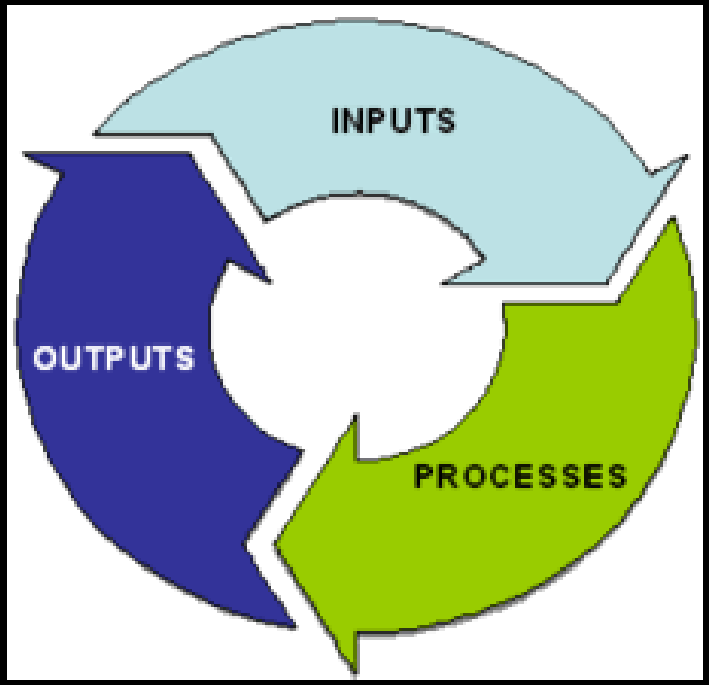
PART TWO

Systems Model and Farming

What is the Systems Model?

- **Systems model** is a model of looking at any system (farming, oil production, tire factory, schooling) and recognizing there are inputs, processes, and outputs.



Inputs

- **Inputs are things that are put into the system.**

  ~ Ex: in farming there are human inputs (labour, equipment, fertilizer and irrigation systems) and natural inputs (rain, sunshine, heat and soil type).

- Given a case study of a farming operation you should be able to briefly describe (inputs).
  - the workers and their source.
  - the kinds of tools and equipment used.
  - the infrastructure.
  - the capital invested in the operation.
  - the types of seeds or young livestock used.
  - the nature of the land.
  - the quality of the soil.
  - climatic conditions.

Processes

- **Processes are procedures that occur in the system to convert the inputs to outputs.**

~ Ex: in vegetable farming the processes may include, sowing seed, watering, fertilizing, weeding, aerating, harvesting.

Processes

- Given a case study of a farming operation you should be able to briefly examine (processes):

  - the division of labour; who does what?
  - the spatial movement of people and animals; Are the workers migratory? Are the animals moved between grazing lands?
  - how the crops are planted; crop rotation, contour plowing, is any land left fallow?
  - irrigation and soil maintenance practices; is there a need for watering? how frequently do they fertilize? What do they fertilize with?
  - the annual cycle of farming activities
  - how farming activities are spatially arranged

Outputs

- **Outputs refer to those things that are produced by the system.**

~ Ex: in cattle farming the outputs could include beef and raw hide whereas vegetable farm outputs could include carrots, potatoes and cabbage.

- Given a case study of a farming operation you should be able to briefly describe (outputs):

  - the kinds of products they obtain the operation for market.
  - How they market these products.

Farming Chart

Inputs		Processes	Outputs
Physical	Human		

Case Study

- **<u>A Mixed-Vegetable Farm In Canada</u>**
- Page 145-146
- Questions
  3, 4, & 5

A mixed-vegetable farm in Canada

1. Which type of crop does Ferguson **not** harvest?
   A. Carrots
   B. Rutabagas
   C. Pumpkin
   D. Cabbage

2. Which type of crop has Ferguson **not** experimented with?
   A. Strawberries
   B. Cucumber
   C. Cauliflower
   D. Broccoli

A mixed-vegetable farm in Canada

3. How many markets does Ferguson sell his products to?

A. 2 B. 3

C. 4 D. 5

4. How many hectares of land does Ferguson cultivate?

A. 9 ha B. 10 ha

C. 7-8 ha D. 8-9 ha

5. When does the planting period begin for Ferguson's Farm?

A. March B. April

C. June D. July

Systems Model for Ferguson's Farm

#3a Inputs		Processes	Outputs
Physical	Human		
Climate	Seeds	Ploughing	Potatoes
Plants	Labor	Harvesting	Meat
Soil	Fertilizer	Weeding	Carrots
	Animals	Administration	Eggs
		Repairs	Rutabagas
		Insect Control	Milk
		Sowing Seeds	Cabbage
		Tending Animals	

A Mixed-Vegetable Farm In Canada

- **#3b**

- Components which are difficult for a farmer to control:

  – Climate (impossible to control!)
  – Quality of seeds
  – Quality of soil
  – Insect infestation
  – Final price of output

A Mixed-Vegetable Farm In Canada

- **#4b**

- Farming activities vary throughout the year because of the Seasons.

Spring – time to prepare the soil and plant.

Summer – crops are tended.

Fall – Crops are harvested.

Winter – time for planning and servicing equipment.