

# Outlook for agricultural and fertilizer demand in Myanmar, Cambodia and Laos

Rod LEFROY

International Center for Tropical Agriculture (CIAT)

Regional Coordinator for CIAT in Asia

Vientiane, Hanoi, Bangkok



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## Outline

- **Country profiles** – compared to neighbours
  - Climate, Land Resources, ...
- **Changing agricultural systems**
- **Prospects**

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## Profiles of Myanmar, Cambodia, and Lao PDR with a comparison to some neighbours



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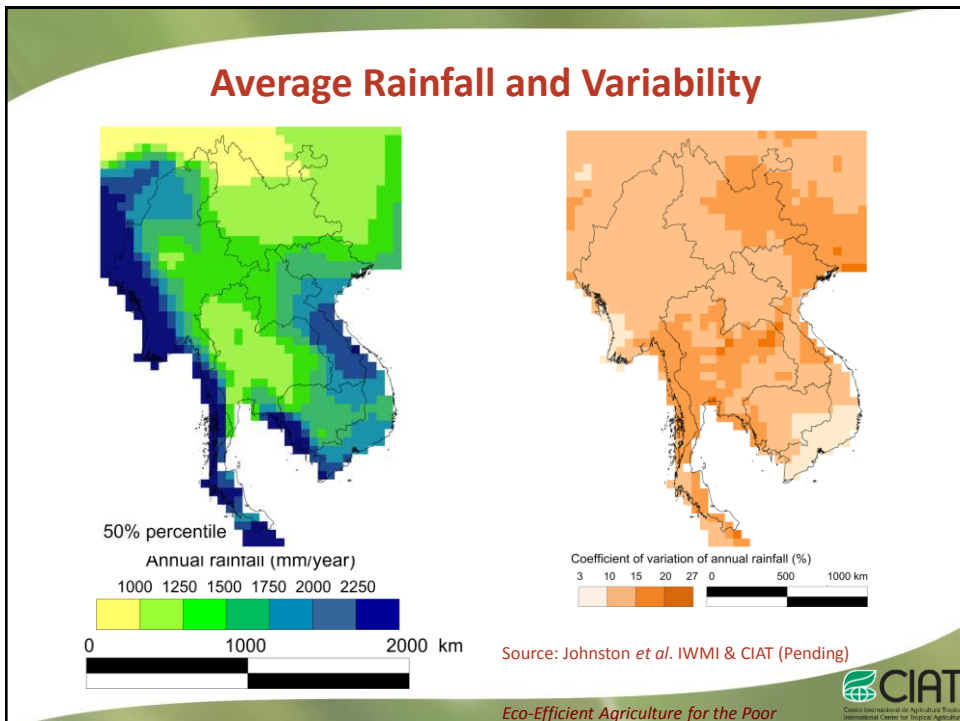
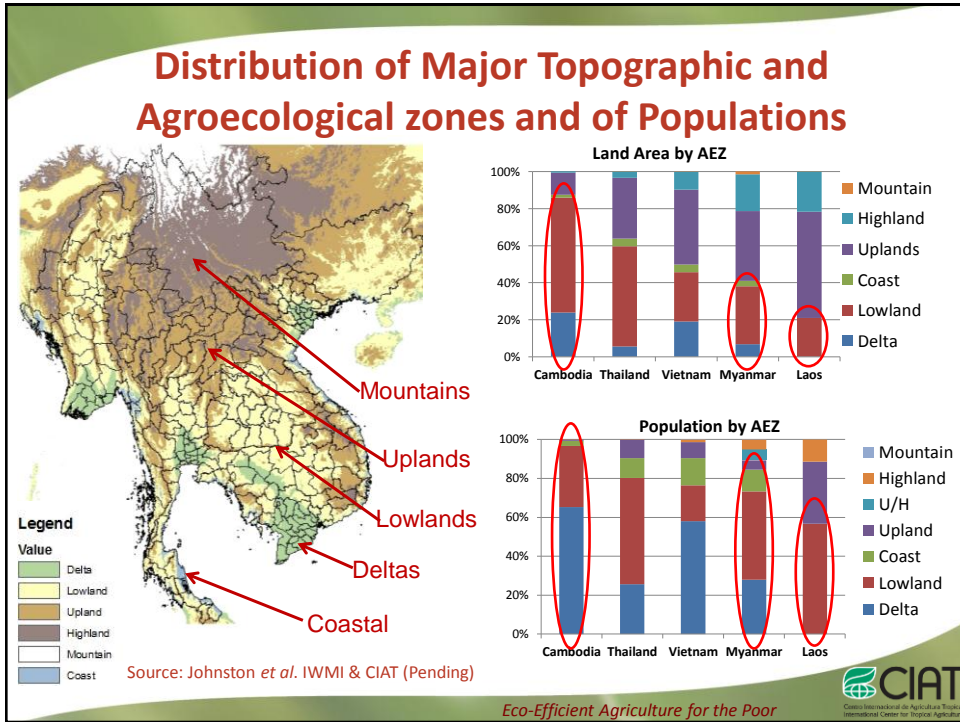
## Profiles of Myanmar, Cambodia, and Lao PDR with a comparison to some neighbours

	HDI	Population (million)	Birth rate (%)	Land Area (million ha)	GDP (US\$ billion)	GDP growth (ann. %)
	2009	2010	2009		2010	ave. '01-'09
Myanmar	0.444	48.0	1.8	65.4	-	13.0*
Cambodia	0.489	14.1	2.3	17.7	11.3	8.0
Laos	0.490	6.2	2.3	23.1	7.5	7.1
Vietnam	0.566	86.9	1.7	31.1	103.6	7.1
Thailand	0.648	69.1	1.2	51.1	318.8	4.3

\*2001-06

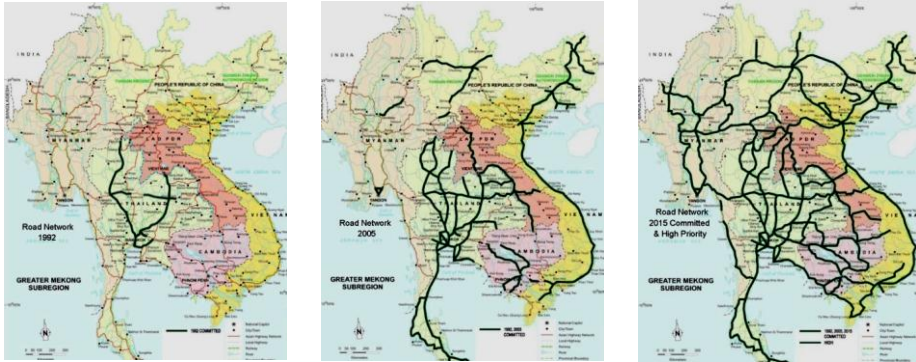
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# Accessibility

## Development of Road Networks (1992 – 2005 – 2015)

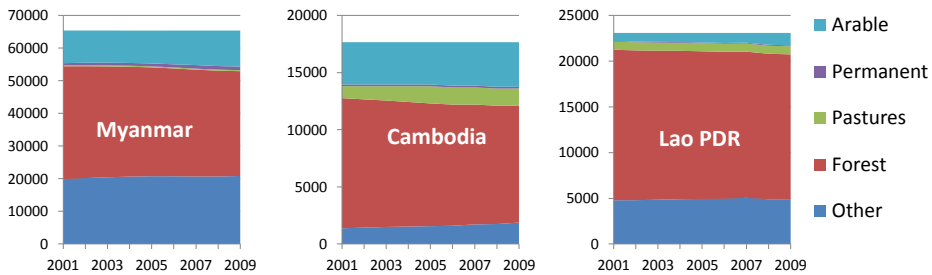


Source: ADB

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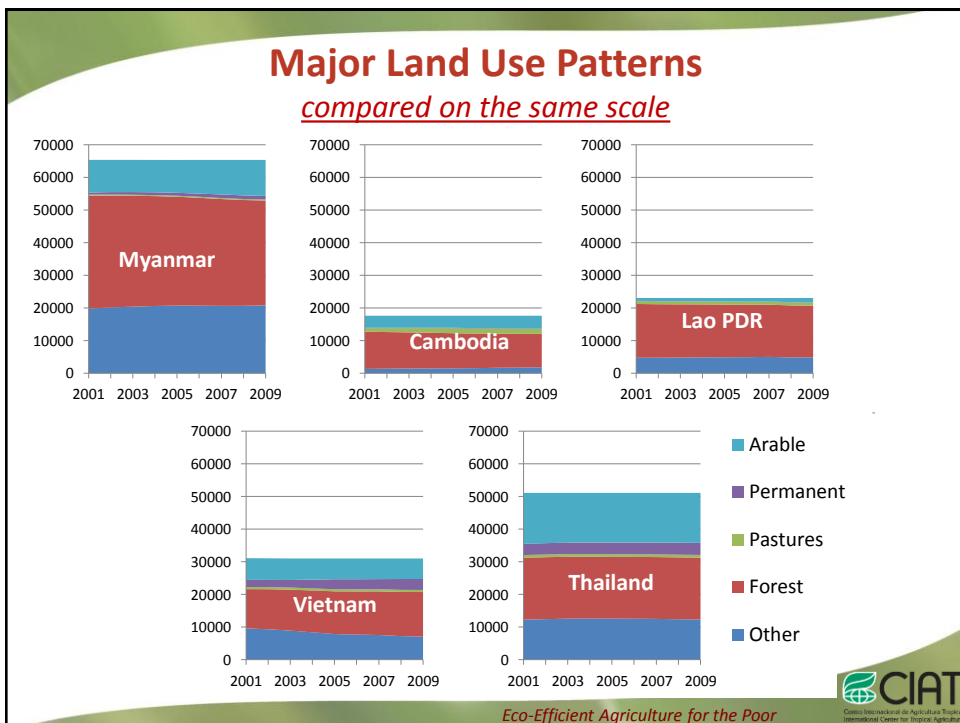
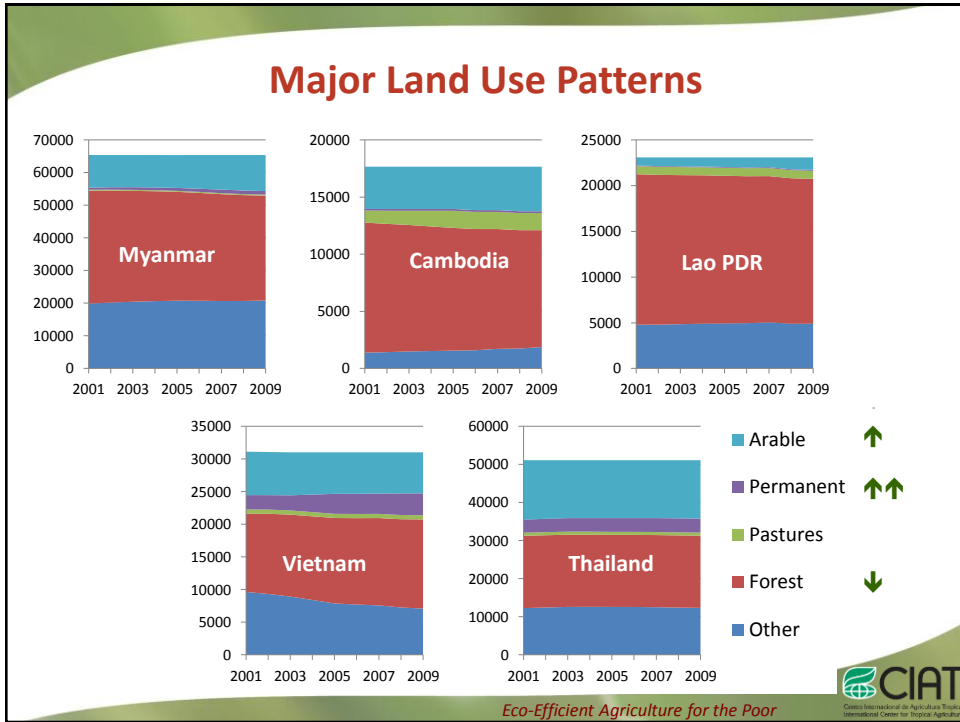
## Major Land Use Patterns



- **Very dependent on:**
  - Definitions of categories (Forest, Pastures, Other, etc.)
  - Data quality
- **Does indicate relatively small proportion that is cropped**

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## Fertilizer use and trends

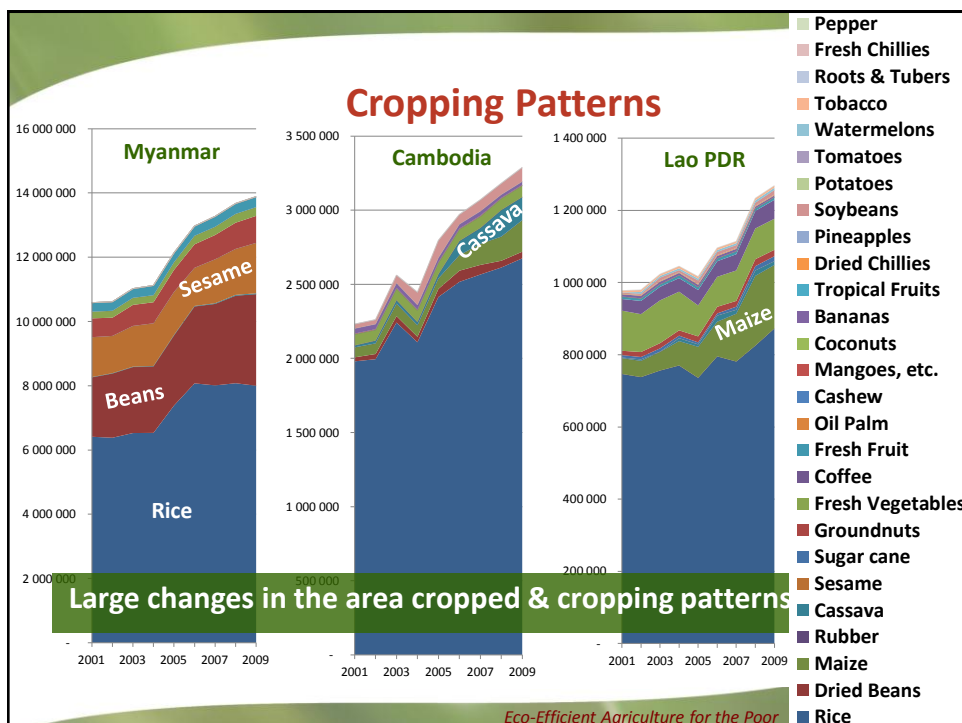
	Nitrogen Fertilizers (t N)		Phosphate Fertilizers (t P <sub>2</sub> O <sub>5</sub> )		Potash Fertilizers (t K <sub>2</sub> O)	
	2002	2009	2002	2009	2002	2009
Myanmar	32,292	50,692	8,469	4,538	1,548	4,400
Cambodia	7,763	19,262	12,829	7,829	963	749
Laos	-	-	-	-	-	-
Vietnam	1,150,277	1,518,178	511,516	689,486	350,969	319,086
Thailand	1,018,849	1,491,424	408,150	255,049	273,832	167,644

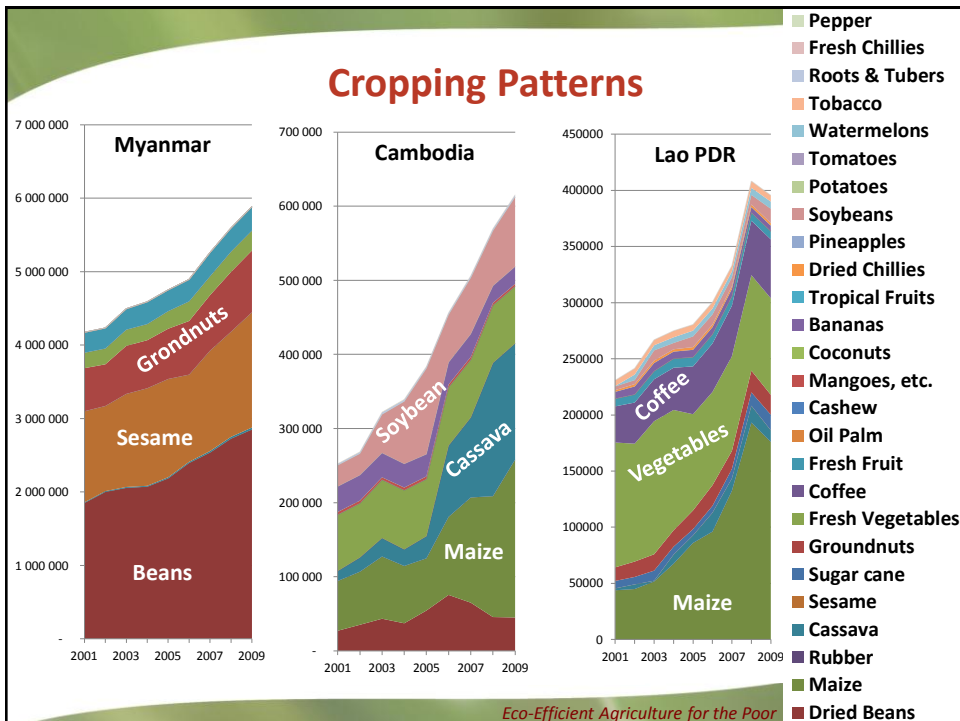
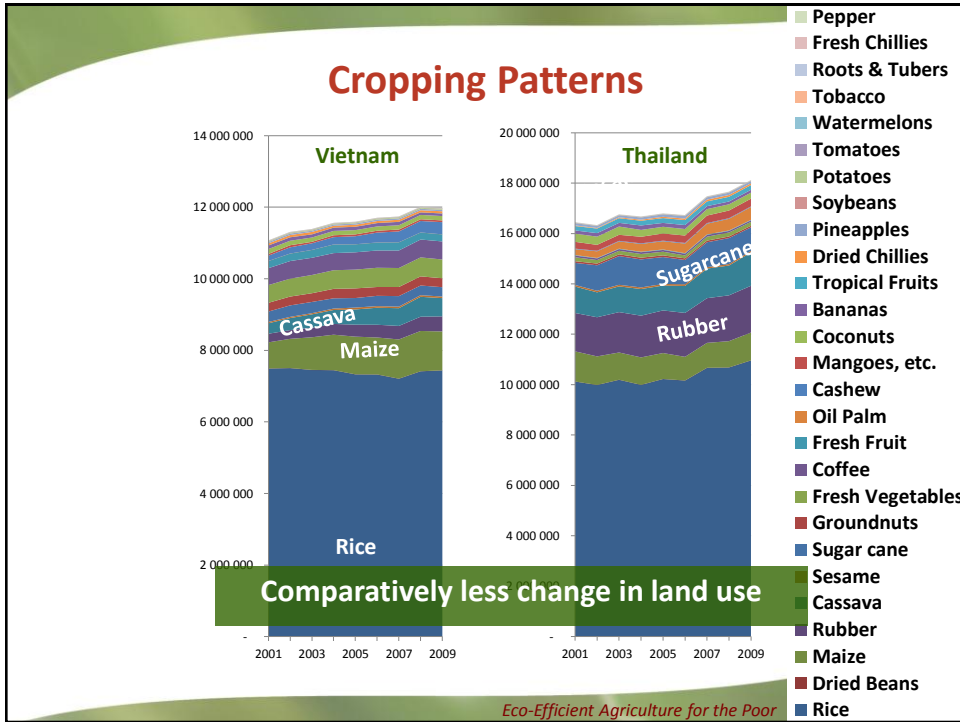
Source: FAOSTAT

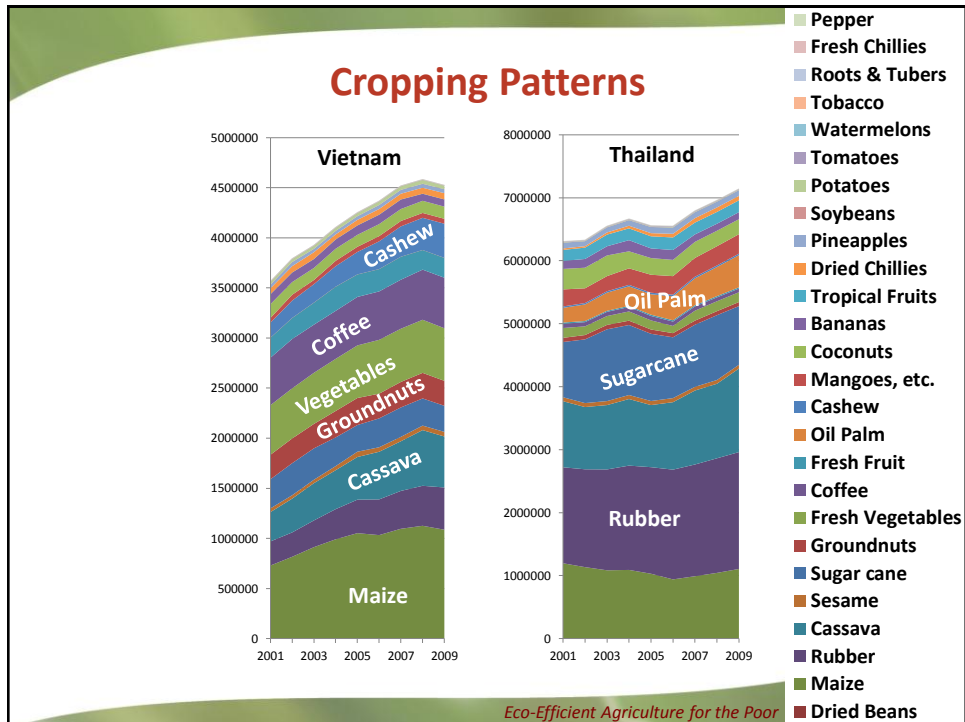
Trends driven by: increased annual cropping  
increased permanent cropping



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### Changes in Cropping Patterns

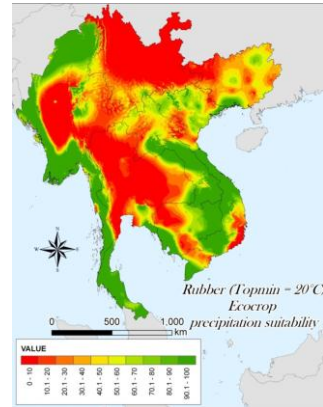
- **Rice:** Cambodia, Myanmar, Laos
- **Maize:** Laos, Cambodia, Vietnam
- **Cassava:** Cambodia, Laos, Myanmar, Vietnam, Thailand
- **Sugarcane:** Laos
- **Coffee:** Laos
- **Sesame:** Myanmar, Vietnam
- **Beans:** Myanmar
- **Rubber:** Vietnam, Thailand
- **Oil Palm:** Thailand



## Changes in Cropping Patterns

### In contrast to the statistics:

- Large increases in **Rubber** planting in Cambodia, Lao PDR, and Myanmar (as well as elsewhere) driven by high prices and projected demand
- Increased production in areas not particularly well suited to rubber climatically



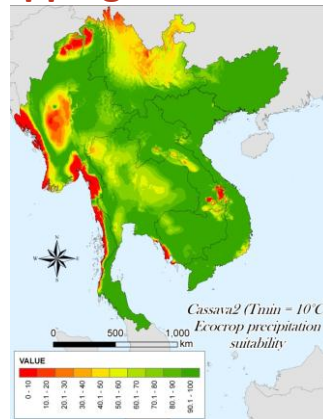
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## Changes in Cassava Cropping

### In addition to the statistics:

- Vietnam: Officially approx. 550,000ha  
May be closer to 800,000ha
- Cambodia: 30,000 ha in 2005  
150,000 ha in 2009  
>300,000 ha in 2010
- Large increases in Laos and Myanmar
- Yields doubling as new varieties being adopted
- Need to match improved varieties with improved agronomy – intercropping, soil erosion control, and fertilizer use
- Returns on fertilizer up to \$6 for each \$1 invested



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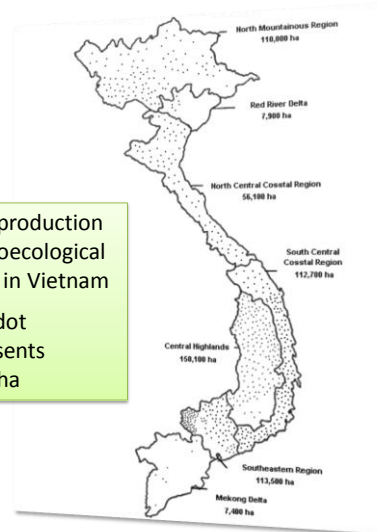
## Cassava in Vietnam

### 2000 to 2010

- Area:  
237,600 to 560,400 ha
- Yield:  
8.36 t/ha to 16.90 t/ ha
- Production:  
1.99 to 9.45 million t
- Currently: 70% exported; 30% used domestically
- Processing capacity:  
2.4-3.8 mill. t roots/year
- 6 ethanol refineries soon:  
550 million L/year  
Will require:  $\approx$ 34% production  
 $\approx$  50% exports

2009 production  
in agroecological  
zones in Vietnam

Each dot  
represents  
1000 ha



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## Land Use Change and Fertilizer use in Myanmar, Cambodia, and Laos

**Laos:** Extremely low use currently  
Government promotes the use of organic fertilizers

**Expansion of Annual Cropping:**  
Strong potential for increased use of fertilizer,  
especially when linked to strong markets  
- Cassava, Maize ... Rice

**Expansion of Permanent Cropping:**  
Strong potential for increased use of fertilizer  
- Oil palm, Sugarcane, Rubber,

**Expansion of livestock:**  
Slow move into fertilizer management of forages and  
justification of fertilizing crops for residues

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