

A Flagship Project for “Development of Rice Production Technologies in Africa”



Transplanting (Ethiopia)



Puddling and leveling (Ethiopia)



Puddling and leveling (Ghana)

1. Contribution of JIRCAS to the goal of CARD

JIRCAS implements a flagship research project to contribute to the goal of the Coalition for African Rice Development (CARD), comprising three research subjects, as described below;

- A) Development of new breeding lines by improving the existing genetic resources of upland and lowland.
- B) Development of an irrigation technology characterized with low life cycle cost, an Asian-type rice cultivation.
- C) Expansion of rice cultivation areas in flood plains.

2. Technical manual for improving African rice production

JIRCAS conducted a 4 year’s validation study in areas suitable for paddy field development in Ghana and Ethiopia (2008-2012). Based on the experience, we compiled technical manuals for rice production and offered them to extension officers and farmers. The manual covers wide contents including agronomic instructions, maintenance of power tillers, and the roles of farmer organization.



Figure 4-7 Canal covered with Geomembrane sheet (a) and Cross Section (b).

4.6 Plot-to-plot irrigation

Plot-to-plot irrigation is to send the water taken in the uppermost plot from the canal to downstream plot one after the other through the plot (Figure 4-5). If all the plots do not have intakes from the canal this irrigation system is usually applied. Irrigation and drainage of this system is constrained by the water movement from one plot to another. Instead of this constraint this system has the advantage of water saving and easy construction.



Figure 4-8 plot to plot irrigation

4.7 Drainage canal

The drainage canal should be constructed at the lowest portion of existing stream if that is the lowest. By improving drainage on the

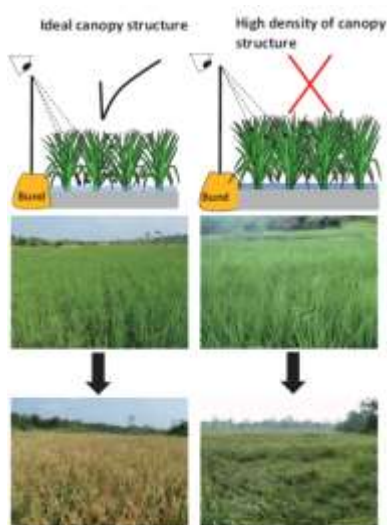
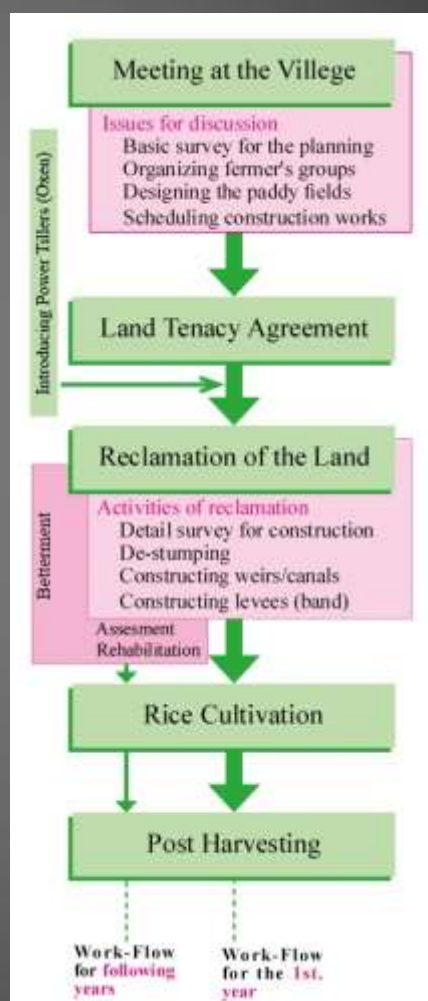


Figure 5-57 Effect of canopy structure on yield



Outline of the manual

Using this manual, farmers can readily develop Asian-type paddy fields. The manual is expected to be used in East and West Africa, abundant in areas suitable for rice production.

URL for the manual:

English: http://www.jircas.affrc.go.jp/english/manual/ricemanual2012/ricemanual2012_index.html

French: http://www.jircas.affrc.go.jp/english/manual/rizicolemanuel2012/ricemanual2012_index.html