

## Rice in the south of Italy

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## Round table and symposiums

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On the occasion of the seminar, the two meetings below have been organized gathering the agricultural representatives of the Calabria and of Basilicata regions and rice growers: a round table in Sibari and a symposium at the *Azienda Agricola Sperimentale Dimostrativa 'Pantanello'*.

### 1. Round table (19 October, 1994)

This meeting has allowed some interesting exchanges between the authorities, farmers and researchers about the future of rice growing in Italy.

### 2. Symposium (21 October, 1994) ("Pantanello" experimental station, Metaponto, Italy): Prospects of rice dry cultivation in the Mediterranean basin.

Unlike the previous meeting in Calabria, this symposium was attended mainly by the teaching and extension staff of the Metaponto province. The *exposés* were followed by interesting discussions about the new techniques applied to rice cultivation.

A debate took place following these two meetings.

### Prospects of rice dry cultivation in Italy (symposium : Roseto, 19 October, 1994; Metaponto, 21 October 1994)

For traditionally flooded rice, the technic of implantation usually adopted for the direct broadcasting of seedlings in water fails to guarantee an optimum investment of the paddy field, particularly in temperate areas, on account of the unfavorable climatic conditions prevailing in spring.

The main unfavorable climatic conditions in Italy are:

- low temperature at germination impeding the normal development of seedlings;
- bacteria attack, fungi, crustaceans (*Triops cancriformis*) and worms, in flooded rice paddy fields;
- the ripples caused by the wind which prevent germs from rooting;
- the seedlings are choked by the algae population;
- the struggle against aquatic weeds (e.g. *Heteranthera*) which impedes the regular growth of seedlings.

In an endeavour to check these negative effects, an alternative technique for planting rice by burying the seedlings and of rice dry cultivation with periodic irrigation have been resorted to.

For rice which is not a typical aquatic plant, satisfactory yields may be obtained even without resorting to basin irrigation, provided that a certain amount of moisture be maintained in the field to prevent the water stress, mainly throughout the several critical stages. This may be obtained using different water saving irrigation methods. The best methods being those restituting the evapotranspiration at 100%. The irrigation methods already tested are the following:

- i) sprinkler irrigation (with a central axis, and a fixed wing);
- ii) runoff irrigation;
- iii) furrow irrigation.

At present, sprinkler irrigation is in its implementation stage in Italy. This method requires no special arrangement on the plot of land, but the more adequate irrigation method allowing a uniform water distribution. Runoff irrigation is mainly adapted to traditional paddy fields already made flat and laid out.

### A. Agricultural labour

With the exception of some cases where the rice area needs to be improved, the seedbed preparation requires no special care. The soil is superficially ploughed (15–20 cm), also because in the absence of submersion the roots are likely to develop only superficially. A too perfect seedbed is not necessary in these conditions.

### B. Seedlings

Ordinary drills can be used rather than the broadcasting method. Depth and uniformity are the determinants for sowing successfully and for rapid crop emergence. Depth must not exceed 2 cm. Usually, there is no need to use a roller. Considering the most favourable conditions for crop emergence, the quantity of seedlings is less than 25–30% than in the case of flooded sowing, 140–160 kg/ha depending on the varieties.

### C. Recommended varieties

- a) Japonica type: Koral, Loto, Vialone Nano;
- b) Indica type: Panda, Graldo, Pegaso.

### D. Fertilizers

Anticipating an infection of the species by *Chenopodium*, *Amaranto*, *Portulaca*..., a treatment with Stomp (e.g., Pendimetalin) is recommended. Typical weeds in paddy fields, such as *Giavoni*, *Ciperaceae*... can be controlled after crop emergence with the following mixture: Londa + (Bensulfuron-mehyl) 100 g/ha + Stam (propanile) 20 l/ha. Given Stam's low phytotoxicity, it should be spread twice: The first time at a dose of 10–12l/ha, mixed with Londax; the second time Stam alone is used at a dose of 8–10 l/ha, at 6-days interval. Usually another second treatment with Stam alone can be necessary.

