

Semester V
DISCIPLINE SPECIFIC ELECTIVE COURSE (DSE- 5.2)

Agriculture & Crop Insurance

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility criteria	Pre-requisite of the course
Agriculture & Crop Insurance DSE 5.2	4	3	1	-	Pass in class 12 th	-

Learning Objectives: The course aims to offer an integrated approach to the understanding of agricultural insurance markets and systems, the concept of risk management in agriculture, concepts of crop insurance and the insurance of livestock.

Learning Outcomes: After completion of the course, learners will be able to:

1. explain the concept of agricultural insurance systems and markets
2. formulate a catastrophe risk modelling design for agricultural risks.
3. differentiate between various types of crop insurance.
4. appraise the linkage between the trends in livestock and extent of livestock insurance.

Unit 1. Introduction

11 Hours

Trends and challenges in the agricultural sector in India. Salient feature of agricultural census. Agricultural insurance systems: private, public, private–public sectors, forms of agricultural insurance operations, cooperative and mutual insurers, co-insurance pools and reinsurance. Agricultural insurance products, Global and Indian agricultural insurance markets.

Unit 2. Risk management in agriculture

12 Hours

Overview of perils for agriculture: natural disasters such as drought, flood, types of floods, hail formation, hail damage to crops, frost, types of frost, frost damage to crops, snow, cyclones (types of cyclones, cyclone losses) windstorm, wildfires, epidemic livestock diseases, and climate variability. Catastrophe risk modelling for agricultural risks, Agricultural risk transfer, Actuarial insurance pricing.

Unit 3. Crop insurance

11 Hours

Major crops and cropping patterns in various parts of the country, concepts, objectives and types of crop insurance, design and operations of crop insurance and products. Multi-peril crop insurance and all-risk crop insurance. Crop insurance schemes in India and their effectiveness.

Unit 4. Livestock and allied agricultural insurance

11 Hours

Trends in livestock production and consumption. Insurance of livestock: general and specific risks, importance and types (cattle, poultry, sheep, goat, pig, elephant, duck, aquaculture), Comprehensive coverage, farm property, farm fire and forestry insurance, Agriculture and forestry vehicles insurance. Personal and liability insurance for farmers. Agricultural credit insurance.

Exercises

The learners are required to:

1. collect data from the recent agriculture census and prepare a presentation on the agricultural insurance market (market segmentation) and identify its challenges (Unit1).
2. form a group to develop a catastrophe risk model for different types of agricultural risks (Unit2).
3. Make a group project on the effectiveness of any one crop insurance offered in India (Unit3).
4. make a group presentation gather secondary data from livestock census and corporate data of insurance companies to assess the extent and effectiveness of livestock and allied insurance in different regions in India (Unit4).

Suggested Readings:

- Hohl, R. M. (2019). *Agricultural Risk Transfer: From Insurance to Reinsurance to Capital Markets*. Wiley.
- Hueth, D. L., & Furtan, W. H. (2012). *Economics of Agricultural Crop Insurance: Theory and Evidence*. Springer Netherlands.
- Just, R. E., & Pope, R. D. (2013). *A Comprehensive Assessment of the Role of Risk in U.S. Agriculture*. Springer US.
- Mahul, O., & Stutley, C. J. (2010). *Government Support to Agricultural Insurance: Challenges and Options for Developing Countries*. World Bank Publications.
- Nirmal, R., & Babu, S. C. (2021). *When implementation goes wrong: Lessons from crop insurance in India*. Intl Food Policy Res Inst.
- Ray, P. K. (2013). *Agricultural Insurance: Theory and Practice and Application to Developing Countries*. Elsevier Science.
- Roberts, R. A. J., Food, & Nations, A. O. o. t. U. (2005). *Insurance of Crops in Developing Countries*. Food and Agriculture Organization of the United Nations.

Notes:

- 1. Suggested readings shall be updated and uploaded on the college website from time to time.**
- 2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.**