

Collecting in Bhutan

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The IBPGR and the Department of Agriculture, Bhutan, fielded a joint exploration for crop germplasm in the middle Himalayan zone of the country from late August until early October 1981. Bhutan has an area of 46 000 km² and can be divided into three broad zones which consist of a southern sub-tropical zone; a middle temperate zone which ranges from 1 000 to 3 000 m, and a cold temperate to arctic northern zone. Most farming is practised in the middle zone.

The country is totally mountainous and the very rugged terrain produces great variation in the local environments, especially with regard to the amount of precipitation, temperature, humidity and exposure to the sun. This variation makes it possible to cultivate a wide range of crops which mature at different times; thus, there is no clear harvesting time. For this reason, most samples were collected from farm seed stores in order to collect the different crops simultaneously. The map (Fig. 1) shows the collection route, which covered most of the road system. The remoter areas remain to be explored in the future. Table 1 provides a list of the crops collected.

Approximately 70 percent of the land is covered with dense forest and jungle and agriculture is restricted to the few wide places in the valleys. Farms may be found in one valley from 1 000 to over 3 000 m. Much of the land is terraced and irrigated and the soils are fertile.

The greatest threat of genetic erosion is to the local wheat landraces which are being replaced by Indian varieties, including Sonalika. This has happened in most areas and it is difficult to find indigenous material in many of the valleys. There are also threats to the rice landraces as farmers begin to grow the modern dwarf varieties, e.g. Pusa 33. As yet, their growth is not widespread but introduction programmes are planned through the agricultural extension service. The same applies to some vegetables crops.

RESUME

Le CIRPG a organisé, en 1981, la prospection de plusieurs espèces végétales au Bhutan. Il semblerait qu'il y a risque d'érosion, surtout pour le blé et les légumes.

RESUMEN

En 1981, el CIRF organizó recogidas de cultivos múltiples en Bhután. Parece ser que existe erosión, especialmente en el trigo y las hortalizas.

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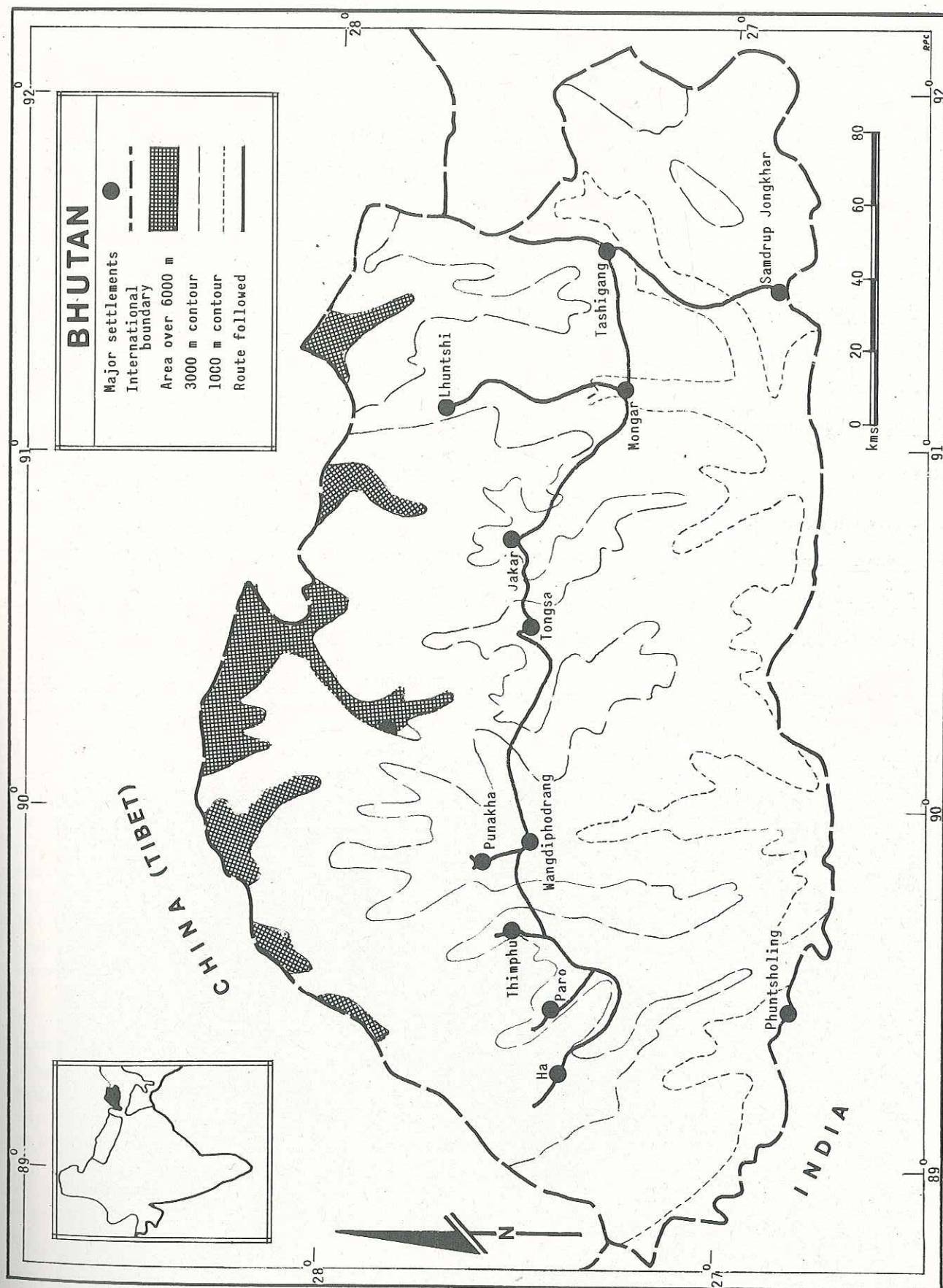
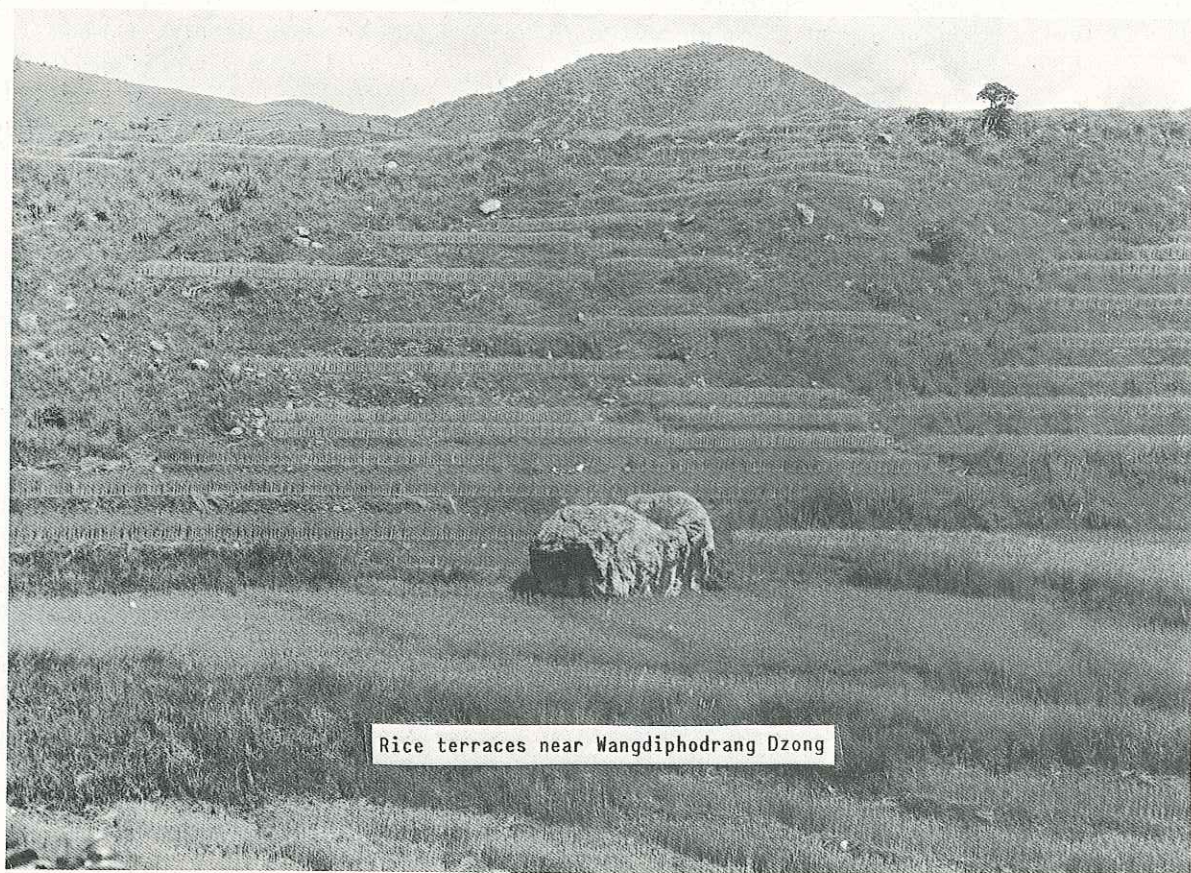


Table 1. Germplasm collected

CEREALS		OIL PLANTS	
<u>Oryza sativa</u>	62	Cruciferae	23
<u>Fagopyrum esculentum</u> and <u>F. tartaricum</u>	48	<u>Perilla frutescens</u>	6
<u>Zea mays</u>	47	VEGETABLES	
<u>Hordeum vulgare</u>	30	Brassicas	27
<u>Triticum aestivum</u>	24	<u>Allium</u> spp.	20
<u>Eleusine coracana</u>	14	<u>Raphanus sativus</u>	11
Minor millets	14	Cucurbits	20
<u>Amaranthus</u> spp.	17	FRUITS	
LEGUMES		<u>Prunus persica</u>	5
<u>Phaseolus</u> and <u>Vigna</u> spp.	47	<u>Musa</u> spp.	1
<u>Glycine max</u>	16	SPICES	
<u>Pisum sativum</u>	9	<u>Capsicum annuum</u>	18
<u>Lablab purpureus</u>	5	<u>Coriandrum sativum</u>	7
		OTHER CROPS	
			11



Rice terraces near Wangdiphodrang Dzong