

附錄四、泰國 Nakornnayok 省 Banna 縣
農業土壤改良所資料



Acid Sulfate Soil Improvement Project Under the Royal Initiatives

Chaipattana Foundation

Ban Nongkunjam, Tambol Banprieak
Amphoe Banna, Nakornnayok Province, 26110

THAILAND



Established since 1997



Project Objectives

- 1) To conduct appropriate experiments in which the acid sulfate soils can be improved and cultivated.
- 2) To set up the demonstration plots under the concept of his Majesty the King's **New Theory** on the area of acid sulfate soil.
- 3) To develop the places where the people can observe, learned and can be trained how to make uses of the acid sulfate soils appropriately.

Location and aerial extent of the project area

The project area is belonged to the Chaipattana Foundation, located at Ban Nongkunjam, Tambol Banpriek Amphoe Banna, Nakornnayok Province. The total extent is approximately 20 hectares.



On-going Activities

1) Conducting number of experiments in Project Area No1 (8 ha) for improvement of an extremely acidic condition in soils and water by natural leaching with rain water but without any liming, included also screening of the acid tolerant plants species namely paddy rice, fruit trees, annual crops and woods.



Lists of acid tolerant plants

Rice Varieties

Suphanburi 90, Pathum Thani 1, Khao Dokmali 105 (KDML 105), Geumgang (GG), Pungsang (PS), IR 53650



Fruit trees

Jack fruit, santol, guava, mango, passion fruits, dragon fruit and *Elaeocarpus*



Annual Crops.

Pineapple, asparagus, cucumbers, squash, sword bean.



Woods.

Casuarinas spp, Acacia spp, Eugenia spp, Melaleuca spp, Neem Tree, and Eucalyptus.



Water loving plants.

Reed (*Cyperus imbricatus*) for making mat.



2. Establishment of the demonstration farms following the Royal Concept of the “New Theory” in Project Area No2 (6.4 ha)

2.1 The soils of these areas have been improved by means of liming, leaching of acidity and control of ground water at about 50–100 cm below the soil surface.

2.2 Three “New Theory” farms were constructed. The aerial extent of each farms are 1.6 ha, 1.28 ha and 0.96 ha respectively

2.3 Land uses of each farm comprise of the following proportion:-

The 1st farm (1.6 ha) : 30% paddy rice; 30 % orchard;
30 % fish ponds; 10 % homelot, garden
and livestock

The 2nd farm (1.28 ha) : 30 % paddy rice; 45 % orchard;
15 % fish ponds; 10 % homelot, garden
and livestock

The 3rd farm (0.96 ha) : 30 % paddy rice; 50 % orchard;
15 % fish ponds; 5 % homelot and garden
and livestock



2.4 The remaining areas include 2 farm ponds (0.16 ha for each one) and are cultivated to ornamental plants, and medical herbs. Fishes are also raising in each farm ponds



3. Demonstration of the wet - land habitats.

An area of 1.28 ha has been developed for demonstration of wet - land plant species. These include *Melaleuca sp*, reeds, sedges and other water - loving plants



4. Cultivation of ornamental plants for seedling propaganda and growing reeds for making mats in Project Area No3



5. Provision of various training courses on agricultural practices and handicraft production as well as welcoming all visitors.



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