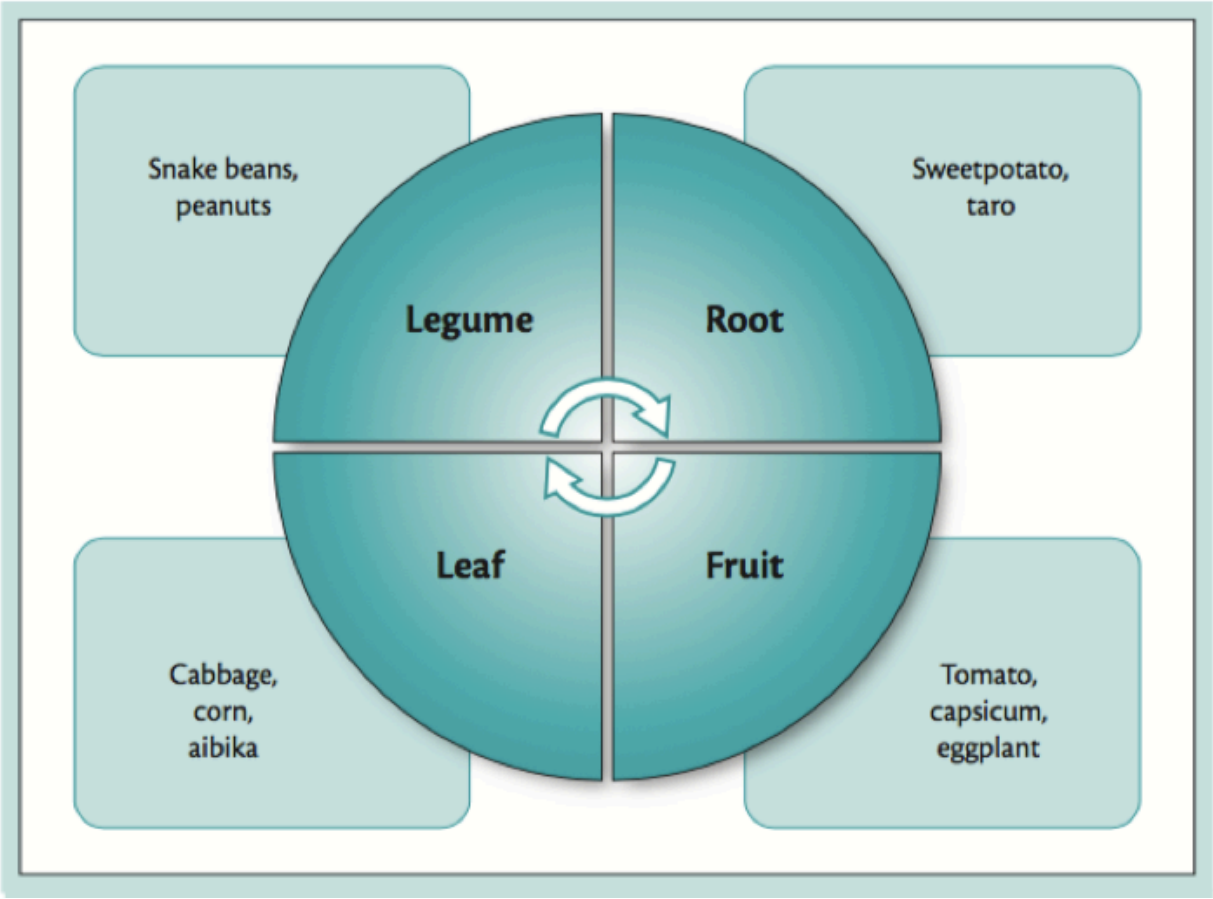
Crop rotation – teacher information sheet

Basic soil management

For soil to maintain its capacity to support plant growth and high crop yields, it must be managed properly. Landslides, flooding and erosion can decrease soil capacity. Soil management is designed to minimise the impact of these processes, and means using soil wisely so that it can continue to support plant growth over the long term.

What is crop rotation?

Crop rotation is the process whereby a first crop (e.g. peanuts) planted on the land is followed by a different crop (e.g. cabbage) on the same land after harvesting the first crop. Non-legume crops (e.g. corn, aibika and cabbage) will use up nitrogen in the soil, and legume crops (e.g. peanut and snake bean) will add nitrogen to the soil. After harvesting, the non- legume crops will be rotated, and the cycle will continue.



Example of crop rotation. (Seta-Waken, Malie, Utama & Palaniappan, 2016, p. 15).

Why is crop rotation good?

- Crop rotation is good because:
- It avoids disease attack on crops in the previous plot.
- It adds nitrogen in the soil by growing legume crops.
- It prevents soil erosion by growing dense (foliaged or vined) crops such as snake beans.
- Varieties of crops are grown for the farmer's use.

Crop rotation and pest control

Crop rotation is also used to control pests and diseases that can occur in soil over time. The changing of crops in a sequence decreases the population level of pests by (1) interrupting pest life cycles and (2) interrupting pest habitat. Crop rotation is still one of the best, widely practiced, and cost effective methods of disease prevention. However, some things must be considered when using it effectiveness. Plants that belong to the same family often share the same pest problems so rotations must be between non-related plants. For example, broccoli and cabbage appear very different from another, they all belong to the mustard family (Brassicaceae).

Information taken from

Seta-Waken P., Malie R., Utama P. and Palaniappan G. 2016. Introduction to basic crop production, post-harvest and financial management practices: a training manual for smallholder vegetable farmers in western Pacific island nations (ed. by C.J. Birch and B.E. Chambers). Monograph Number 176 Australian Centre for International Agricultural Research: Canberra, ACT. **http://aciar.gov.au/node/25047**

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