Rice Postharvest Handling

1. Postharvest System
   - The postharvest system consists of a set of operations from harvest to consumption.
   - An efficient postharvest system aims to minimise losses and maintain quality of the harvested crop until it reaches the final consumer.
   - Rice postharvest system consists of the following operations: (a) Harvesting, (b) Threshing, (c) Cleaning threshed grain, (d) Drying, (e) Aggregation and storage, (f) Milling, (g) Marketing.
   - Postharvest losses in rice are estimated at 30-40% due to inefficient postharvest handling operations.

2. Harvesting
   - Harvesting is the process of collecting mature rice crop from the field.

3. Threshing
   - Threshing separates the grain from the chaff, and produces paddy rice (threshed grain with hulls).
   - Threshing should be started immediately after harvesting (within 24 hours after harvesting).
   - In Kenya, threshing is done manually and also by use of paddy threshers.

4. Cleaning grain after threshing
   - Grain damage should be minimised during threshing as damaged grain is much more prone to attack by insects and moulds.

5. Drying of threshed paddy
   - Rice paddy should be dried to a moisture content of 13-14% for safe storage and milling.
   - Sun drying is commonly used by spreading the paddy on tarpaulins over a given period to dry.
   - Small-scale driers can also be used.

6. Paddy aggregation and storage
   - This involves bulking of paddy rice by cooperative societies, farmer groups and millers.

7. Milling
   - This is the process of removing husks and bran from paddy rice to produce white rice grains.
   - Milling of paddy rice in Kenya is done by commercial rice millers; and smallholder millers in village mills.

8. Marketing
   - In Kenya, rice is marketed through (a) Government agencies (National Irrigation Development Authority, National Cereals and Produce Board, Lake Basin Development Authority); (b) Marketing cooperatives; (c) Private companies; and (d) small-scale traders.
   - All the rice produced in Kenya is consumed locally, with a major production gap. Kenya imports 90% of its rice from Vietnam, India and Pakistan.

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