



tropentag 2022 September 14-16, 2022

Conference on International Research on Food Security, Natural Resource Management and Rural Development
organised by the Czech University of Life Sciences, Prague, Czech Republic

Rice cultivation in Namibia and Angola

The choice between high-tech and ecological agriculture

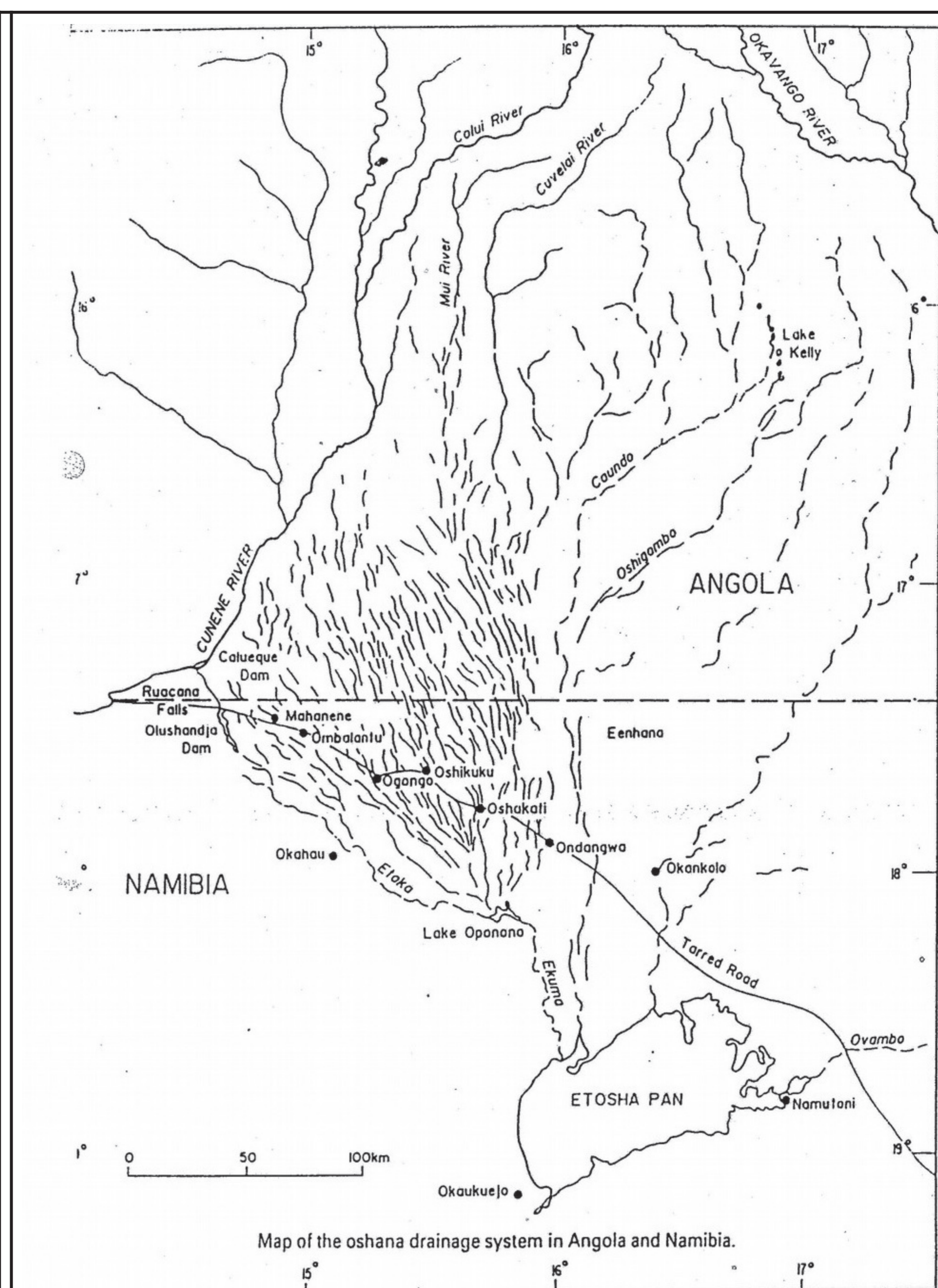
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for the Ministry of Agriculture, Dept. of Agricultural Research and Training

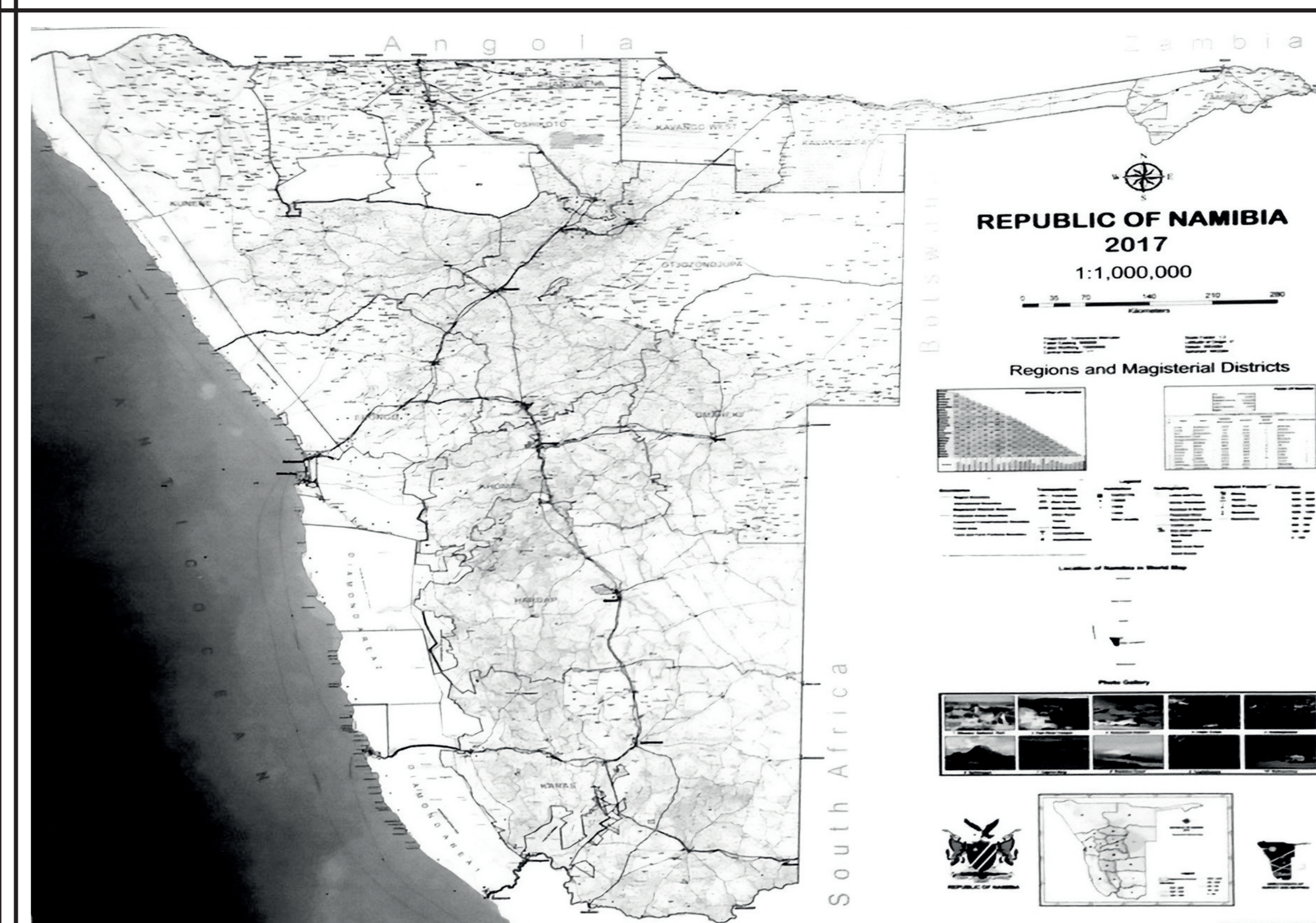
in cooperation with the Namibia Development Trust and the University of Namibia

- > Rice is endemic in Namibia, 3 wild species in NBRI,
- > First irrigated rice, 1975 in Mahenene, later in Cunene and Caprivi.
- In 1990 Feasibility study, rice trade and production-chain analysis and environmental impact assessment (AGRICOLA).
- 1990-1995, selection trials with deep-water rice varieties (AGRICOLA).
- 2010, UNAM with Kink-Uni-Japan "New Rice for Africa" (NERICA).
- 2016-2018 transplanted rice by UNAM Ogongo Campus.
- > Rice yields (2.4-5.1 t/ha, unimproved soil) are higher than for sorghum (staple food), pearl-millet (350 kg/ha).
- > Rain is insecure (450 l/ha pa.) in North Central Namibia, leading to frequent drought and famine.
- > Floodwater from Angola Plateau perform every year and can be used under appropriate Natural Resource Management (Etosha Natural Wildlife Sanctuary), (NRM, IWRM, ICM and IWM).
- > The Cuvelay System of Seasonal Wetlands (CSSW) cover 800,000 ha. (oshanas and odombes).
- > Selection trials during 5 years, on 3 trial sites, testing 588 varieties from IRRI, WARDA, IITA, IRAG. (Results below)
- > On-farm trials, rice cultivation and cattle breeding (Farming Systems Research) AGRICOLA: "Community based rice production in oshanas".
- > Additional food-crop on underutilized communal land.
- > Fodder for cattle, ducks and fish. Grazing ratoon yields.
- > No pests, diseases, serious weeds detected.
- > Substitution of rice imports by own national production is possible.
- > Food security, storage, job creation, poverty alleviation, resilience to climatic change.
- > Wetlands cover 6% of earth's land surface.
- > Argo-ecological farming can feed the world !



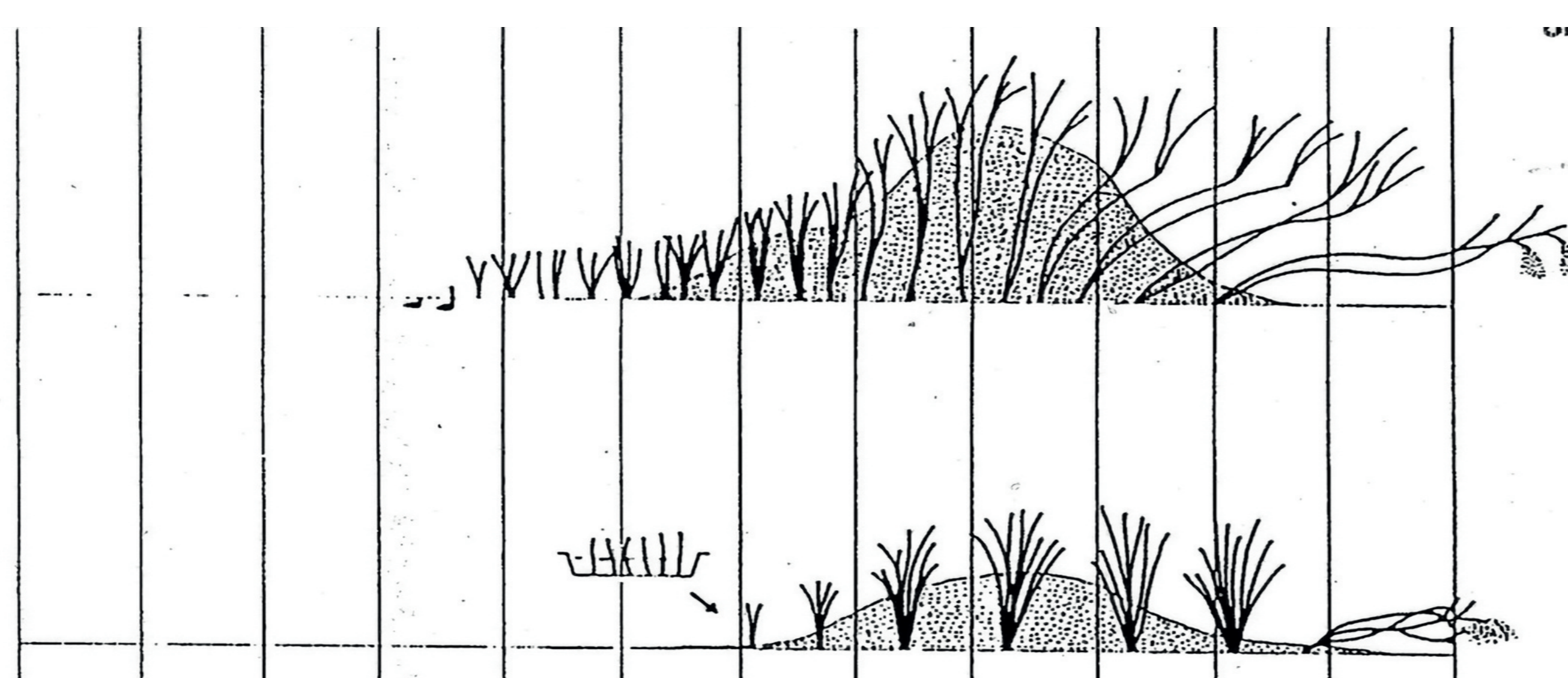
Results of selection trials with deep water rice:

- IR42 (IRLON, IRBON), mature 143-165 DAS, plant height 76-120 cm. 1.3-2.5 t/ha (no fertilization, no soil improvement)
- FR13A-Mahsuri (IDRON), matured 132-162 DAS, plant height 65-97cm, 1.1-2.3 t/ha. Awns defend against weaver birds.
- Nankin6 (IRAG 8833), 114-122 DAS at plant height 87-115cm, 1.9-2.2 t/ha.
- Rojofotsi (Burundi), 1.9-3.2 t/ha, 105-117 DAS, 1.7-3.2 t/ha.
- TOX33-61 (WARDA, Burundi), 118 DAS, 1.9-3.2 t/ha.
- WAB56-104 (WARDA), 125 DAS, 2.3 t/ha.
- Sundari (India), 158 DAS, 1.3-2,4 t/ha
- R321-1852 cross 962837, 152 DAS, 5,1 t/ha (red-rice).



direct seeded
deeply flooded

transplanted
flood depth 20-80 cm



Workshop

Friday Sept. 16, afternoon 14:30-17:30 h

Target group

Students, researchers, farmers, policy and decision-makers.