GOOD AGRICULTURE PRACTICE AS DATA SOURCE FOR LCIs ON FOOD AGRICULTURE PRODUCE

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MALAYSIA IN GENERAL

- Land area: 329,749 square km
- Climate: Tropical
- GDP: 5.3 (2006)
- Main economic sectors: Industrial, Agricultural, Eco-tourism
Major Export For The Year 2005

- E&E (47.6)
- CP (5.9)
- Chemicals (4.7)
- Palm oil (4.1)
- Refinery pet prod. (4.0)
- LNG (3.9)
- Machinery (3.5)
- Wood product (2.7)
- Manufac. Metal (2.3)
- Equipment (2.3)
- Textile (1.9)
- Others (17.1)
Agriculture land use = 6.02 ha

Malaysian Agriculture Pattern

- Industrial commodities
  - Oil palm
  - Forestry and logging
  - Rubber and cocoa

- Food commodities
  - Fisheries
  - Livestock
  - Paddy
  - Other agriculture
    (coconut, vegetable, fruits, tobacco and pepper)
Food Commodities

- Food commodities account for 16% of total agriculture exports
- 12.5% of agriculture land use for food commodities compared to oil palm plantation 63.4%.
- Fruits and vegetables are exported (each contributing ~ 6% of total food exports in 2005).
- Productivity:
  - Pineapple 21.1 metric tones/hectare/cycle
  - Fruits 4.8 metric tones/hectare/season
  - Vegetables 12.1 metric tones/hectare/cycle

Note: Cycle is variable, dependent on the type of vegetables / fruits.

Good Agriculture Practice (GAP)

Farm Accreditation Scheme of Malaysia (SALM)
Introduce in year 2002 by the Department of Agriculture (DOA)

Three major aspects evaluated under SALM:
- Environmental setting of farm
- Verification of farm practices
- Safety of farm products
Farm Accreditation Scheme of Malaysia (SALM)

Under these aspects, 21 elements evaluated, of which 17 types of records need to be maintained.

The information available from SALM-certified farms are on:
- Land use,
- Soil types,
- Source and quality of irrigation water,
- Soil preparation including soil fumigation,
- Fertilizer programme,
- Harvesting techniques and field transport,
- Post harvest treatment and packaging and
- Farm waste disposal.

Environmental impact of agriculture product

- Eutrophication occur when limiting nutrient in water is supplied. Fresh water, phosphate is limiting nutrient and salt water is nitrogen as limiting nutrient.
- Excessive use of fertilizers and poor manure management mean that nutrient released from farm to air, soil and waterways.
- Greenhouse gases normally methane byproduct of ruminants (cows, goats, sheep etc) of their digestion.
- Acidification due to the manure not properly managed, cause ammonia can lead to acidification of soil.
- Human toxicity.
Environmental issues in agriculture production

- Haze due to open burning agriculture waste.
- Contaminated river water with pesticide, herbicide and fertilizer
- Land erosion due to cleaning of surface
- Acidification of soil (loss fertility)
- Biomass waste

**SYSTEM BOUNDARY OF LCI FOR PRODUCTION OF AGRICULTURE PRODUCT**

- Electricity Production
- Diesel Production
- Poly bags Production
- Agrochemicals Production
- Fertiliser Production
- Transport Sector
- Water Supply
- Other systems

Product flows:
- Agriculture Product → Packaging
- Farming Activities
- Waste
- Emissions
- Transportation
THANK YOU
FOR YOUR KIND ATTENTION