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He holds a Ph.D. in economics from Harvard University, and specializes in agricultural and food policy analysis, much of it concerned with the Asian and world rice economies. He has spent much of his professional career resident in Southeast Asia, having worked for the Harvard Institute for International Development in Indonesia, the International Rice Research Institute in the Philippines and FAO in Thailand, in addition to working several years at FAO headquarters in Rome.

He has written and edited numerous books and research articles relating to trade and markets, domestic price policy, production and natural resources (fertilizer and water management, climate) and nutrition, and was an editor or co-editor of two recent books on rice: "The Rice Crisis: Markets, Policies and Food Security" and "Rice in the Global Economy: Strategic Research and Policy Issues for Food Security."





# Some thoughts on production economics

South-East Asian agri benchmark Rice Network  
March 18th -22nd, 2013  
Rama Gardens Hotel, Bangkok

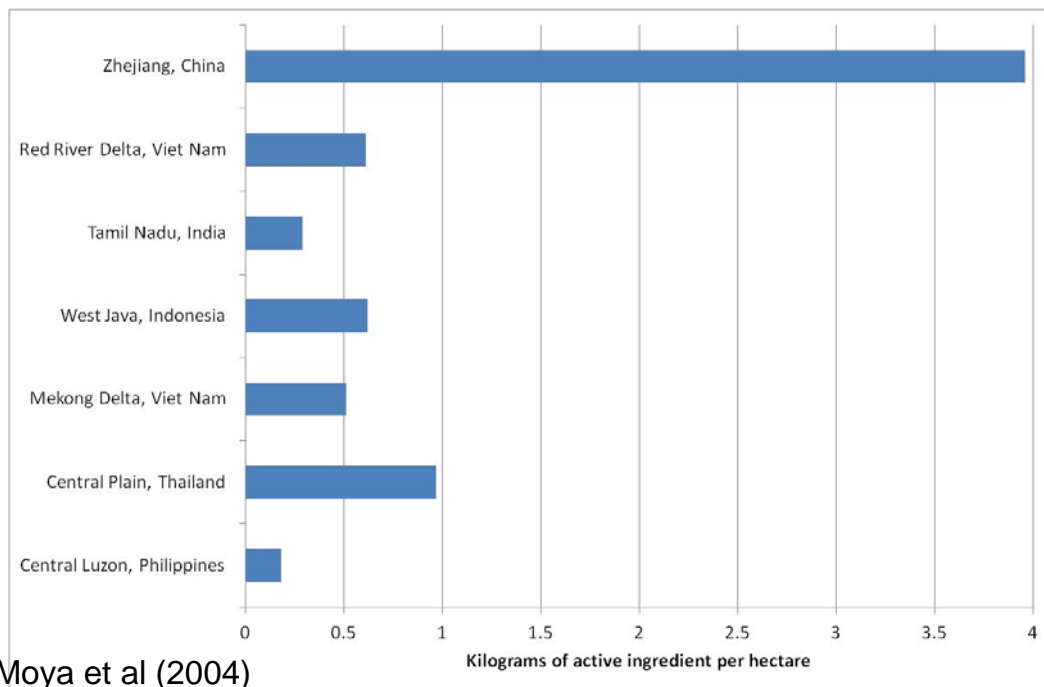
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## Some examples

- It is often helpful for countries to understand their own situation in comparison with others, e.g. levels of pesticide use across countries.
- Levels of fertilizer use: how balanced (or imbalanced) are farmers fertilizer applications? What are the relative levels of fertilizer use across seasons?
- Basic information on the importance of credit is also crucial for general policymaking. How important is it as a cost of production? Does lack of credit affect input use?

## Insecticide use in various rice bowls of Asia, 1999

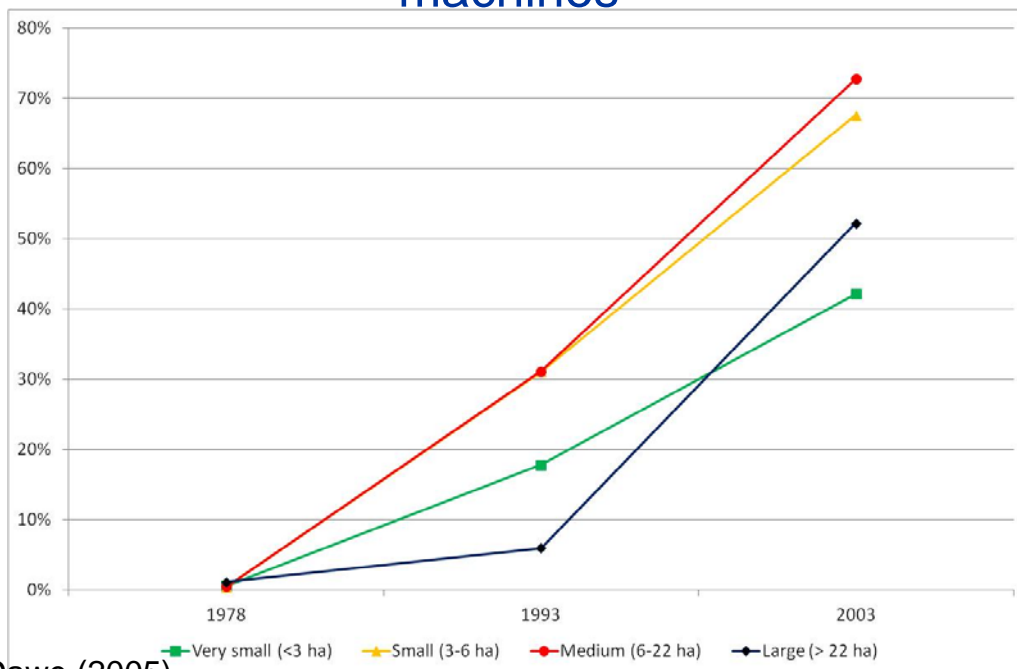


Source: Moya et al (2004)

## Changes over time

- Wages are rising in many countries in the region, and the non-farm economy is growing.
- Mechanization will become increasingly important.

## % of farms in Suphan Buri, Thailand using harvesting machines

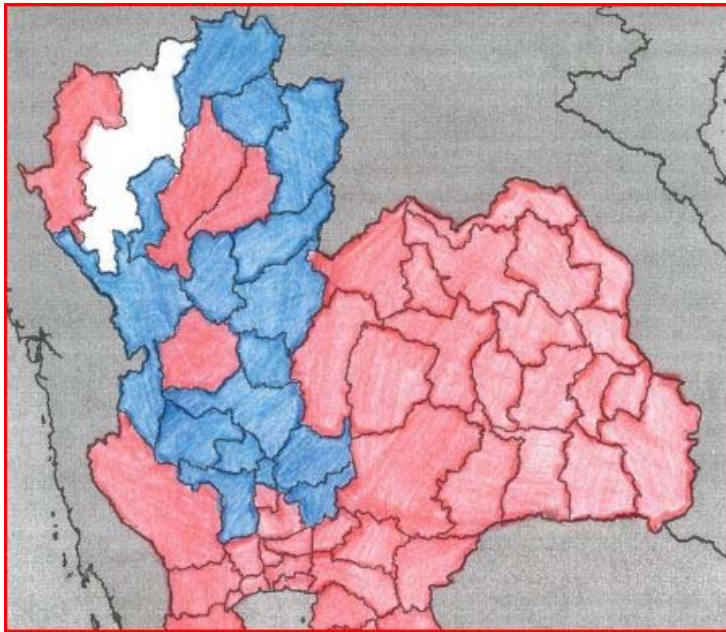


Source: Dawe (2005)

## Does farm size matter?

- Will farm sizes increase as a result? What will be the impact of increased farm size if (when) it occurs?
- Farm sizes are increasing in some parts of the region, even if national average farm sizes are still declining.
- Farm sizes are likely to get larger in the future, but how fast this will happen is an open question.
- Distinguish between ownership and operational farm size, i.e. how active are rental markets?

## Change in farm size by province, Thailand, 1993 - 2003



(Blue indicates increase;  
Red indicates decrease)

Source: Dawe (2005)

## Is bigger better? Or is small beautiful?

- Research has traditionally shown that small farms are more efficient and get higher yields, but is this still true?
  - Small farms may no longer exploit family labor more intensively as the opportunity cost of that labor increases.
- Large farms may be more efficient and get higher yields in the future for any of the following reasons:
  - Some technologies can perhaps be more easily adopted on larger farms (although rental markets can sometimes compensate).
  - More incentives for adoption of new technologies (because farmers with more land are more likely to learn new technologies if they can be applied over a larger area).



## Marketing

- Are there major differences between contract and non-contract farms?
- For many countries, marketing systems can have many problems: lack of infrastructure, old mills, inadequate financial systems, etc. Quantitatively, how much do each of these factors matter? Given relative prices of capital and labor, are some “old” systems actually more efficient than modern ones?



# Thank you for your kind attention