

Surjan is a land arrangement model in tidal swamplands as an effort to optimize use of land, support diversification of farm commodities, as well as reduce compensation from fail risks in the farming system. The systems consist of sunken bed part which can be planted by rice and raised bed which can be planted by orange, vegetables, etc. Surjan is constructed at flood type B or A of tidal swampland, made at a middle part of rice fields with distance of 12-14 m, while at flood type C of the land, the distance can be made closer since the sunken beds is not planted.

Surjan dimension are 3-6 m wide top, 4-7 m wide bottom, and height 50-60 cm, depending on the length of ownership. Surjan model is suitable for crops, vegetables or fruits. Figure 1 show the surjan system schema which rice is planted at the raised bed and the other crop like coconut (kelapa), orange (jeruk), and banana (pisang) are planted at the sunken bed

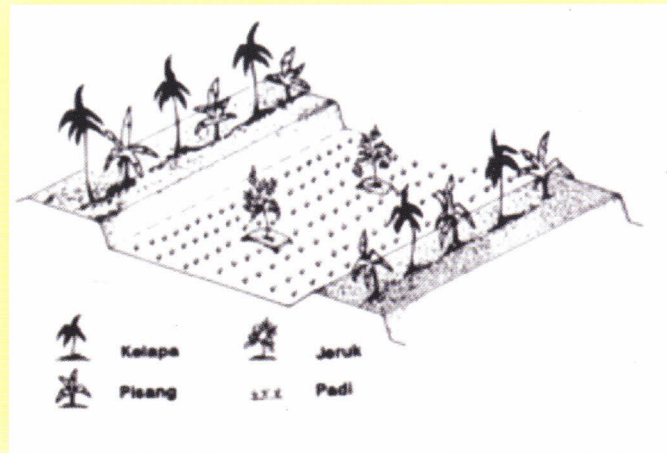


Figure 1. Schema of surjan system at tidal swampland

Advantages of surjan system is: (1) in one stretch of arable land, there are various commodities that can be planted so that it may avoid "bankruptcy" because the farm does not depend on any single commodity like rice only; (2) it may increase plant diversification or increase farmers family nutrition; and (3) implementations of surjan system in tidal swampland can increase farm income (Table 1). Figure 2 show the surjan system with bases rice that planted in shunken bed and vegetable or horticulture (orange) that planted in rased

Table 1. Contribution of some comoditiesof surjan system on farm's income (%) at some locations of tidal swampland in South Kalimantan

Commodity	Contribution of comodities on farm's income (%)				
	Karang Indah	Sungai Kambat	Sungai Arya	Gudang Hirang	Sungai Tandipah
Livestock	-	0,65	0,95	-	-
Rice	24,86	8,73	14,55	14,67	10,74
Orange/Citrus	60,82	88,20	78,82	75,46	76,13
Bananas	-	-	-	1,90	0,99
Vegetable	0,33	1,20	-	-	0,29
Other Crop		0,33	1,69	0,05	-
Farm worker	-	1,10	1,49	0,33	0,13
Out farm	13,96	-	1,09	7,58	11,71
Total	100,00	100,00	100,00	100,00	100,00





Figure 2. Rice-melon patterns at surjan system in tidal swamplands

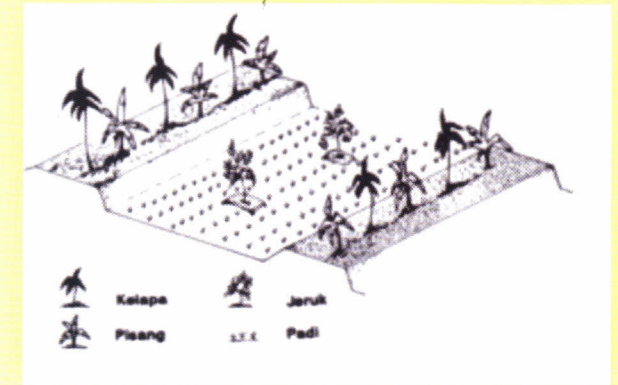


Figure 3. rice-orange patterns at surjan system in tidal swamplands.

## WHAT IS SURJAN ?

Indonesian Agency for Agricultural Research and Development (IAARD)

ISARI: Jl. Kebun Karet, Loktabat Utara, Banjarbaru  
70712, South Kalimantan



BALAI PENELITIAN PERTANIAN LAHAN RAWA  
Balai Besar Litbang Sumberdaya Lahan Pertanian  
Badan Penelitian dan Pengembangan Pertanian

