Rice Ecosystems

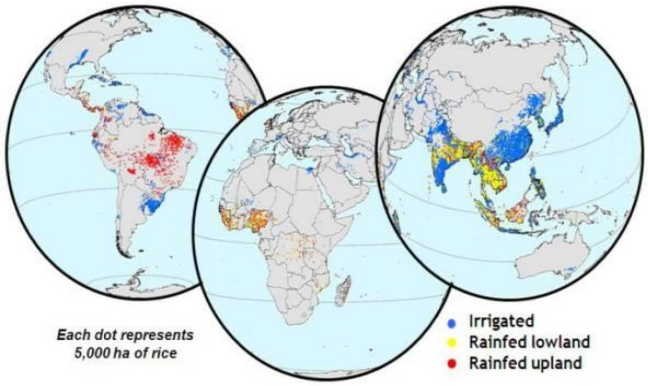
www.rkbassam.in

Introduction

Rice is grown in more than a hundred countries and a wide range of environments. As an aquatic plant, it can grow in conditions where many other crops would fail. More than 90% of rice produced in the world is grown in Asia on small fields with flooding soil.

Rice ecosystems

Rice production areas are typically grouped by hydrologic conditions and referred to as rice ecosystems. The three primary rice ecosystems are irrigated, rainfed lowland, and rainfed upland.



Irrigated lowland

There is approximately 0.4 million ha of irrigated rice production area accounting for about 15% of the total rice production. Average irrigated rice yield is between 6 to 7 tons per hectare.

Rainfed lowland

Rainfed lowlands have no provision for irrigation and often have little means for controlling excess water. As a result, they are subject to drought, excess flooding, and other abiotic stresses like salinity, alkalinity and acidity. These systems predominate in areas of greatest poverty. There are approximately 1.8 m ha rice production area in Assam iunder rainfed lowland. Out of these 0.5 m ha is chronically flood affected.

Rainfed upland

In this ecosystem, rice is produced under dryland conditions with no puddling during land preparation or flooding during the growth cycle. Upland environments are quite variable from flat to sloping topography, low to high elevation and soils that are relatively fertile to highly infertile. Yields in upland environments are typically low.

Rice Ecosystem	Rice Production Area (%)	Total Rice Production (%)	Typical Features
Irrigated lowland	15	~ 75	Land is puddled during preparation; bunds surround field; rice is flooded for most or all of the growing season; maximum area under boro.
Rainfed lowland	77	~ 20	Lack of irrigation; land is puddled during onset of rains; bunds surround field; rice is flooded for part of growing season; significant yield variability. Maximum area under Sali.
Rainfed upland	8	< 5	Dryland conditions with no bunds; widely varying environments; many constraints; maximum area under ahu.

Rice Fact Sheet

Assam Agribusiness and Rural Transformation Project (APART)

The World Bank is the funding agency of APART
Department of Agriculture, Assam is the nodal department for implementation of APART
ARIAS Society is the State Level coordinating and monitoring agency for APART
Assam Agricultural University is the leading Agricultural University of the State and implementing agency of APART, imparting research and scientific support.
International Rice Research Institute (IRRI) is the rice global leader providing technical and hand-holding support in the implementation of APART