Supply & Utilization Accounts (SUA) for Agriculture Commodities

Presented by:

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OUTLINE

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2. CONCEPT & DEFINITION OF SUA
3. ELEMENTS OF SUA
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5. SELECTION OF ITEMS
6. FORMULA
   - Self-Sufficiency Ratio (SSR)
   - Import Dependency Ratio (IDR)
   - Per Capita Consumption (PCC)

Background

- During Ninth Malaysia Plan (2006-2010), the agriculture sector is revitalized to become the third engine of economic growth.
- Development of SUA in Malaysia begin 2008.
- Attend learning session at Korea National Statistical Office (2008) and Statistics New Zealand (2009).
- Conducted a Seminar on Supply Utilization Accounts and Agricultural Indicators at Putrajaya (October 2009) and was trained by Mr. Romeo S. Recide (Bureau Of Agricultural Statistics, Philippines).
- Concept papers on SUA has been prepared.
- Committee group has been set up:
  - ✓ Technical Committee of SUA; and
  - ✓ Steering Committee of SUA

Concept & Definition

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- SUA is one of statistical framework that present a comprehensive picture on the pattern of country's supply and utilization for food commodities in agriculture.
  - ✓ Food and Agriculture Organization (FAO) defined SUA as:
    - ➢ A balancing account that present statistics on supply and utilization which are kept physically together to allow the matching of food availability with food used.

- Main reference in preparation of SUA:
  - ✓ Food Balance Sheet - A Handbook by Food and Organization of the United Nations (FAO), Rome, 2001.

Concept & Definition (cont'd)

Jabatan Perangkaan
MALAYSIA

- The objectives of SUA :

  i. Provides users with a framework with physical accounting of agricultural commodities;

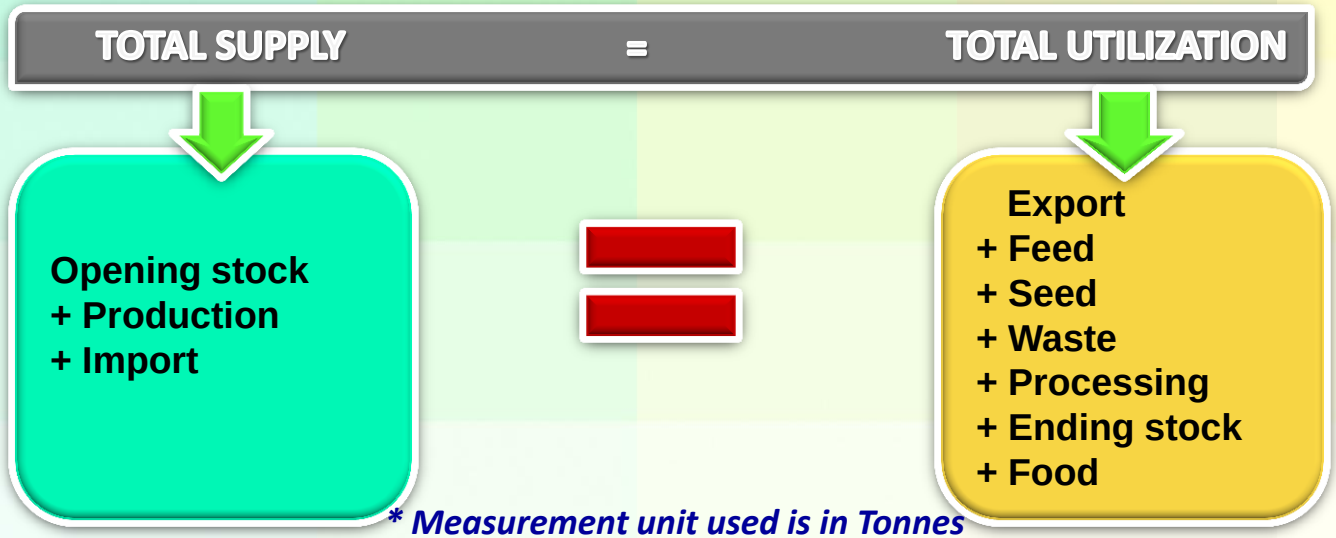
  ii. Helping in the consistency checking of commodity data; and

  iii. As a basis in computing self-sufficiency ratio (SSR), import dependency ratio (IDR) and per capita consumption (PCC).

Elements of SUA

- Elements of SUA:
  - i. Supply - Opening stock, production, import
  - ii. Utilization - Exports, feed, seed, waste, processing, ending stock, food

- The sum of supply elements is equal to the sum of utilization elements.



** Measurement unit used is in Tonnes*

Elements of SUA - Supply

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OPENING STOCK

Quantity of commodity available at the beginning of the reference period

PRODUCTION

Total domestic production that take place during the reference period

IMPORT

Movements of commodity into the country

Elements of SUA – Utilization

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EXPORT

Movement of commodity out of the country

SEED

The amount of commodity allotted for the purpose of production e.g: planting, breeding, hatching

FEED

The amount of commodity allotted for animals during the reference period

WASTE

The amount of commodity lost/damage during the processing, storage or transporting

Elements of SUA – Utilization (cont'd)

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PROCESSING

Amount of commodity used in the processing of food

ENDING STOCK

Quantity of commodity available at the beginning of the reference period

FOOD

Amount of commodity available in its original form for human consumption

** Food is reminder/residual that is derived after all the utilization elements are taken into account*

Komoditi *Commodity*	
Pembekalan (tan metrik) *Supply (tonnes)*	63,230.3
Pengeluaran[1] *Production*	36,315.0
Import *Imports*	26,915.3
Penggunaan (tan metrik) *Utilization (tonnes)*	63,230.3
Eksport *Exports*	5,111.0
Benih *Seed*	254.2
Makanan ternakan *Feed*	-
Kerugian *Waste*	2,906.0
Prosesan *Processing*	18,153.0
Makanan *Food*	36,806.2

Total Supply

Food = 63,230.3 - 26,424.2

= 36,806.2

Sum of exports, seeds, waste, processing

Food

Sources of Data

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DATA	SOURCES
1. Production	Department of Agriculture (DOA)
	Department of Veterinary Services (DVS)
	Department of Fisheries (DOF)
2. Imports/Exports	External Trade Statistics Division
3. Seeds, Feeds, Wastes	Using conversation rate from Philippines and Indonesia
4. Processing	Industrial Production and Construction Statistics Division
5. Population	Population and Demographic Statistics Division

Selection of Item

- The selection of items are based on the importance of SUA in:
  i. Potraying the trend of supply and utilization of the country's food resources;
  ii. Monitoring the status of national food security; and
  iii. Analyzing and designing agricultural agrofood policy.

- Criteria on the selection of items:
  i. Staple food that consumed by majority of people in the country;
  ii. The availability and time series of data.

Selection of Item (cont'd)

- The coverage:
  - ✓ Crops
  - ✓ Livestock
  - ✓ Fisheries
- The listed items under National Agro-Food Policy (NAP).
- The selection of items agreed by Technical Committee of SUA and approved by Steering Committee of SUA.

Formula of SSR, IDR & PCC

- SUA can be used in computing agricultural indicators:
  i. Self-sufficiency ratio (SSR)
  ii. Import dependency ratio (IDR)
  iii. Per capita consumption (PCC)

- The formula used in computing SSR, IDR and PCC is based on formula that recommended by FAO

Self-Sufficiency Ratio (SSR)

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DESCRIPTION

- To calculate the extent to which the supply of agricultural commodities in the country meet the domestic needs of the country

FORMULA

$$SSR = \frac{\text{Production}}{(\text{Production} + \text{Imports} \pm \text{Stok}) - \text{Exports}} \times 100\%$$

- Unit of measurement = (%)
- SSR < 100% = Shows the supply of agricultural commodities in the country is still not sufficient to meet the domestic needs of the country.
- SSR $\geq$ 100% = Shows the supply of agricultural commodities in the country is sufficient to meet the domestic needs of the country.

Import Dependency Ratio (IDR)

Jabatan Perangkaan
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DESCRIPTION

- To calculate how much proportion the supply of agriculture commodities comes from importation

FORMULA

$$IDR = \frac{\text{Import}}{\text{(Production + Imports } \pm \text{ Stok) – Exports}} \times 100\%$$

- Unit of measurement = (%)
- IDR < 100% = Shows the supply of agricultural commodities is less dependence on import to meet the domestic needs of the country.
- IDR $\geq$ 100% = Shows the supply of agricultural commodities is more dependence on import to meet the domestic needs of the country.

Per Capita Consumption (PCC)

Jabatan Perangkaan
MALAYSIA

DESCRIPTION

- To calculate how much the food has been consumed by each person during the period

FORMULA

$$PCC = \frac{\text{Food}}{\sum \text{Population}} \text{ X 1000 Kg}$$

- Unit of measurement = Kg/year

* SUA table

Jadual 14: Akaun pembekalan dan penggunaan bagi cili, Malaysia, 2009-2013

Table 14: Supply and utilization accounts for chilli, Malaysia, 2009-2013

Komoditi *Commodity*	2009	2010	2011	2012	2013
Pembekalan (tan metrik) *Supply (tonnes)*	63,230.3	61,769.1	62,519.3	77,398.7	97,978.0
Pengeluaran[1] *Production*	36,315.0	30,846.0	29,645.0	41,489.0	61,654.0
Import *Imports*	26,915.3	30,923.1	32,874.3	35,909.7	36,324.0
Penggunaan (tan metrik) *Utilization (tonnes)*	63,230.3	61,769.1	62,519.3	77,398.7	97,978.0
Eksport *Exports*	5,111.0	5,826.7	5,804.0	4,110.4	4,052.1
Benih *Seed*	254.2	215.9	207.5	290.4	431.6
Makanan ternakan *Feed*	-	-	-	-	-
Kerugian *Waste*	2,906.0	2,797.1	2,835.8	3,664.4	4,696.3
Prosesan *Processing*	18,153.0	20,341.0	20,622.0	11,421.4	14,637.6[p]
Makanan *Food*	36,806.2	32,588.4	33,050.0	57,912.1	74,160.4

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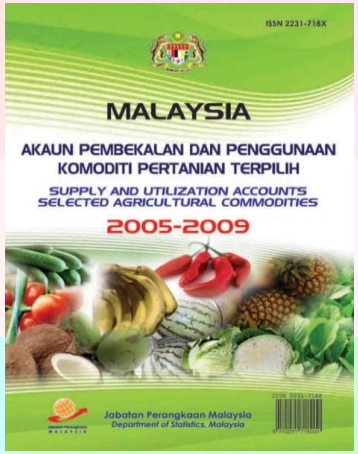
Penduduk ('000)	**28,081.5**	**28,588.6**	**29,062.0**	**29,510.0**	**29,915.3**
Penggunaan per kapita (kg/thn) *Per capita consumption (kg/yr)*	**1.3**	**1.1**	**1.1**	**2.0**	**2.5**
Kadar sara diri (%) *Self-sufficiency ratio (%)*	**62.5**	**55.1**	**52.3**	**56.6**	**65.6**
Kadar kebergantungan import (%) *Import dependency ratio (%)*	**46.3**	**55.3**	**58.0**	**49.0**	**38.7**

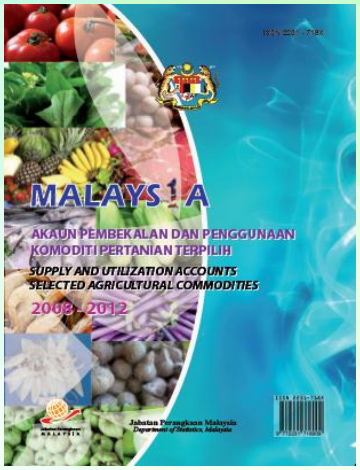
PCC

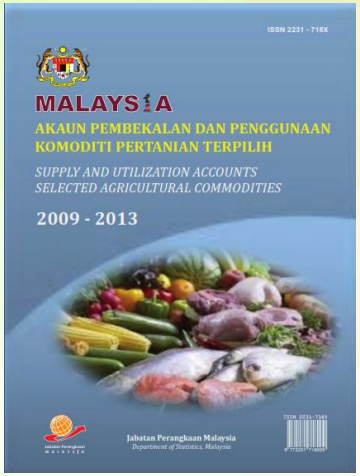
SSR

IDR

- **Five (5) publication of SUA has been released:**







- Summary on number of items by sub-sector and publication.

SUB SECTOR	SUA (2005-2009)	SUA (2006-2010)	SUA (2007-2011)	SUA (2008-2012)	SUA (2009-2013)	SUA (2010-2014)
Crops	9	19	19	20	20	21
Livestock	-	4	4	5	5	5
Fisheries	-	-	5	5	5	5
TOTAL	**9**	**23**	**28**	**30**	**30**	**31**

- **For 2014, 30 agriculture commodities was covered:**

CROPS		LIVESTOCK
Rice	Guava	Beef
Banana	Round cabbage	Mutton
Watermelon	Tomato	Pork
Pineapple	Chilli	Chicken/duck egg
Coconut	Cucumber	Poultry meat
Manggo	Mustard	**FISHERIES**
Rambutan	Brinjal	Tuna
Durian	Long bean	Mackerel
Manggosteen	Lady's finger	Shrimp
Jackfruit	Spinach	Crab
Sweet corn		Cuttlefish


THANK YOU
Very Much!