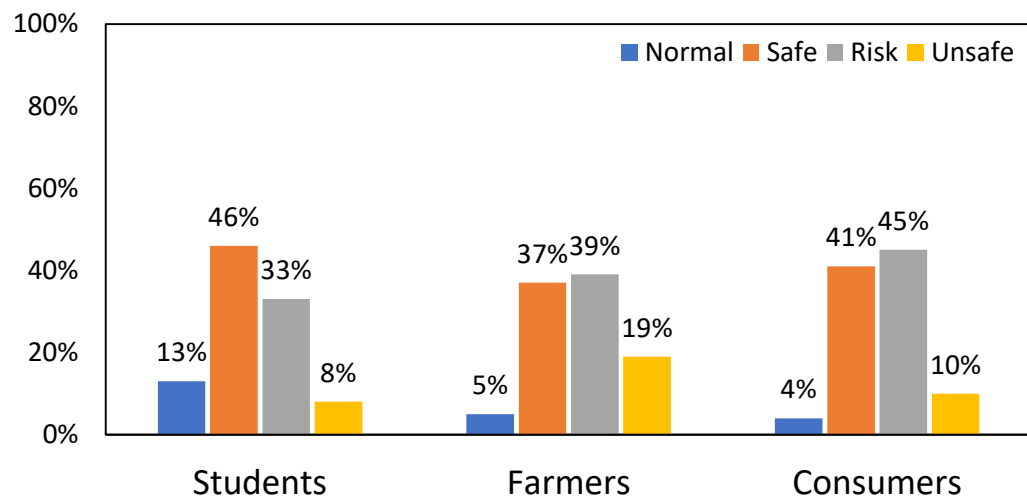


Pesticide awareness raising through the uses of test kits, 2017

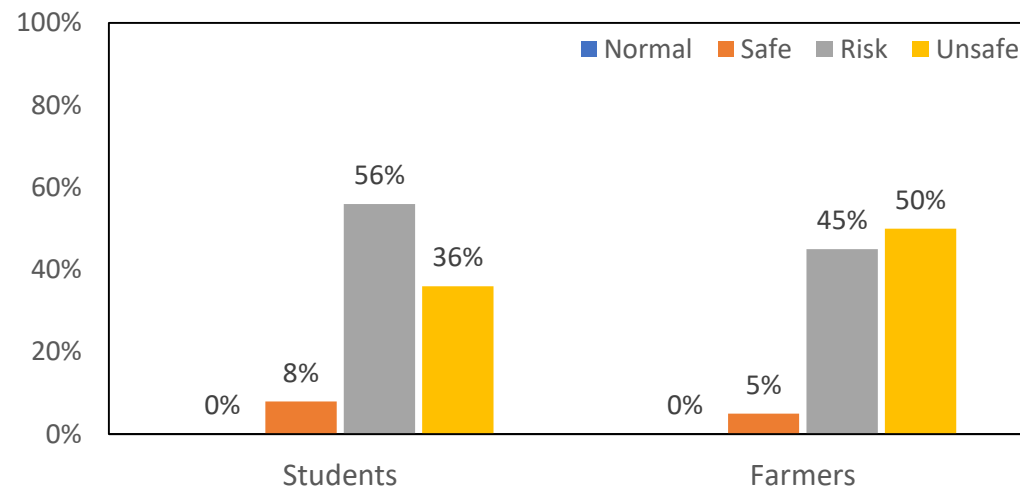


Regional Studies Results on Testing Pesticides (OP, C) in Blood using Reactive Paper

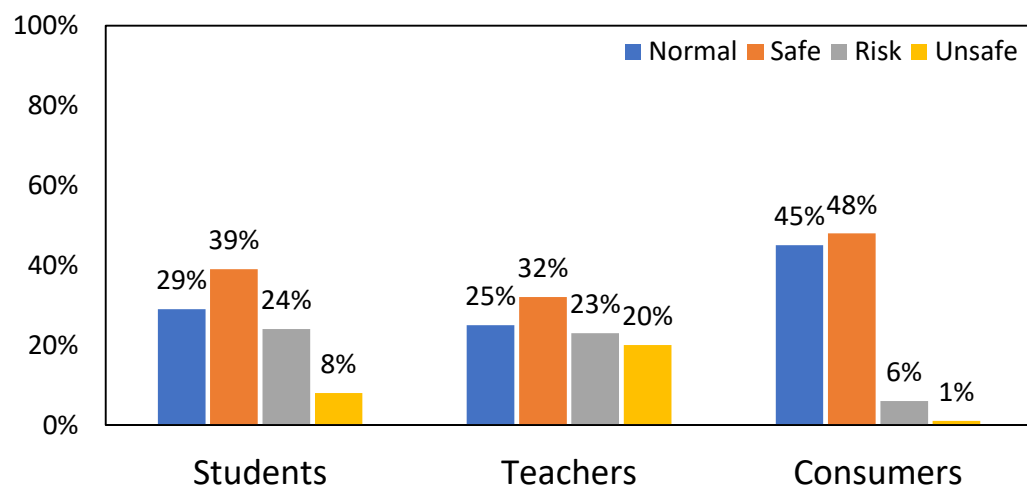
Lao



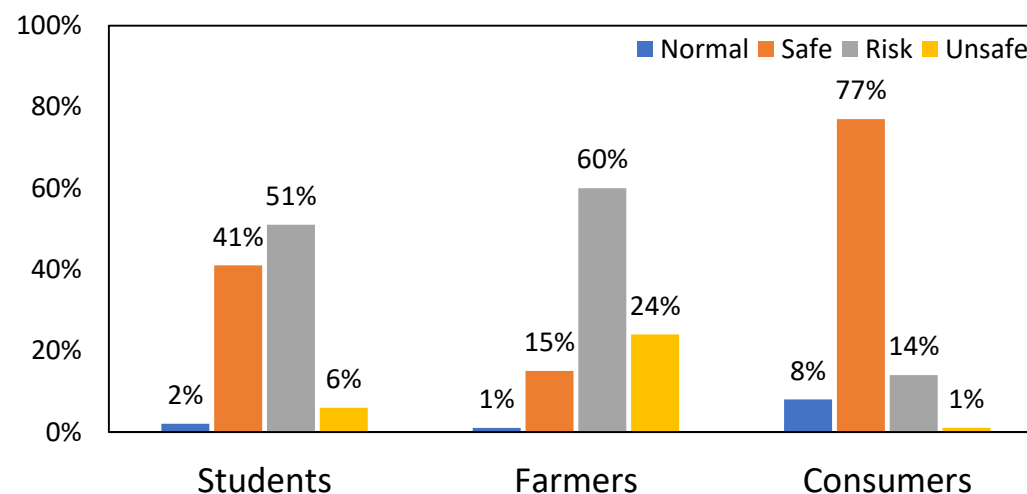
Philippines



Thailand



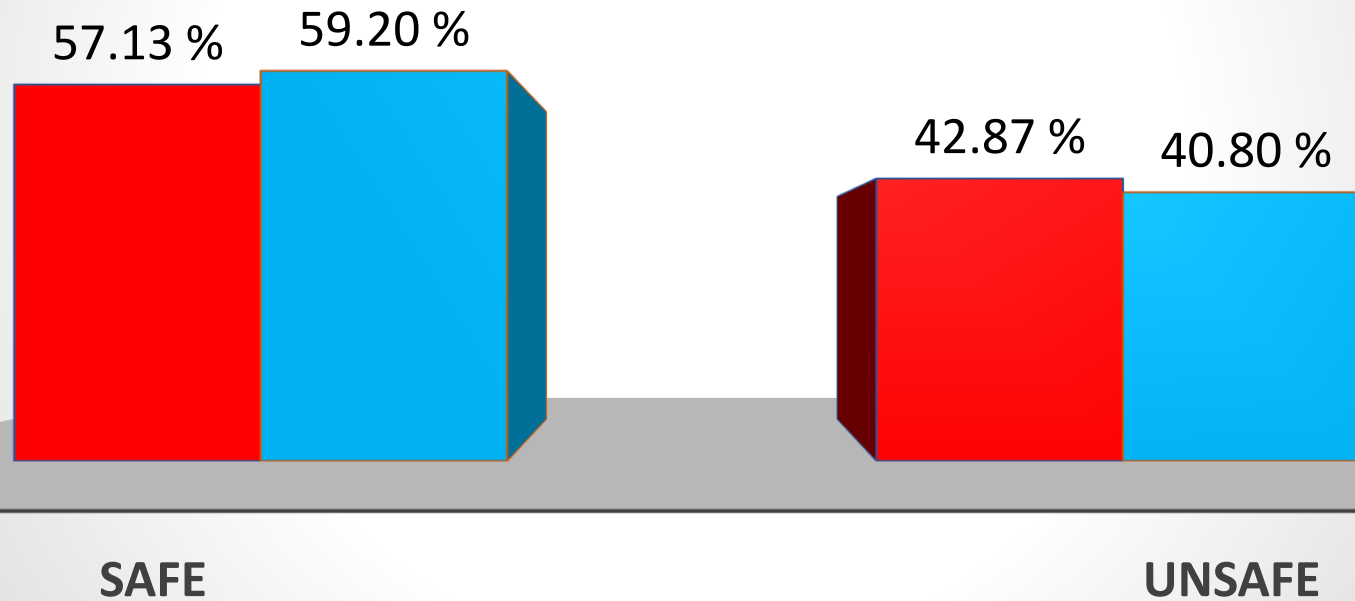
Vietnam



Pesticides (OP,C) Residue in school lunch

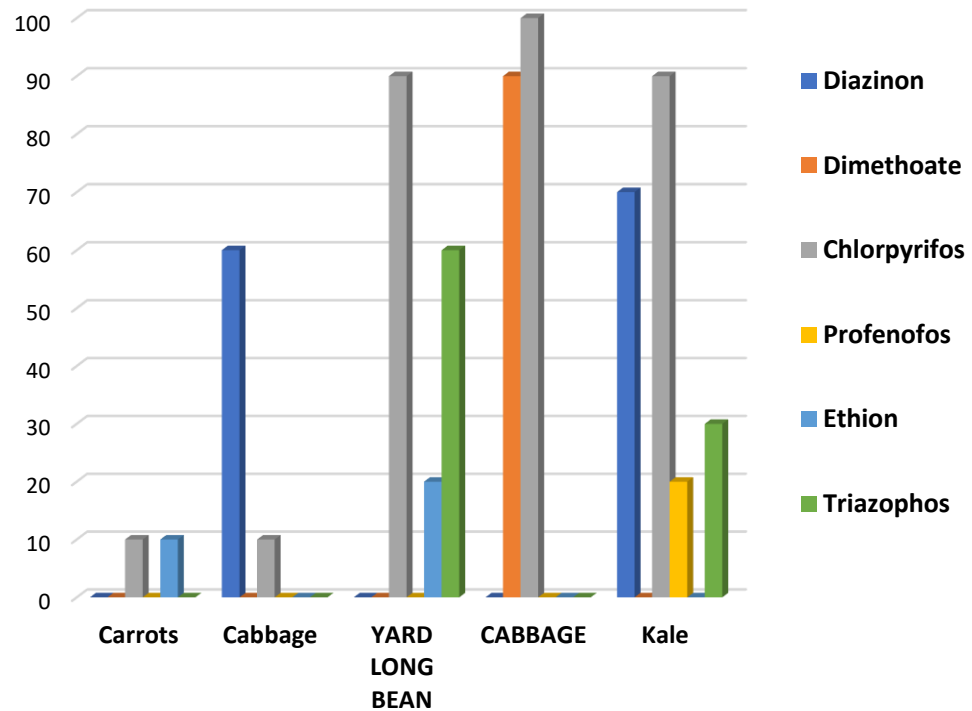
Results of 512 samples of fruit and vegetables
from 36 schools tested for pesticides residue.
Thai Education Foundation, 2016

■ Schools in risk areas ■ Schools in no risk areas

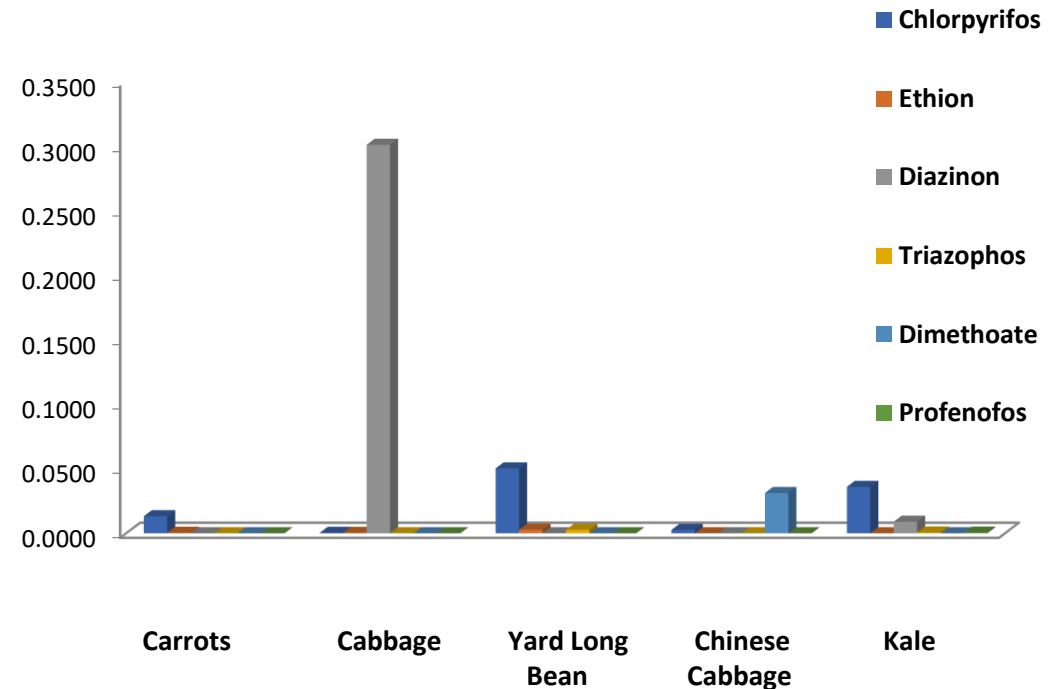


OP Residues in vegetables samples

Percent of chemical (OP) residues in vegetables samples from Chiangmai Province

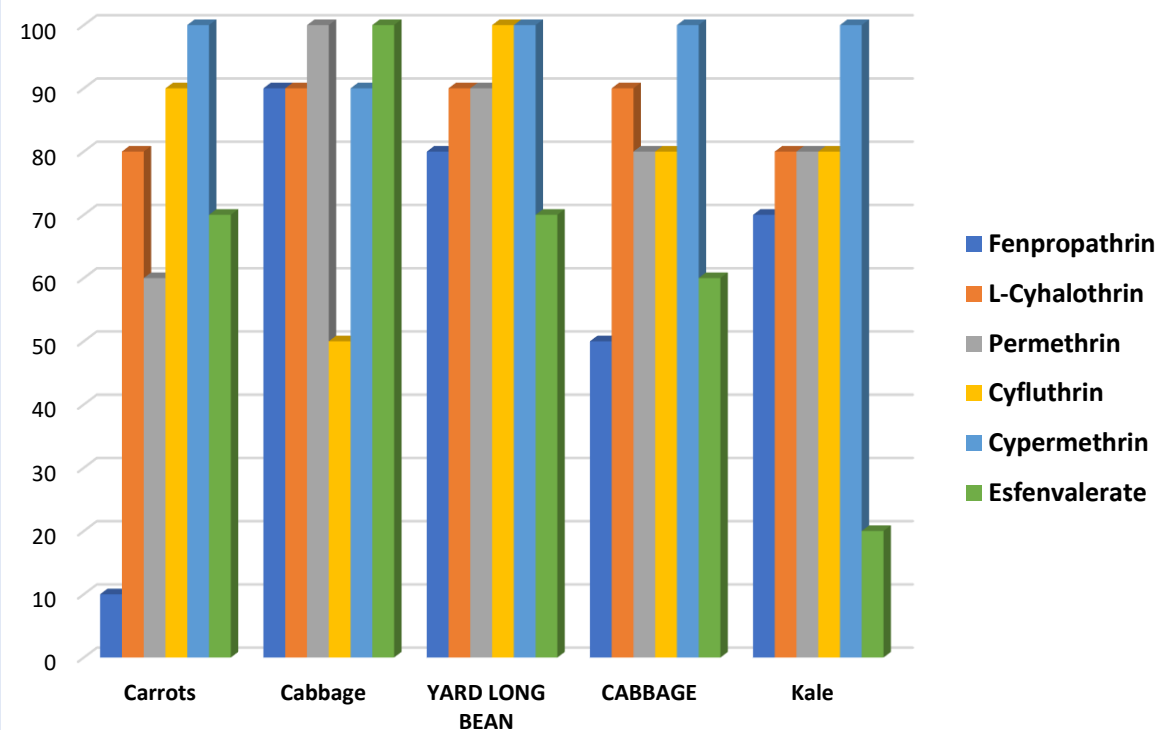


The amount of Ops residues in vegetables samples from Chiangmai province

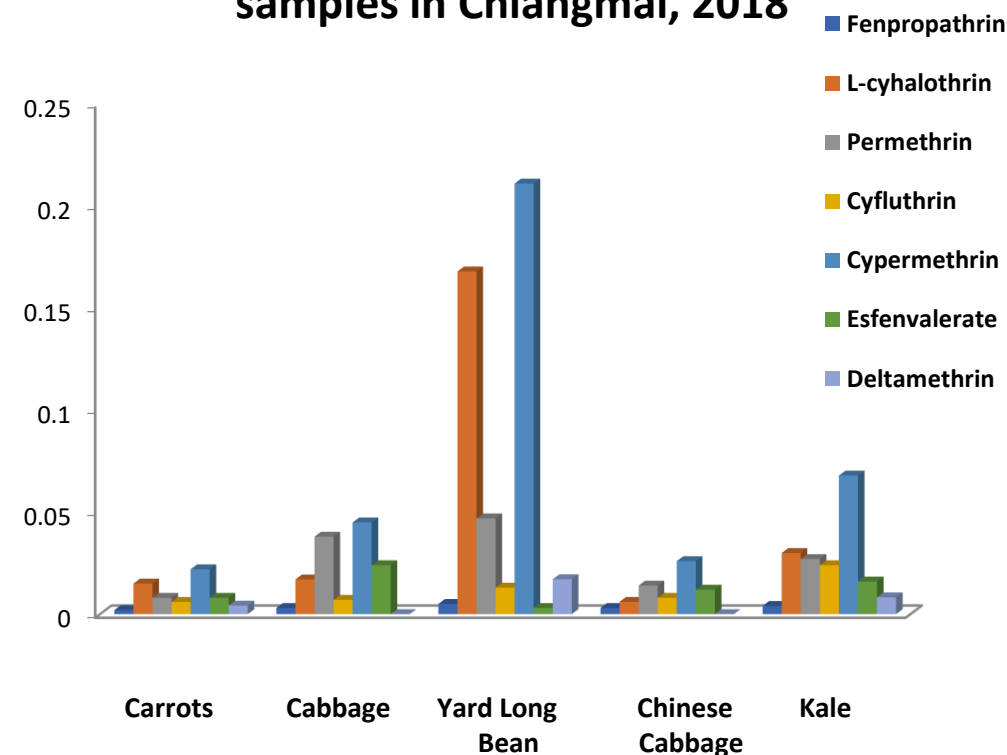


Pyrethroids Residues in vegetables samples

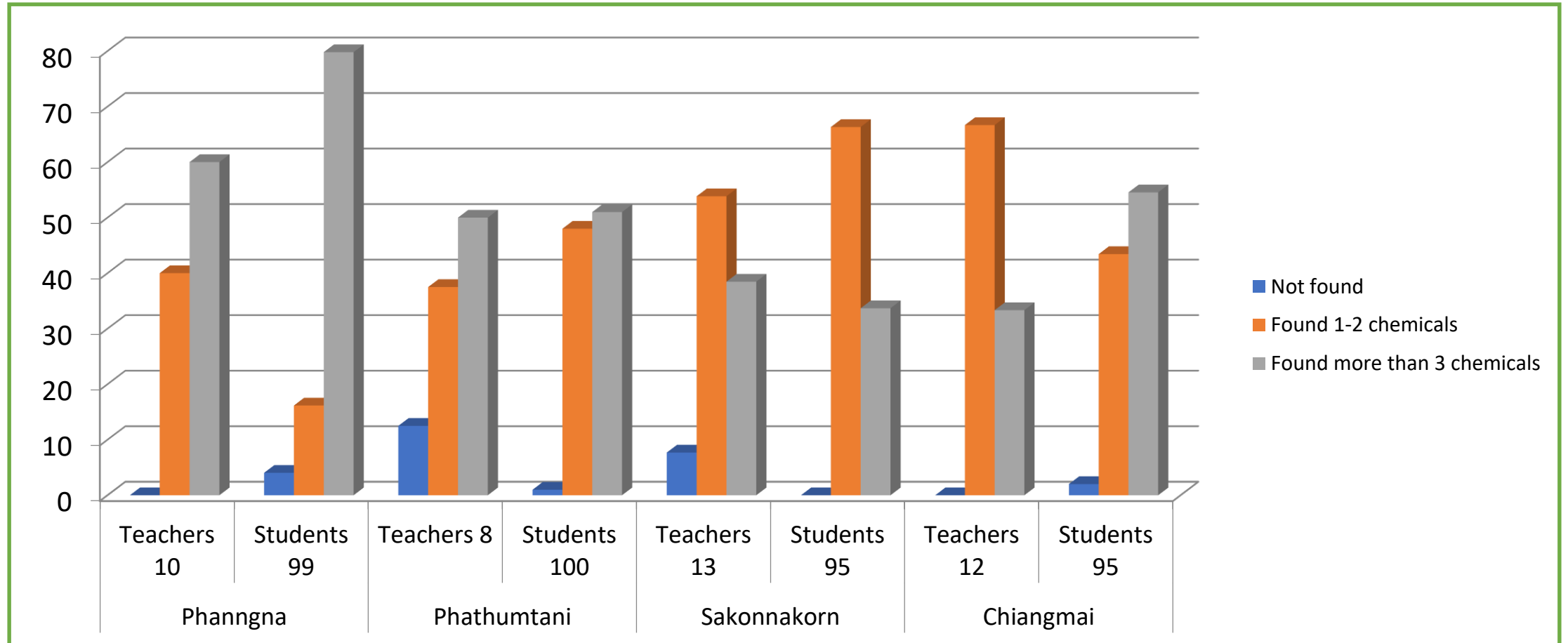
Percent of samples found PY residues, Chiangmai province, 2018



Amount of PY residues in vegetables samples in Chiangmai, 2018



Organophosphate chemicals detected in urine metabolites of students and teachers



Affects from Chlorpyrifos

- Chlorpyrifos affects the human's neuro system,
- May cause learning disabilities, attention deficit hyperactivity disorder (ADHD), autism spectrum disorders, developmental delays, and emotional and behavioral problems
- Pregnant mothers who were pre- and postnatal exposed to Chlorpyrifos, has been linked with developmental disorders in children.
- It also has impacts to learning ability thinking and memorization skills and may impair their basic growth development throughout the rest of their life, delayed mental development, lower intelligence quotient (IQ), and ADHD.

What can we do?

- Systematic reliable surveillance of pesticides residues testing and dissemination of results to public
- Consumer awareness-raising is urgently needed to reduce exposure of the most vulnerable groups, especially pregnant women and children.
- Coordination amongst agriculture, health, education, environment and commerce ministries to educate, develop responsive trainings for students, young farmers and communities to reduce the uses of toxic pesticides and adopt sustainable agricultural practices. These solutions need to be scaled up.
- Further studies on impacts of pesticides is needed but we cannot wait to act.
- National policies for management of pesticides life cycles and to protect vulnerable groups (children and women) and the environment from pesticides exposure.

Thank you

