

AAINews

**APPROPRIATE AGRICULTURE INTERNATIONAL
CO., LTD**

TEL/FAX:+81-42-725-6250

1-2-3-403 Haramachida, Machida, Tokyo, 194-0013 JAPAN

E-mail: aai@koushu.co.jp Home Page: <http://www.koushu.co.jp>

Irrigation in the Nile Delta, Egypt and Water Users Association

For millennia in Egypt, people farmed the Nile Delta using the water from the Nile. As the soil in the Delta is clay, basin irrigation is used to grow crops such as rice, pulses, grass and vegetables. As in many other developing countries, the population of Egypt is growing rapidly, and an increase in food production is an important challenge facing the country. Therefore, agriculture has been expanded by extending irrigation channels to areas adjacent to the Nile Delta.

I have had the chance to investigate irrigation areas in the Nile Delta from last year to this year. This time, I visited the Noubarya Area which is on the western side of the Delta. Irrigation water is channeled there via the Noubarya Canal from the Nile after being pumped up at three locations on the way. Many investors and laborers moved to the newly cultivated areas with the new jobs created here. As mentioned earlier, the soil is clay in the irrigation areas in the Nile Delta. By contrast, in the newly farmed areas, the soil is sandy, hence water saving irrigation methods such as drip and sprinklers are obligatory in order to achieve effective use of water resources. In addition, the irrigation water includes 10-15% of waste water that contains salt, to effectively exploit limited water resources.

As irrigation water is distributed via large scale channels, water use is managed through a water users association which is organized for each block in order to achieve smooth distribution of water resources. For some years after settling, we were told by chairpersons of water users association that a number of different crops could be cultivated due to irrigation, for example, wheat, alfalfa and broad beans in winter, and watermelons and various vegetables in summer. However, as the years passed by, the ground water level rose resulting in the salinization of soil. This in turn resulted in a situation whereby farmers could not continue farming because of substantial decreases in harvests. The problems were entirely caused by lack of adequate drainage systems. After requests were made to the Government, drainage systems were constructed and it became possible to resume cultivation.

Water users association played a major role in establishing drainage systems by lobbying the Government to establish drainage systems. Water users association do not only bear the simple responsibility of equitable distribution of water, but also have a critical role in meeting farmers' demands, coordinating association members' opinions and acting as a window for communication with the Government. In the Nile Delta, the establishment of a water users association is often a very complicated task, as water distribution and use relates to the interests of individual residents, different interests between people up stream and down stream, and human relationships with neighboring communities. Drainage channels in the Delta are very unhygienic because of the influx of household effluent and illegal dumping of household waste. In order to promote smooth water use, JICA has been supporting the establishment and operation of water users association. In oases in arid areas, traditional water users associations have existed for centuries. I wonder whether it is possible to learn from these traditional water users associations and use these lessons in associations in newly developed farm lands.



Irrigation channel and drainage in newly opened farm land



Water Users Association members with their pennants in hands



A drainage channel in the Nile Delta

(Zaitsu, March 2007)