

Spanning the Gap

Farming the Park



U.S. Dept. of the Interior
National Park Service

Spanning the Gap
The newsletter of
Delaware Water Gap National
Recreation Area
Vol. 22 No. 1 Spring 2000

With nearly 3,000 acres in agricultural production, Delaware Water Gap National Recreation Area leads the national park system in the number of acres farmed. Why is farming allowed in a national park?

by Larry Hilaire

Picture it. The year is 1300 A.D. Prayers and tobacco are being offered up to the spirit *Kahesana Xaskwim* (kay-ess-ahna haas-queem) or "mother corn" by some of the earliest inhabitants of this valley—the Lenape (or Delaware) Indians of the Munsie group.

Kahesana Xaskwim is the one of the *manitowouk* (man-ee-toh-wook), or spirits. She is a benefactor of mankind, and oversees all plants, including corn. The Lenape hold special dances, songs, and celebrations throughout the year to thank her for taking good care of the corn and green plants. It is said that the Munsie women even offer her bear meat along with their prayers.

Today, almost a millenium later, people still grow corn in this valley, along with soybeans, hay, and small grains such as oats. Instead of working small gardens with hand tools, they harvest large fields with modern machines like the combine shown in the photograph above.

Agriculture plays a very important role in managing the landscape of the recreation area. Without farming, the fields would quickly turn into forest, and farmed fields are part of the *cultural landscape* -- how the area of the park appeared historically.



The park issues permits for "ag" fields to area farmers through multi-year contracts. In addition to the croplands, farmers have the responsibility of keeping other lands open for wildlife, usually by mowing every couple of years or planting native grasses. Thus, agriculture provides habitat for wildlife.

The hedgerows and tree-lines that divide crop fields provide travel lanes and homes for groundhogs, squirrels, deer, songbirds, and pheasants. Mature trees such as walnut, cherry, apple, butternut, and oak provide food for wildlife. When trees get too tall and start to shade or overgrow the hedgerows, they can be thinned out, and the branches and trees trimmed from hedgerows are made into brush piles, providing protective cover for small mammals and birds. Field borders and contour strips help to stop erosion while providing grassy cover and food to still more varieties of wildlife.

In order to protect the land from pesticide use, erosion, and other problems associated with modern-day farming practices, farmers must follow a conservation plan developed in consultation with the Natural Resource Conservation Service. This plan includes information on soil types, recommendations on planting, and other practices designed to protect land and water. The plan also restricts farmers as to the types and amounts of pesticides they are allowed to use to control weeds and pests.

Most of the fields are *no-tilled* or *minimum-tilled*, i.e., simply disked rather than plowed. *Disking* the surface prior to planting, rather than plowing, merely chops up the previous year's crop residue and leaves it on the surface. Over time, this organic "mat" of residue shields the soil surface from erosion by the wind and the rain, and acts like a snow fence in the wintertime, trapping snow while helping to retain soil moisture. The mat also prevents run-off of fertilizer and herbicides into groundwater supplies, while helping to build topsoil.

Our farmers provide valuable services to the park.



(Above) A modern-day combine at work harvesting corn in the recreation area.
(NPS Photos by Larry Hilaire)



Grassy field buffer and residual corn stalks from a field planted using the "no-till" method. No-till planting leaves layers of organic matter on the soil surface, protecting the soil from erosion and protects the soil from water and nutrient loss.



Hedgerows and grassy field

They keep open areas open, they use their own equipment to help the park complete projects like planting native grasses, and they perpetuate a nearly 1,000-year-old tradition of agriculture in this scenic river valley. Wildlife, birdwatchers, hunters, and park visitors in general all enjoy the benefits of the recreation area's agricultural permit program.

Today, even though the Lenape people are scattered far and wide, the spirit of *Kahesana Xaskwim* still has crops and plants to look after here in the scenic valley of the Delaware River.

buffers protect agricultural fields and the river/watershed from erosion, and help absorb any excess of nutrients. (NPS Photo by Larry Hilaire)

Larry Hilaire is a wildlife biologist who oversees agricultural permits within the recreation area's Research and Resource Management Division.



Grains

(dried, about 3/4 size)

Wheat

Rye

Oats

Barley