

COASTAL RICE FARMER FIELD SCHOOL

Written by Ben Brown, *Restoring Coastal Livelihoods* - 2012

Rice and brackish water fish farms have been the two major features of coastal South Sulawesi's landscape since the 1970's, with examples of the two systems operating adjacently as far back as the 17th century. Both of these agroecosystems have been carved out of natural habitats dominated by mangrove forests as well as salt and fresh water marshes, and hinterland forest. The system is so much changed from it's original state, that a return to natural state is impossible. Rehabilitation into a more natural system, with a greater percentage of native ecosystems is possible in some locations, but will take a re-thinking of current agronomic practices which rely heavily on external inputs, and are under a high degree of control by humans.

Paolo Friere described the process of increasing awareness in order to rekindle a more natural balance between humans and the natural world, conscientization. As part of the process of conscientization, coastal communities have been engaged rice farmer field schools, to rebuild critical thinking skills around farming, and enhance ecosystem services in the agro-ecosystem.

SPECIAL CHALLENGES WITH COASTAL RICE PRODUCTION

South Sulawesi has the highest level of rice production out of Indonesian Province outside of the island of Java. Highland rice production in the Province, however, is given priority over coastal rice, evidenced by the 100 rice farmer field schools run annually by the Department of Agriculture versus zero (0) in coastal areas.

Villages in the Pangkep District are representative of issues coastal farmers are having with rice production. At the onset of the RCL project, 15 hectares of rice fields in Bontomanai had been abandoned for 20 years, while another 20 hectares experienced total harvest failure in 2009-2010.

Farmers cited "water issues" as the root cause of crop failure and rice field abandonment. Fresh water from the upper watershed comes more erratically nowadays for a variety of reasons;

- in part due to loss of forest cover, increased runoff and decreased infiltration and aquifer recharge;
- higher demand in the mid-watershed by farmers and urban populations,
- higher demand by aquaculture ponds which have their own systems of irrigation,
- physical impediments to freshwater flow from mid-watershed
- inadequate irrigation systems

Salinization is another issue with rice fields behind aquaculture complexes, in part due to sea-level rise, but also largely due to the lack of mangrove systems to buffer salinization of land, and regulate tidal inundation.

Farmers also say the weather has become more erratic, especially concerning the onset and duration of rains, with unknown effects on predator and prey populations associated with rice agro-ecosystems. Additional and classic issues such as increased reliance on urea, pesticides and other agro-industrial inputs, and the "hardening" of land were cited as significant challenges to coastal rice production.



Women from Pitusunggu, Pangkep participating in a ballot box post-test on contributing factors to a successful rice harvest. Results are used for educational and monitoring purposes.

SPECIAL CHALLENGES WITH COASTAL RICE PRODUCTION

The Provincial Department of Agriculture was engaged to lead rice farmer field schools in 2 villages initially. Most extension offices in South Sulawesi had some degree of experience leading rice farmer field schools. The activity was supported by both PPL (agriculture extensionists) and PHT (integrated pest management specialists), at the district and sub-district level. of government.

Twenty-five to thirty rice farmers (men and women) were engaged to participate in a season long "Salt Water Tolerant Rice Field School," with SW tolerant rice varieties brought over from Java.

There was little need to undertake comparisons between methods learned in SW Tolerant Rice field school with previous practices. The simple fact that communities were once again able to grow and harvest rice in lands considered unsuitable for rice production was enough and enabled several "next steps."



The narrow path between brackish water ponds (right) and rice fields (left) does little to buffer salinization.



The following syllabus was used for the initial pair of field schools;

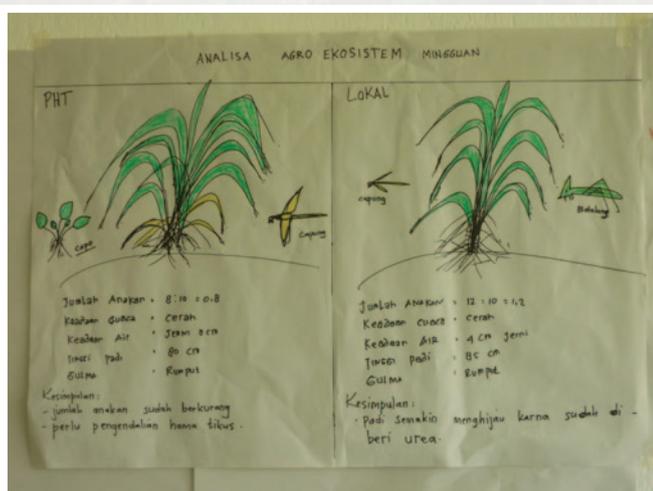
Wk.	Activity	Wk.	Activity
1	Learning Contract, Setting Objectives	9	Rats
2	Gender Assessments	10	Ecological Relationships: Specific Pests/ Natural Enemies
3	Soil Ecology	11	Sampling
4	Setting up Season Long Field Studies (SRI, Organic Inputs and IPM)	12	IPM Decision Making: Agroecosystem Analysis
5	Plant Physiology, Salt water tolerant rice	13	Toxic Compounds
6	Diseases	14	Review of SRI and IPM practices
7	Weeds	15	Harvest
8	Snails	16	Future Planning

SCALING UP, OUT AND DOWN

Following the initial pair of field schools, a series of Training of Trainers events have been held, focusing on developing a network of community trainers to allow for continued support of participant villages as well as dissemination to adjacent areas.

Rice farmer field school alumni in Maros, Pangkep and Barru Districts, are partnering with alumni from fish farmer and vegetable field schools, and developing community based organic composting to drive organic production of all three enterprises.

The government is very supportive of this process; providing a variety of goods and services including provision of hand-tractors on a rolling basis, support of central organic fertilizer production units, saltwater and local varieties of rice seed and continued extension services. Coupled with the cadre of village farmer field school facilitators, there is strong indication that these services are becoming increasingly institutionalized into the future.



Presenting the results of a weekly comparison between IPM (left) and previous agronomic practices (right).

Facilitation

Community Field School Trainers (64)

Government Ag. Extensionists @ Sub-District & District

Coastal Field School Alumni Network

Tech Support

Integrated Pest Mgmt Specialists @ District and Provincial Level

Social Agency Production & Post Harvest Processing Support

Structures in place for cont'd Coastal Field Schools

“We are quite happy to work with a farmer’s group such as the coastal field school groups, who are well-organized, enthusiastic, and making strides for themselves. We are all in this together and learning from one another as we move along.” exclaims Abdul Gafar, Chief Extensionist of the South Sulawesi Provincial Agency for Grains and Horticulture Crops (BPTPH).

ADAPTATION

In Bodia, alumni from salt-water tolerant rice field school, have organized a second field school, supported directly by the Pangkep Dept of Agriculture. The second field school focuses on use of local, “fresh-water” rice. The group feel that the salt-water tolerant rice variety will be useful in the dry seasons, when salinization of their fields occurs, but during the rainy season they want to trial a local rice variety which they haven’t grown since the green revolution of the 1970’s. The group also stated that with increasingly “unclear” weather patterns , it is important to have options.



14 Hectares of abandoned rice fields in Pitusunggu are being prepared for cultivation, a true case of Restoring Coastal Livelihoods.

Pak Sukri of Bodia village owned the half hectare demonstration site that his field school group used for salt-water tolerant rice trials. He has raised another crop of rice on this plot, had a successful harvest and saved enough of his own rice to seed next season’s crop. He says, “We always understood that things were changing. Now we can prepare for change. Now we have options.”

For more information see: www.rcl.or.id