

Annexure – II

Training program on “Scientific storage of food grains to ensure food security”	
Course Synopsis	The training will be conducted through class room lecture method assisted by power point presentations, videos, identification of live and specimen stored grain pests at laboratory, live demonstration on prophylactic and curative pest management measures, phosphine fumigation with gas monitoring tubes in place, practical operation of safety equipment during fumigation and field visit to scientific store houses.
Course Duration	14 days
Justification/ Rationale	Food grains are damaged due to various biotic and abiotic factors during storage. Among different factors, stored grain pests cause both qualitative and quantitative loss and at times may render the food grains unfit for further storage and human consumption. Improper spraying, fumigation and other technical quality control aspects at storage godowns always results in increased pest population and development of resistance in insects and further damages to food grains. Non-availability of sufficient food grains will lead to food insecurity in developing countries. Hence, there is a need for scientific storage of food grains to ensure food security and to work towards zero hunger policy of UNO.
Aims & Objective of the course	i) To sensitize the need for scientific storage ii) To manage biotic and abiotic factors in large food grain storage warehouses iii) To study integrated stored pest management including rodents iv) To ensure issuance of safe grains to people and to ensure food security
Expected Outcome of the course	The course will sensitize the stakeholders to store the valuable food grains scientifically and to avoid damages of food grains from biotic and abiotic factors and to ensure food

	security.
Eligibility conditions of the participant	Any Graduate in Agriculture, Life Science, Post Graduate in Agriculture, Warehouse Officials
Country	All ITEC partnering countries

Training Schedule: A simple thematic/ day-wise schedule (topics covered) may be attached.

Day	Topics
Day 1	Registration & Pre course evaluation
	Inauguration
	Importance of storage pests in Post-Harvest Management
	Role of Abiotic factors in food grain storage
	Identification of Insect pests in storage
Day 2	Detection & monitoring of stored grain pests
	Khapra beetle detection, identification, biology & ethology
	Use of light traps/pheromones/ sticky trap in pest management in FCI godowns
	Storage fungi, mycotoxicity & management
Day 3	Major rodent pests & Their problems in storage places
	Biology & morphology of rodents in relation to their pest nature
	Ethology of rodents
Day 4	Visit to historical places
Day 5	Assignment preparation
Day 6	Morphology of rodents in relation to their pest nature
	Zoonotic diseases, Emergency preparedness- role of PCOs in awareness creation among the stake holders
	Non-chemical Rodent Pest Management practices
	Habitat / Ecology analysis of rodent pests– Field visit
Day 7	Rodenticides, mode of action-their safe and judicious use
	Preparation of rodenticide bait and application
	Rodent Population assessment techniques in urban environs
	Participatory exercise on rodent breeding biology
Day 8	Prophylactic treatments for stored pest management
	System approaches in integrated stored pest management
	Fumigation in food grain warehouses
	Fumigation demonstration
Day 9	Visit to food grain storage godowns
Day 10	Code of Storage Practices – Rice & Wheat
	Code of Storage Practices - Pulses
	Safe usage of pesticides in stored warehouses- Precautions and first aid
	Practical demonstration on spraying
Day 11	Visit to historical places
Day 12	Assignment preparation
Day 13	Visit to ICRISAT
Day 14	Group Discussion

	Assignment presentations
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