

The Multiple Benefits of Agriculture

Analysis and Policy Development for Social, Economic, and Environmental Benefits in Agriculture

Issue # 4, December 2000

Project Coordinator's Notes

In this newsletter, you will find descriptions of the primary scenarios we will use in our analysis of the social, economic and environmental benefits resulting from different types of agriculture. The Multiple Benefits of Agriculture analysis is based upon the comparison of different future scenarios to the baseline: how will changes in farming practices and systems affect the environmental, social, and economic outcomes for communities? What interests are served by changing the incentives or drivers for our agricultural practices? How can we value these changes? We have developed four scenarios which will provide the basis for our analysis in the coming months. These scenarios were developed through focus groups, interviews, expert input, and long work by the steering committee for the project. If you have comments, questions, or would like to make suggestions on the scenarios, please do not hesitate to contact me.

-- Mara Krinke, Project Coordinator

Baseline Review

The Wells Creek watershed totals 45,000 acres (53% in corn and/or soybeans, 20% in pasture, 10% in hay, 5% in grains, 2% in CRP and 10% in other land uses such as trees, roads, and buildings). Over 19,000 hogs are raised/finished in the area. There are approximately 7,000 dairy cows and 2,000 beef cattle in the watershed.

The Chippewa River sub-watershed contains 44,000 acres (72% in corn and/or soybeans, 10% in sugarbeets, 6% in pasture, 3% in grain or hay, 1% in CRP and 7% in other land uses). Almost 18,000 turkeys, 9,000 hogs, 1,000 beef cattle, and 400 dairy cows are raised in the watershed. Goats and chickens are raised in small numbers.

Data are preliminary. The baseline will also include information on runoff of sediment, nitrogen and phosphorus into waterways; data on the different organizations and groups working in the watersheds; and a survey of the markets for farm inputs and outputs in the watersheds. Additional data will be released when available.

Brief Scenario Descriptions

Pressure for cheap food and maximized profitability drive the *current trends scenario*. We see trends toward fewer and larger farms with increasing acreage in row crops and the loss of some small and mid-sized livestock farms. Small, more diversified farms are the other surviving form of agriculture. We predict that there will be an increasing level of corporate control and management of farms, but land will be held by absentee owners. More and more farms will be in contracting systems. This is a capital-intensive system which will likely propagate negative environmental outcomes such as erosion, nitrification, and habitat loss. Surviving towns do so with a base in non-agricultural economy.

Government programs and other incentives drive the *adoption of best management practices (BMPs) scenario*. These BMPs include conservation tillage, contour strips, terraces and buffers around streams, as recommended by Extension agents and county Soil and Water Conservation Districts. Increased use of BMPs could result in increased farm size because producers will till more land to compensate for possible decreases in yield and because more of their land is taken out of production (e.g., with buffer strips). The purpose of developing this scenario is to show how far we can get by adopting currently recommended management practices on the types of farms currently in the watersheds.

A focus on profitability rather than productivity drives the *community and economic diversity scenario*. This scenario is also driven by an emphasis on quality of life and on food quality rather than commodity production. In modeling different versions of this scenario, we will include increased crop diversity (including some organic products and perennial crops), prairie plantings for seed sales, community supported agriculture farms, cover cropping, land managed for hunting preserves, management intensive rotational grazing systems and wetland restoration in appropriate areas. Wide buffers that would be used in a working landscape will edge streams. Incentives for farmers will be based on environmental outcomes, not commodity production. In variations of this scenario, we will assume higher levels of government support for landowners who produce measurable environmental benefits. A fourth scenario will assume a focus on covering black soil with different types of cover. The *year round cover scenario* will include cover crops, grasses, and other land uses to ensure soil is not directly exposed to wind and water erosion.

Project Timeline

January - finalize scenarios, run biophysical model to calculate environmental benefits; develop estimates and descriptions of benefits to communities and economies under the different scenarios. Mail contingent valuation survey for estimates on Minnesotans' willingness to pay for improved environmental outcomes from farms.

March - Analyze results; create rough draft of report and send out for review.

June - Write final draft of results in Wells Creek and Chippewa watersheds for this phase of the project.

July and onward - enter second phase of project.

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News and Notes from the Multiple Benefits of Agriculture Project



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Many of you are receiving this newsletter for the first time. Welcome! We publish this newsletter every two months to keep a wide variety of interested people informed about the developments of the Multiple Benefits of Agriculture project, an effort to quantify the environmental, social, and economic benefits of different types of agriculture in two Minnesota watersheds. Newsletters are available on LSP's website: <http://www.landstewardshipproject.org>.

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