



“Rice-Duck Farming” of Chinese Organic Rice Farmers Application and Adaptation

Sept. 2018

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Overview of Rice-Duck Farming

Rice-Duck Farming inherits and innovates upon the traditional Chinese practice of raising ducks in paddies.

After over 10 years of R&D in Japan, Rice-Duck Farming has spread across Japan and gained foothold in China, the Philippines, Korea, Vietnam and other Asian rice producers, becoming a "common Asian technology".

In 1999, Danyang of Jiangsu, China became the first to introduce this technology. Past 20 years have seen significant progress and innovation in the application and adaptation of the technology.

Rice-Duck Farming vs. Duck in Paddy

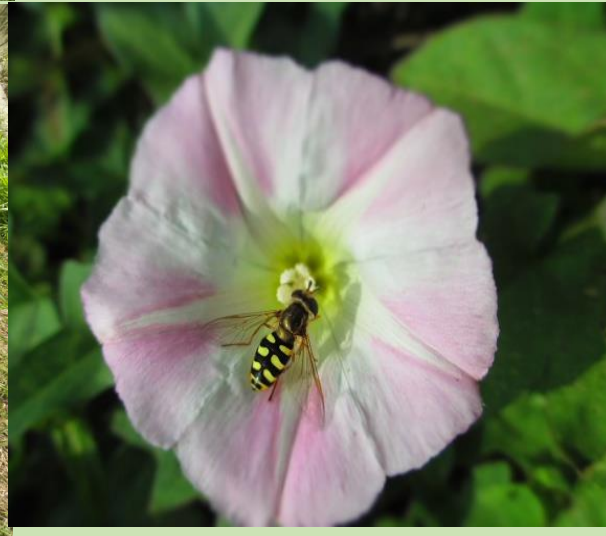
	Duck in Paddy	Rice-Duck Farming
End goal	Duck	Rice
Subject	Protect rice; rice and ducks separated	Rice farming and raising ducks in one
Scope and extent	Ducks in the field in the morning only; short time and little impact	Ducks go in after seedlings has stabilized until heading; long time and big impact
Duck variety	Meat or layer (big and inactive)	Specially bred working ducks (small, active and strong forager)
Concept	Traditional agriculture	Modern Agriculture (organic, environmental, sustainable)

Innovation in Rice-Duck Farming in Organic Rice Production in China

Innovative application in organic rice farming :

1. Released right after birth. 270-375 ducks/ha., 0.4 ha. max per plot, giving ducks enough space.

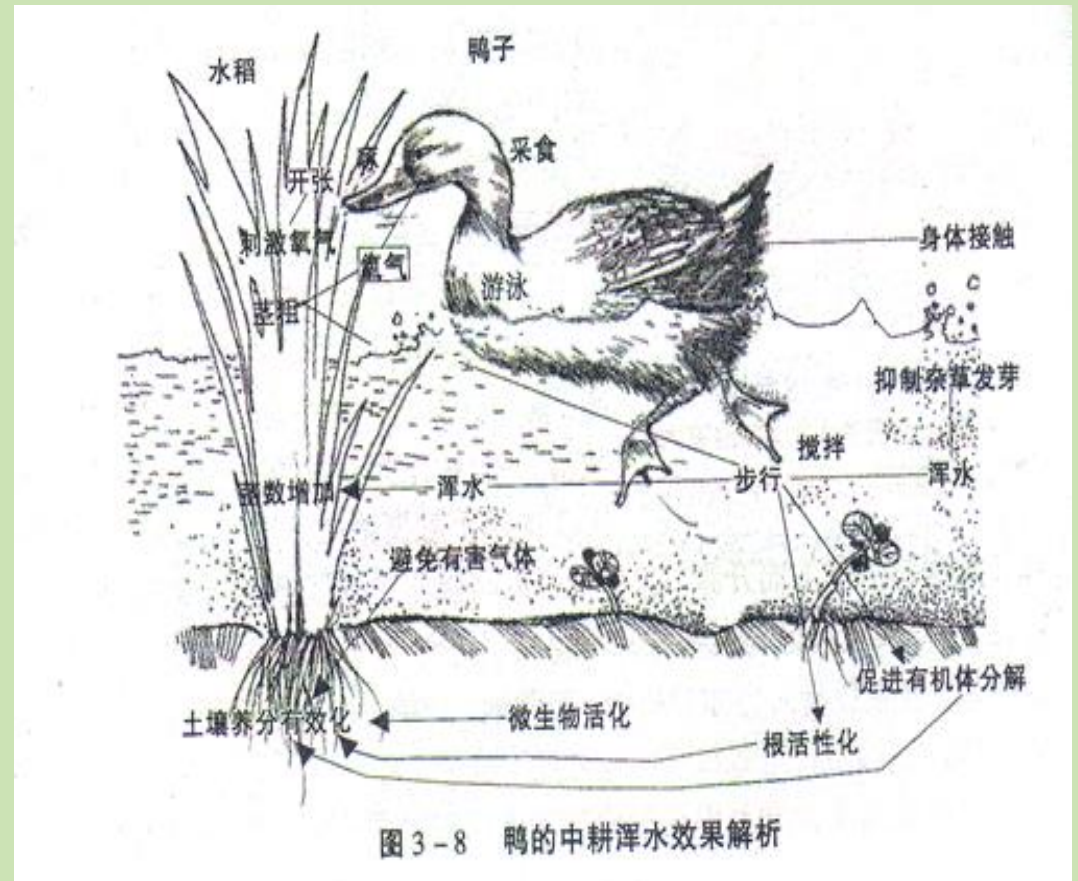
2. Eco ridges. Rice-Duck Farming requires high water level, so 10-cm thick, 35-40-cm deep cement ridges are built, between which are 70-80 cm of earthen ridge for wild grass and flowers, to help parasitic wasps.



Role of Rice-Duck Farming in Organic Rice Production

Rice and ducks benefit each other. Fields give ducks space, food, shade and shelter; rice absorbs manure, cleans water; ducks curb weeds, pests, stir water to stimulate growth. Both are winners, so are we who get safe food.

Hence Rice-Duck Farming has become a key method in organic rice production in China.



Role of Rice-Duck Farming in Organic Rice Production

1. Weeds. Working ducks eat weeds, stamp on weeds and muddy the water to curb weed growth.
2. Pests. Omnivorous working ducks prey on pests like rice plant hoppers and some *Cnaphalocrocis medinalis*.
3. Replenish O₂ and reduce diseases. Stir the water to add 20% more oxygen, boost root growth, enhance disease resistance, esp. against rice blast, sheath blight, etc.
4. Rub and stimulate. While catching pests, beaks rub between plants to stimulate stronger growth, enhance tillering and enhance resistance against rice blast, sheath blight, etc.
5. Duck manure. In 60 days, a duck produce 10 kg of manure, basically enough for later stages of organic rice growth.
6. Save water. Requires constant water so ridge must be maintained. So no leakage. Save 1/5 of water than conventional rice production.



Role of Rice-Duck Farming in Organic Rice Production

Assist weed and pest control

Working ducks eat broadleaf weed and curb other weed growth. Still some large weeds and barnyard weeds needs manual weeding. 2-3 manual weedings are required.

When plants are above 60cm, ducks are less effective to control pests in upper parts of the leaves. We have solar light traps, with various light sources to trap adult pests.



Women's contribution to organic agriculture in China

Rice-Duck Farming has been proven to improve income, which incentivizes organic rice farmers. Women-"half the sky"-have also taken an active part in organic Rice-Duck Farming.





Thank You!