



## Bai Yen Village, Dan Chu District, Hoa Binh Province

### General Information

Bai Yen village implemented Green Productivity (GP) methodology independent of the Vietnam Productivity Center (VPC). After the representatives from the Department of Science, Technology and Environment (DOSTE) attended a workshop, they decided to implement GP in Bai Yen village. The VPC provided training and DOSTE and the villagers provided the funding required for implementation. The project extended from 2000 to 2001.

Bai Yen village in the Dan Chu district of Hoa Binh province is located 70 km northwest of Hanoi.

Some characteristics of the village are as follows:



### *Bai Yen Village, Dan Chu District, Hoa Binh Province*

Cultivated land: 53 ha.
Residential land: 3.4 ha.
Population: 467 people within 94 households.
Average income: 2,420,000 VND/person/year.
Main production activities
Agriculture: 323 villagers are involved

## MAIN ISSUES

- General environmental pollution as a result of people's activities and a small forest area was a major issue.
- The water resources (surface and groundwater) were polluted as latrines and breeding facilities were located around the well. Moreover, polluted water was used without filtration.
- The breeding facilities and latrines were unhygienic in the village as human and animal waste was discharged directly onto the land without any treatment.
- The management of solid waste was improper.
- Chemical pesticides and fertilizers were used incorrectly by the farmers.
- Soil erosion was also a major concern for the village. Cultivated land was losing a lot of top soil and was becoming sandy.
- The transportation system was inadequate and degraded.
- Agricultural productivity and the quality of agricultural products produced in the village were low.
- The villagers were unaware of environmental protection.

## GP OPTIONS

- (1) Increase the villagers' awareness of environmental issues.
- (2) Upgrade the drinking water supply.
- (3) Upgrade breeding facilities and latrines.
- (4) Use effective microorganisms (EMs) to treat solid waste.
- (5) Upgrade the drainage system.

## IMPLEMENTATION AND RESULTS

- Nine training courses were conducted. The aim of the training was to raise the villagers' awareness of environmental issues. One hundred and twenty people participated in the courses.
- The villagers now have a positive attitude toward the environment. They have learned to protect and care for their environment.
- A small-scale water treatment system was established. Five boreholes were drilled, each with its own hand pump.
- Eleven sewage lines of total 50 m in length were installed in the main road.
- The Villagers are now willing to use hygienic latrines.
- The village drainage system was upgraded by constructing 2.5 km of drainage around the village.
- EMs are now used to clean the breeding facility, treat animal waste, and deodorize livestock breeding areas.