

A Factsheet on Evolutionary Plant Breeding (EPB) in Nepal

EPB concept: Proposed by the American agronomist, Coit Suneson in 1956 and experimented in barley

EP type: Composite cross population (CCP); composite mixture population (CMP)

EPB type: Participatory EPB (PEPB), and EPB (on-station)

EPB started year: 2015 (by Bal Krishna Joshi)

First EPB site: Khumaltar, Lalitpur

First institute initiated EPB: National Genebank (NAGRC)

First EPB crop and landrace: Rice and Jumli Marshi (different collections)

EPB project approved year: 2017

EPB project field implemented year: 2018

Crop selection year for EPB: 2016

Site selection for EPB: 2017

Implemented district: Lalitpur, Lamjung and Jumla

Institutes involved in EPB project: NARC, LI-BIRD and Bioversity International

EPB landraces collected districts:

Humla, Jumla, ARS-Jumla, Dolakha, Lamjung, Kaski, Panchthar, Kalikot, Rasuwa, Myagdi, Mugu, Rasuwa, Gorkha, Solukhumbu, Bajhang, Bajura, Sindhupalchok, Darchula, Syangja, Nuwakot, Jajarkot, Dhankuta, Dadeldhura, Rukum, NPBGRC-Khumaltar

Total cultivars in EP: Jumla- 66 rice cultivars, 48 bean cultivars; Lamjung- 56 rice cultivars

Treatment, n: Jumla- Rice: 9, Bean: 9; Lamjung- rice: 12



Number of cultivars in treatment: 1 to 56 in Lamjung, 1-66 in Jumla for rice, 1-48 in Jumla for bean

EPB initial work: Protocol developed

Design and replication of PEPB: RCBD, 3

Plot size: Rice= 4 m X 3 m and Bean: 6 m X 3 m

Data analysis approaches: GGE biplot, R, GenSTAT, preference ranking, organoleptic test

Nutritional analysis: Laboratory analyses (macro and micro nutrients)

EPB in Nepali language: उत्पत्तिवर्तनशील बाली प्रजनन

Total farmers involved in Lamjung: 105

Total farmers involved in Jumla: 224

Total trainees in EPB: 189

Total meeting, workshop, training, write-shop organized: 17

Total farmers cross site visited: 72

Total EPB related publications: 15

Knowledge products shared to users: 1590

Best EP: In Jumla- rice: mixture of native landraces of site, and Selected mixture by male, bean: Mixture of landraces from analog sites;

In Lamjung- rice: Late males selection lines mixture, late female selection lines mixture

EP seed distributed to farmers, n: 170

Landraces maintained in diversity block: 63 in Lamjung; 37 for rice and 27 for bean in Jumla

