



Info

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"Kapilaler Demonstration Plots" The Effective Way Through The Integrated And Participatory Water Resources Management In Klaten Regency , Central Java Province.

Program Framework and Partnership

The demonstration plot activity was developed in the Klaten Program framework related to the improvement of irrigated agriculture through an integrated and participatory water resources management. The program aims at developing a common vision on water management issues in irrigated areas and, at identifying, proposing and implementing technical and organizational solutions with the participation and support of majority of stakeholders. The Program is funded by Danone-Aqua and implemented by the facilitation team constituted by CIRAD and IAHRI Centre from Bogor and by UGM-PUSTEK and BPTP from Yogyakarta in partnership with the Klaten Public Work and Agricultural Services and with the Regional Monitoring Committee including a group of members representatives of regional stakeholders involved in water issues: Regional Water Company(Perusahaan Daerah Air Minum/PDAM), PT. Tirta Invesatama, Water User Associations, Farmer Associations, Local NGOs, Public Work and Department of Agriculture of Klaten Regency.



Figure 1. Demonstration Plots of Maize

Objectives of Demonstration Plot Activity

The main objectives of the demonstration plots were:

- Promoting *Palawija* crop in third cropping season (dry season, July-October) in substitution of rice.
 - Convincing farmers that PU recommended irrigation doses and BPTP-DP recommended fertilization doses are suitable for *Palawija* productions.
 - Raising awareness among Kapilaler farmers about their agronomic and economic benefits.
- CIRAD: Centre de Coopération Internationale de Recherche Agronomique pour le Développement (France)
- IAHRI: Indonesian Agro-climate and Hydrology Research Institute (Bogor)
- PUSTEK: Pusat Studi Ekonomi Kerakyatan - Universitas Gadjah Mada (Yogyakarta)
- BPTP: Balai Pengkajian Teknologi Pertanian (Yogyakarta)

Location and Treatment

The demonstration plots were implemented in three locations of the Kapilaler perimeter namely Meger, Dlimas and Kujon during the third cropping season of 2008 (figure 2).

Treatments

No tillage (only land cleaning) using the Pioneer 11 or Bisi 2 maize variety, the main treatments of the Kapilaler 2008 demonstration plots dealt with fertilization and irrigation.

Farmer Fertilization Doses	BPTP Recommended Fertilization Doses
Urea: > 700 kg/ha	Urea: 300 – 350 kg/ha
SP36: > 200 kg/ha or Phonska: > 300 kg/ha	SP36: 100 – 120 kg/ha Phonska: 150 kg/ha
Farmer Irrigation Doses	Public Work Recommended Irrigation Doses
0,70 liter/second/hectare	0.6 liter/second/hectare

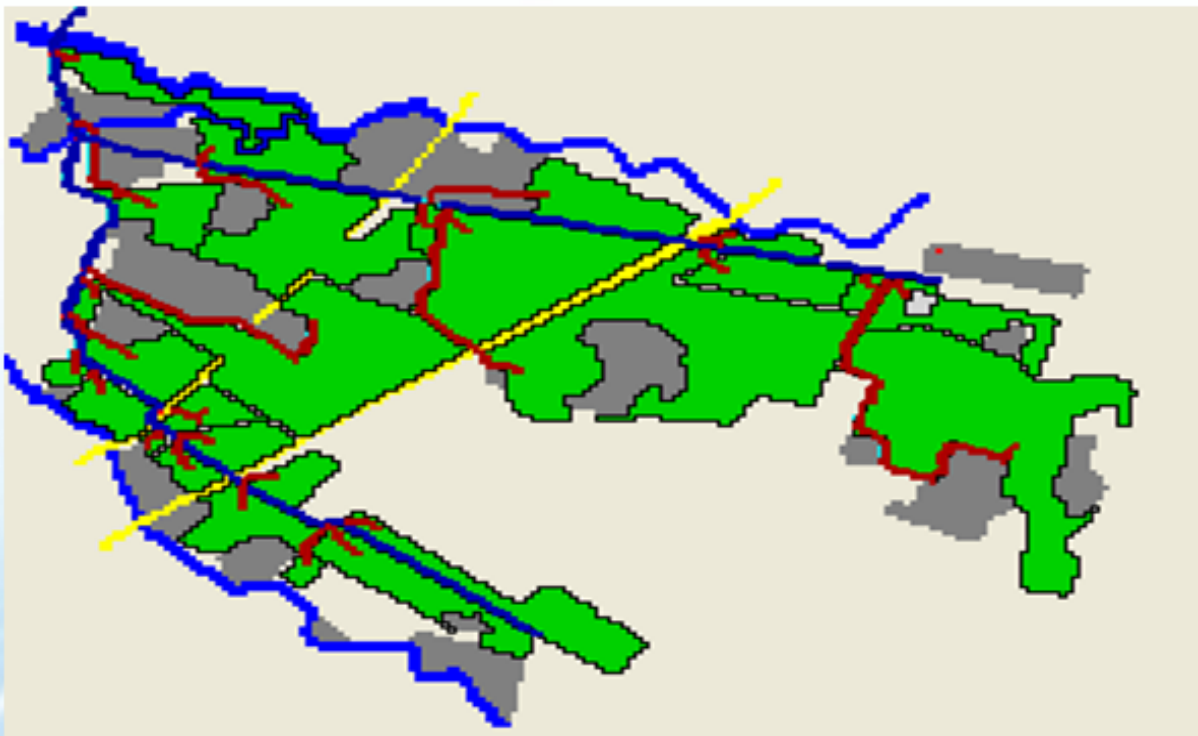


Figure 2. Kapilaler Perimeter Map

Main results recorded in third cropping season 2008 (July-November)

Decreasing of volume irrigation

- Farmer irrigation: 960 m³
 - Project recommended irrigation: 820 m³
- By applying the Public Work recommended irrigation doses for *palawija* crop (maximum 0.6 l/s/ha) it was observed a good crop development and a significant reduction of water used (140 m³)



Figure 3. Lateral move irrigator system

Decreasing of fertilization costs

- Recommended fertilization: Rp. 160.000,-
- Farmer fertilization: Rp.250.000

By applying the BPTP-DP recommended fertilization doses for corn crop (Urea: 300-350 Kg/ha + SP36: 100-150 Kg/ha or + Phonska: 150 Kg/ha) it was observed a good crop development and a significant reduction of fertilization cost (- Rp. 90.000,-)



Figure 4. fertilization costs

Same level of corn production

- Corn production(Kg/2000 m²):

Village	Meger , Dlimas	Kujon
Project	2000	1600
Farmer	2100	1800

By applying the Project irrigation and fertilization recommendations it was observed the same level of maize production.



Figure 5. corn production

On field visit

On-field visits were organized during the third cropping season to observe the crop development, and to present and discuss the demonstration plot results with local authorities, regional farmers and water users.



Figure 5. On field visit

Closing Remarks:

- When soil fertility is not degraded, reduced doses of Urea and SP36 (or Phonska) as recommended by BPTP-DP looks not affect the maize production in Kapilaler area and, consequently, it seems more profitable for farmers who are usually using massive fertilizer doses (> 250 kg per 2000 m^2) with subsequent high costs.
- Water doses with maximum value of $0,6$ l/s/ha as recommended by PU, seems fully justified for *palawija* crops. Example of maize yields recorded in Kapilaler 2008 demonstration plots superior to $1,6$ tons per 2000 m^2 .

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