

A map of Southeast Asia is shown in the background. The text is overlaid on the map.

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Commercial Farms in Southeast Asia



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Characteristics of commercial farms in Southeast Asia

- Strongly polarized between large scale growers (>1,000 ha) and small scale growers (<10 ha)
- Most farmers are engaged in commercial farming
- Farming systems are very dynamic and change according to market conditions

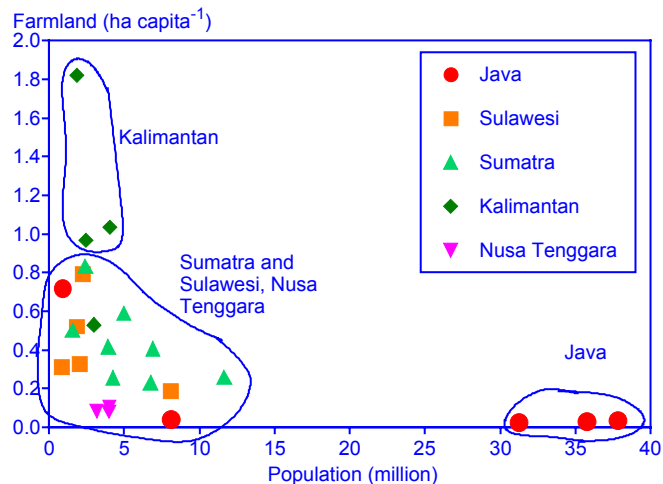
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Contrasts within Southeast Asia

- Large scale agriculture predominates in Malaysia
- Smallholders predominate in Thailand
- Indonesia a mixture of small and large holdings

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Variability in availability of farmland in Indonesia



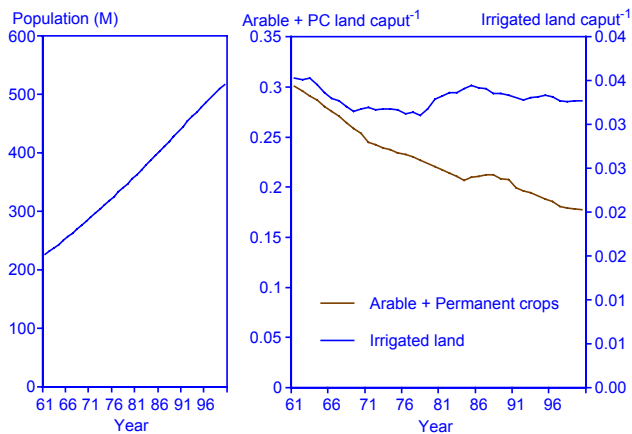
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Effect of markets on development of commercial farming

- Commodity prices
- Price of inputs
- Land availability
- Land prices
- Cost of labor

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Changes in population and land availability



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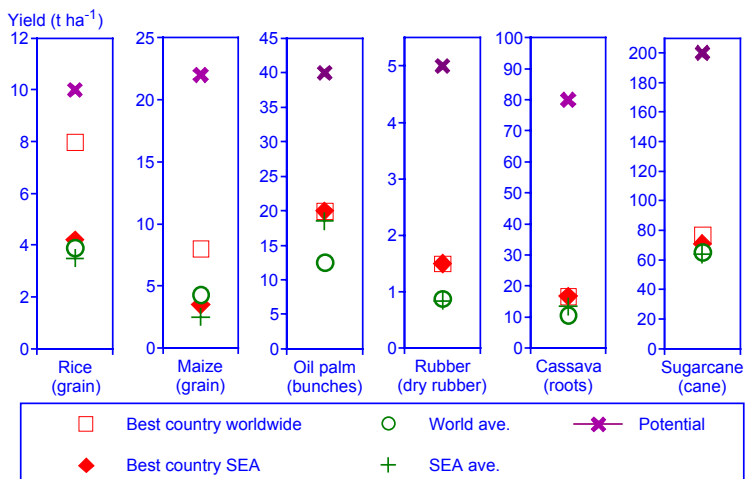
How to provide more food without damaging the environment?



- Small potential for further agricultural and irrigated land expansion.
- Need for intensification on existing agricultural land.
- Low input agriculture drives rainforest depletion?

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Potential and average yields for commercial crops in SE Asia



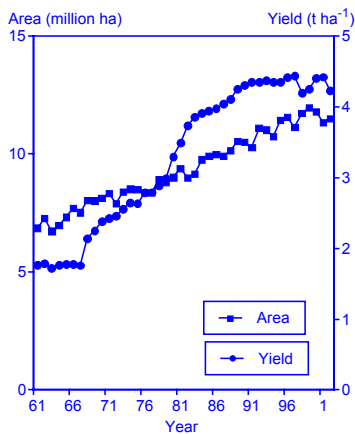
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Six commercial crops in Indonesia



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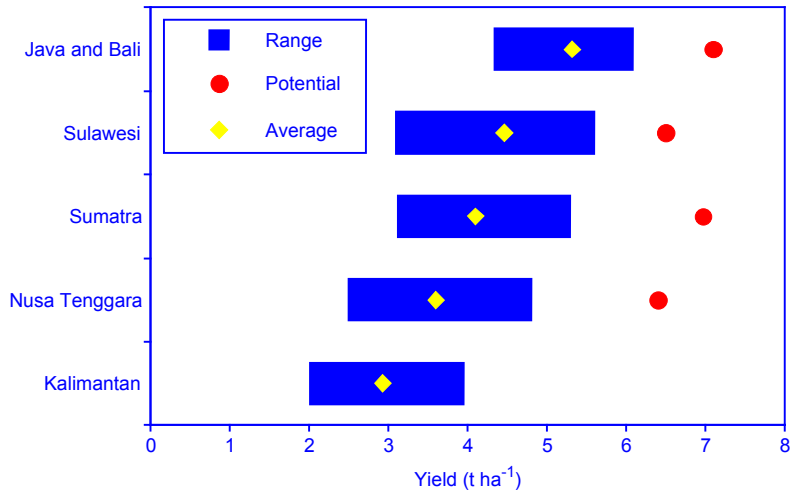
Rice



- Large area and productivity increase since GR
- Yields have reached a plateau partly due to unbalanced fertilizer use
- Irrigated rice area likely to decrease in future

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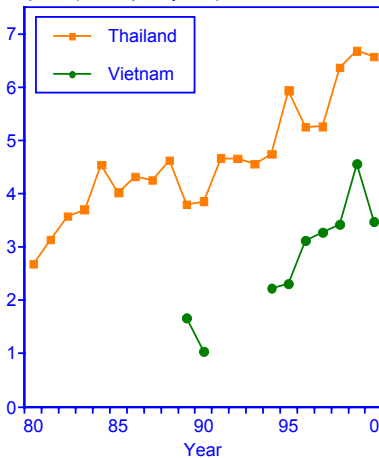
Yield gaps in rice in Indonesia



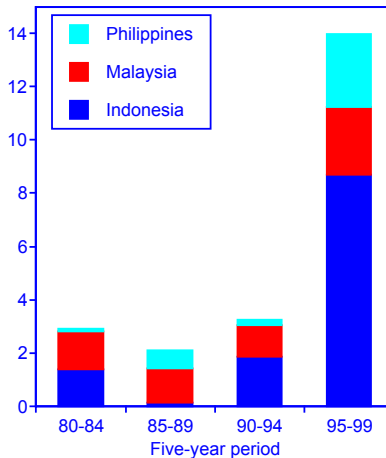
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Exports and imports of rice in Southeast Asia

Exports (milled paddy, M t)

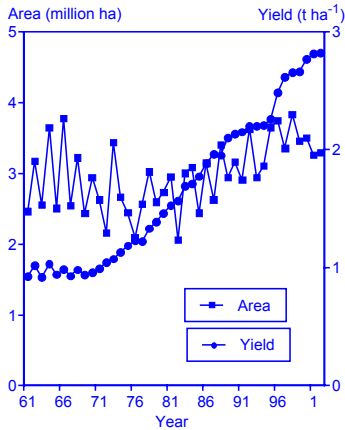


Imports (milled paddy, Mt)



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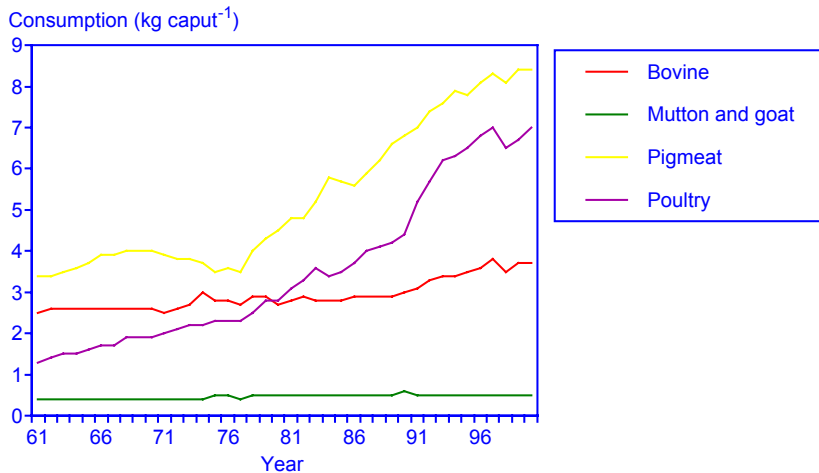
Maize



- Wide fluctuations in area planted due to price volatility
- Continuous increase in yield due to use of hybrids, improved fertilizer use
- Increasing demand for livestock feed

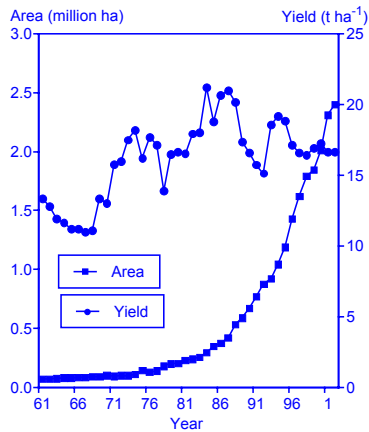
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Growth in demand for meat in Southeast Asia



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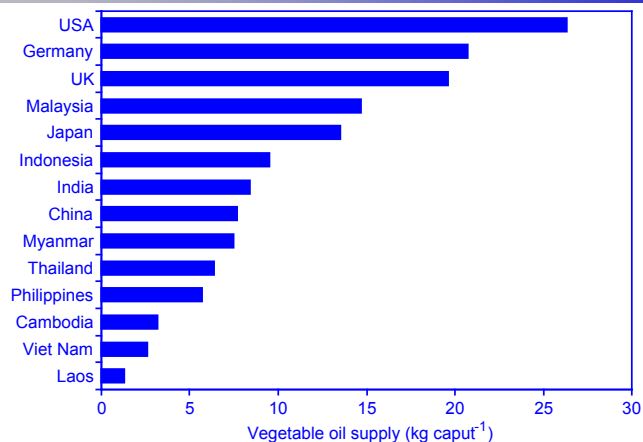
Oil palm



- Rapid expansion due to growth in demand from Europe, India and China
- Emphasis should change from area expansion to yield increase

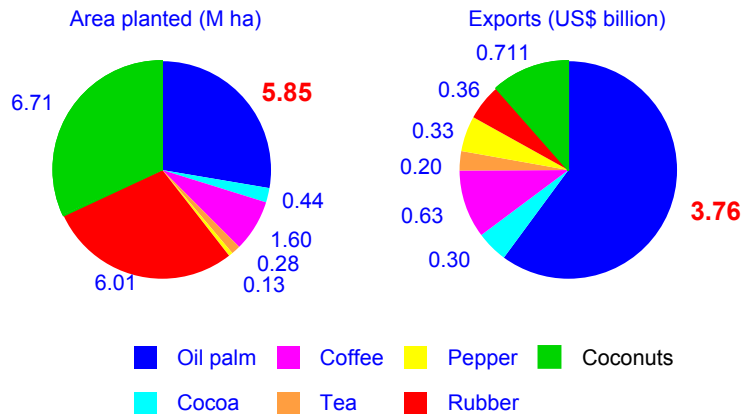
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Consumption of vegetable oil in selected countries



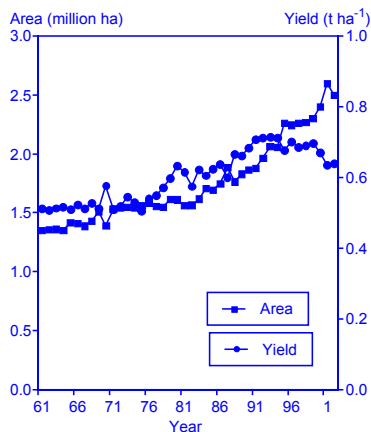
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Area planted and value of tree crop exports in Southeast Asia



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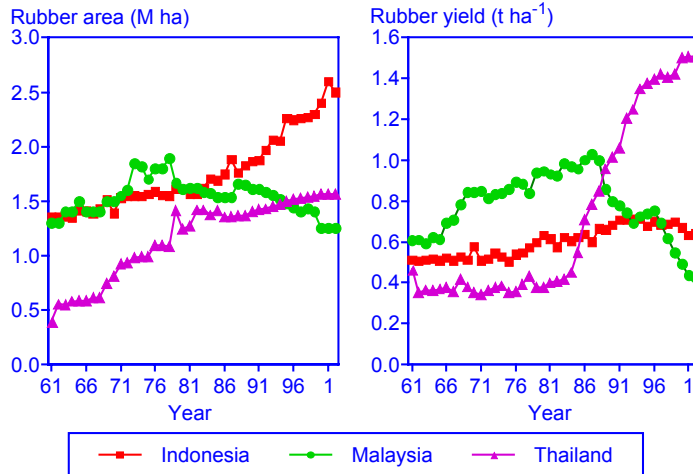
Rubber



- Increase in area planted (major smallholder expansion projects)
- Yields declined since 1990s as plantation producers convert to oil palm

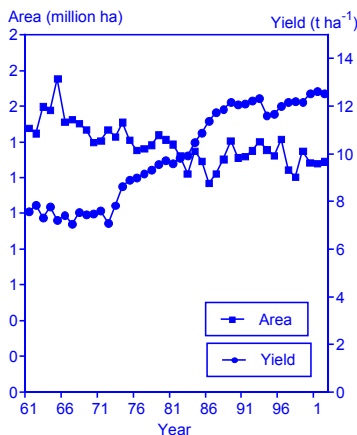
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Area and yield of rubber in Indonesia, Malaysia and Thailand



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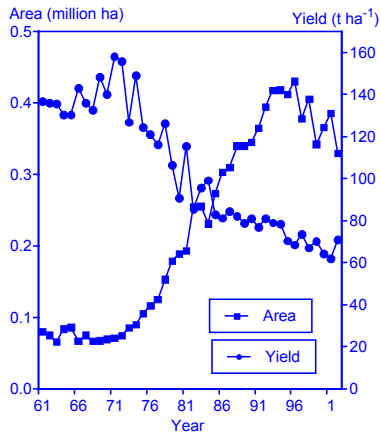
Cassava



- Decrease in area planted
- Increasing importance as raw material in starch industry
- Increased yields due to improved planting material and fertilizer use

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Sugarcane



- Increase in area planted up to 1990 and decline thereafter
- Decreasing yields due to relocation from Java to Outer islands

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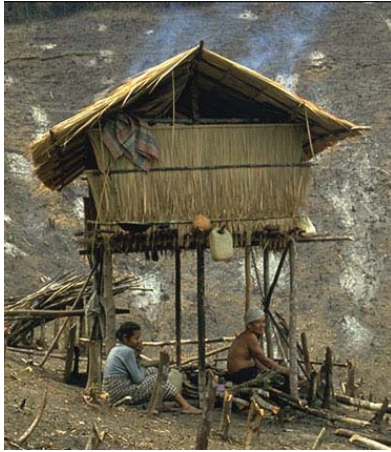
Nutrient exports in crop products



- Nutrients removed in crop products must be replaced by adequate use of mineral fertilizers
- Large amounts of nutrients exported in sugarcane and cassava

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'Farmer first', participatory approaches, bottom up planning?

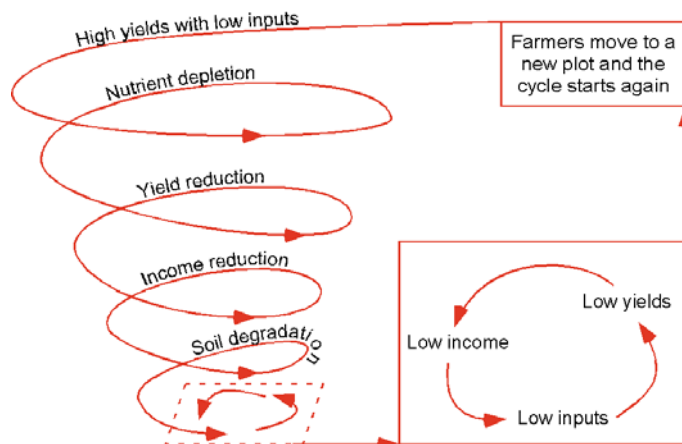


'A man cannot lift himself by his own bootstraps if he has no boots'

Fox, R. L. (1988)

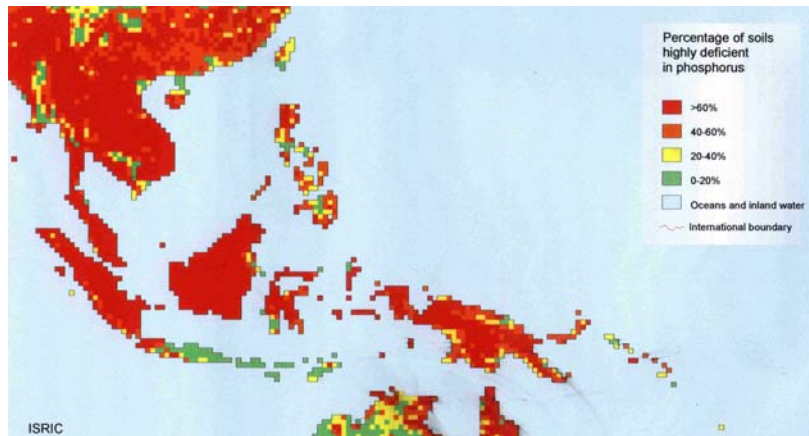
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The downward spiral to the poverty trap



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Phosphorus deficiency in soils in Southeast Asia



Fairhurst *et al.*, (1999)

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Area under acid soils in Southeast Asia

FAO soil group	Approx. area (M ha)	Approx. analogues in soil taxonomy
Fluvisols	18	Fluvents
Gleysols	18	Aquents, Aquepts
Andosols	3	Andisols
Cambisols	43	Orchrepts, Tropepts
Podsols	3	Spodosols
Acrisols	163	Ultisols
Nitisols	15	Ultisols
Ferralsols	15	Oxisols
Histosols	17	Histosols
Total	295	= 64% of Southeast Asia's land area

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Rehabilitation of anthropogenic savannah land



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Hypothesis for soil phosphorus recapitalization in Southeast Asia



Provided soil conservation structures are already in place, a large application of reactive rock phosphate followed by the introduction of improved but adapted germplasm are essential and generic interventions in farming systems development on sloping P deficient and acid upland soils in Asia.

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Low productivity in ruminant livestock



- Poor productivity of livestock due to poor primary productivity in cropping systems
- Improved forages larger amounts of crop residues contribute to ruminant productivity

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Indirect benefits of soil P recapitalization

- Increased biological N₂ fixation
- Increased root length density (soil carbon deposition, improved scavenging for K and Mg)
- Improved water utilization
- Faster canopy establishment (reduced erosion, increased yield)
- Increased response to fertilizer N, K and Mg
- More efficient solar radiation and water use

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Nicholas Stern, the World Bank's Chief Economist considers the wider effects of agriculture subsidies paid in Europe and North America



“It is hypocritical to preach the advantages of trade and markets and then erect obstacles in precisely those markets in which developing countries have a comparative advantage”

“That hypocrisy does not go unnoticed in developing countries. The recent Farm Bill in the United States and the recent agreement in Europe to delay the reform of the Common Agricultural Policy are deeply damaging.”

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World Bank's forecast of the effect of removing subsidies

- Agricultural subsidies in rich countries (\$300 billion/year) suppress world prices and undermine developing country exports
- Subsidies six times total development aid.
- Elimination of subsidies in rich countries would increase global trade in agriculture by 17%,
- Total annual rural income in low and middle income countries would rise by about \$60 billion, or about 6%.
-**fiddling whilst Rome burns?**

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FairTrade sets standards for commodity traders



Guarantees
a **better deal**
for Third World
Producers

- Price covers costs of sustainable production and living.
- Premium that producers can invest in development.
- Advance payments when requested by producers.
- Contracts that allow for long-term planning and sustainable production practices.

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Thank you for your attention!

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