

Watershed News

November 2005

South Branch of the Root River Watershed Project

NEW LOAN PROGRAM MAKES UPGRADING OLD SEPTIC SYSTEMS EASIER

Mike and Joanne Souhrada knew they needed a new septic system. Much like most old systems installed many years ago, sewage was coming out of a pipe into the ditch near their home. Since they had been planning to remodel their home, it seemed like the perfect time to fix the problem. And the timing could not have been better. Low-interest loan funds became available through the South Branch Root River Watershed Project for upgrading septic systems, and they didn't even have to go to a bank.

Applications for the loan program are administered through the Fillmore County Zoning Office and the Mower County Environmental Services Office. Set up to be similar to Mower County's county loan program, it allows watershed residents to apply for the loans through the county and pay back the loans with their property taxes. Loan terms are ten years, so even the maximum loan amount of \$10,500 for a mound system is affordable. In most cases, payments come to less than \$100 per month. The maximum loan amount for a trench system is \$7500. Mower County is charging 3% interest, while Fillmore County is charging 4% interest. Loans are disbursed when the project has been completed and has received a certificate of compliance from the county office.



Shown here by the inspection pipes for their new septic system, Mike and Joanne Souhrada are pleased with the process for applying for the loan. "The paperwork was simple and straightforward," Mike said. "The process was 'painless.'" His system was installed by O'Connell Excavating from Spring Valley. A pump was needed to pump the liquid from the tank into the drainfield. The drainfield had to be situated on a higher part of the yard where the soils met the requirement for having three feet between the bottom of the drainfield and the ordinary high water table. This ensures that all pathogens and other pollutants in the liquid portion of the sewage are adequately treated.

The new loan program, which began in 2005, has \$300,000 in funds available from the MN Pollution Control Agency's Clean Water Partnership program. The only requirements to qualify for the loan are that the applicant is the owner of the property and that the property taxes are current. The loans are handled as a special assessment recorded as a lien on the property. If the property is sold or transferred, the loan must be paid off. The loan can be paid off early without a penalty.

Contact the Fillmore County Zoning Office in Preston at (507)765-3325 or the Mower County Environmental Services Office in Austin at (507) 437-9527 for application information.

HAY SET-ASIDE PROGRAM OFFERS OPTIONS

Farmers were frustrated. They wanted a set aside program like CRP but still wanted to be able to harvest the forage and keep the trees from taking over. So the hay set aside program was born and is being piloted in the South Branch Root River watershed.

The program pays farmers \$50 per acre per year for three years to plant hay and/or grasses in buffers along streams, sinkholes, wetlands, and field borders. The hay can be harvested up until September 15th. Hay buffers should be a minimum of 33 feet wide up to a maximum of 180 feet. Seeding mixture is an alfalfa, timothy, brome combination, but can be modified with approval from the Soil and Water Conservation District (SWCD) office. Sign up is through the local SWCD office.

Another option under this program is to receive a \$150/acre one-time bonus payment (\$50/acre/year for 3 years) for installing continuous CRP buffers. This payment is made as a lump sum payment upfront when the 15-year CRP contract is signed. CRP waterways in the uplands are eligible.

For more information, contact the Fillmore SWCD office at (507)765-3878 or the Mower SWCD office at (507)434-2603.



Buffers can prevent up to 80 percent of sediments and phosphorus from reaching surface waters. The vegetation traps the sediments and associated pollutants in the runoff. In addition, the buffers increase infiltration of water allowing soil treatment of many pollutants and recharging ground water.

ATRAZINE BMPs PROTECT WATER QUALITY

Atrazine concentrations have been rising in southeastern Minnesota streams according to data collected by the Minnesota Department of Ag (MDA) since 1989. In 2002, pesticide monitoring began in the South Branch of the Root River in cooperation with the MDA. In all three years of monitoring, atrazine concentrations exceeded the water quality standard for streams, which is 3.4 parts per billion (ppb), at least once during early summer runoff events. Low concentrations of atrazine have been detected in all samples collected throughout the year including in midwinter when only ground water is supplying the base flow in streams.

In 2004, MDA released a list of voluntary Best Management Practices (BMPs) for producers to follow to reduce the risk of atrazine contamination of water resources. Core practices for general herbicide use plus those specific for atrazine include:

- Scouting for weeds and matching the management to the problem.
- Evaluating reduced or split herbicide application rates.
- Incorporating herbicides into the soil to reduce runoff.
- Evaluating surface drainage patterns and installing filter strips and establishing buffer zones for streams, sinkholes, wells, and tile inlets. Atrazine use should also include identifying where runoff leaves the fields and considering protection measures for those vulnerable areas.
- Determining depth to ground water and considering protective measures.
- Rotating herbicide modes of action, i.e. rotating use from different chemical classes; atrazine is a photosynthesis-inhibiting herbicide, as is metribuzin.
- Considering precision application of herbicides.
- In SE MN, limiting total atrazine use to 0.8 lbs. per acre per year on all soils except medium- to fine-textured soils where 1.0 lbs. per acre per year can be used.
- Adopting conservation tillage methods appropriate for a farm's topography and SE MN karst areas.
- Identifying label-required setbacks and planted buffers for your farm.

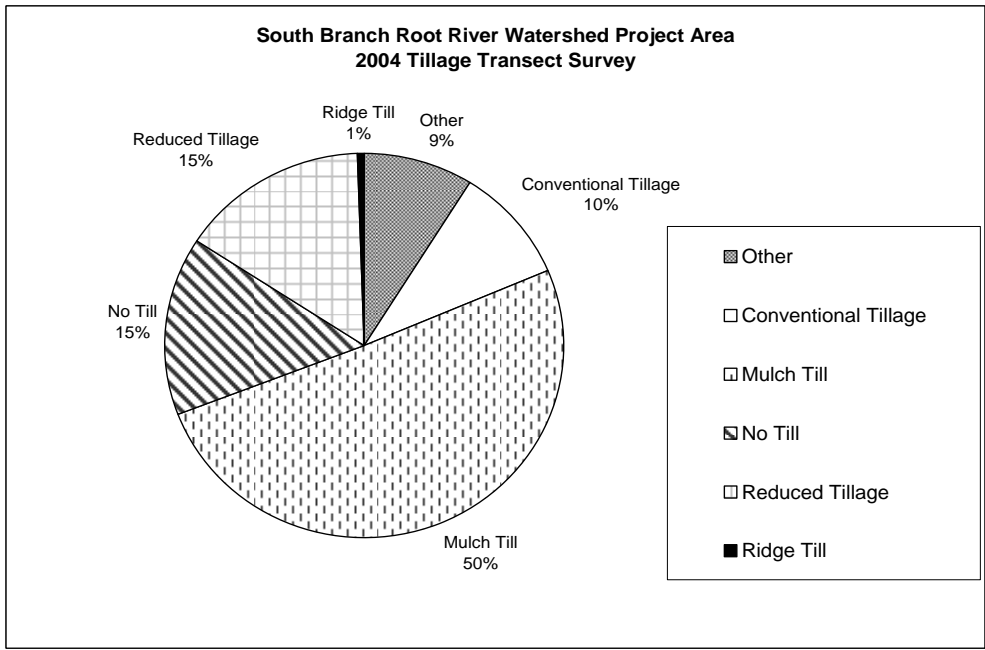
Atrazine, and premixes and tank mixes containing atrazine, may not be applied within 66 feet of points where runoff enters perennial or intermittent streams, within 50 feet of wells or sinkholes, or within 200 feet of natural or artificial lakes or reservoirs.

TILLAGE PRACTICES IN THE SOUTH BRANCH ROOT RIVER WATERSHED

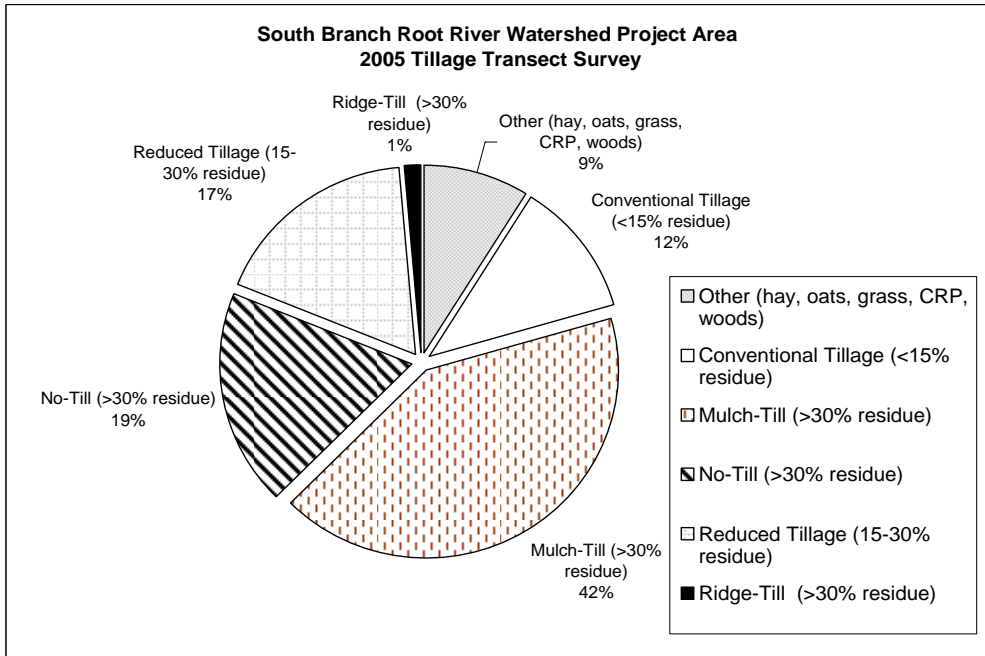
Over the past two years, a survey of tillage practices has been conducted in the watershed at 132 sites. Fields on both sides of the road are observed for a total of 264 records. Each stop is approximately one mile apart. The purpose of the survey is to determine the amount of crop residue left on the land immediately after planting. Present and past year's crops are also recorded. Fields are classified into six categories:

- Conventional tillage (less than 10% residue)
- Reduced tillage (15 to 30% residue)
- Mulch tillage (some tillage--more than 30% residue)
- No till (no tillage—more than 30% residue)
- Ridge till or strip till (same as no till)
- Other (hay, oats, pasture, CRP, woods, buildings)

The pie charts below compare the results from 2004 with those from 2005.



Maintaining more than 30% residue following harvest and after spring planting protects the soil from erosion and aids water infiltration during the time when soils are most vulnerable to erosion. More infiltration provides moisture to crops during dry periods, recharges ground water, and maintains base flow in springs and streams.



***BUFFER BONUS
PAYMENTS FOR
CONSERVATION
TILLAGE***

Producers can receive a \$7/acre payment for adopting a conservation tillage practice that increases the amount of residue left on fields adjacent to conservation buffers. Planting a cover crop is also eligible for the \$7/acre payment.

TILLAGE PRACTICES IN THE SOUTH BRANCH ROOT RIVER WATERSHED

Over the past two years, a survey of tillage practices has been conducted in the South Branch Root River Watershed at 132 sites. Fields on both sides of the road are observed for a total of 264 records. Each stop is approximately one mile apart. The purpose of the survey is to determine the types of tillage used and the amount of crop residue on the fields. Surveys are usually conducted in the first week of June. Fields are classified into six categories:

- Conventional tillage (less than 15% residue)
- Reduced tillage (15 to 30% residue)
- Mulch tillage (more than 30% residue)
- No till (more than 30% residue)
- Ridge or strip till (more than 30% residue)
- Other (hay, oats, pasture, CRP, woods, buildings)

Maintaining more than 30% residue following harvest and after spring planting protects the soil from erosion and helps water soak into the ground during the time when soils are most vulnerable to erosion. More water in the ground provides moisture to crops during dry periods, recharges ground water, and maintains base flow in springs and streams. Conservation tillage also saves farmers labor, fuel, and machinery.

For the past several years, the SWCD and the Natural Resources Conservation Service (NRCS) have been conducting a tillage transect survey in all of Fillmore County about every other year. Almost 500 sites are recorded in the survey to determine crop residue management practices. In 1995, the survey showed 39 percent of the corn and soybean fields in the county meeting the residue target of 30 percent. In 1998, only 23 percent met the target. In 2000, that increased back to 44 percent. In 2004, 45

percent of the fields had at least 30 percent residue, including 72 percent of the soybean fields in conservation tillage and 27 percent in no-till.

In the South Branch Root River Watershed, these percentages are higher for 2004 and 2005, which may reflect an overall trend toward maintaining more residue cover. In 2004, about 66 percent of the fields met the residue target of at least 30 percent. In 2005, 62 percent of the fields met the target. (See the pie charts on the next page.)

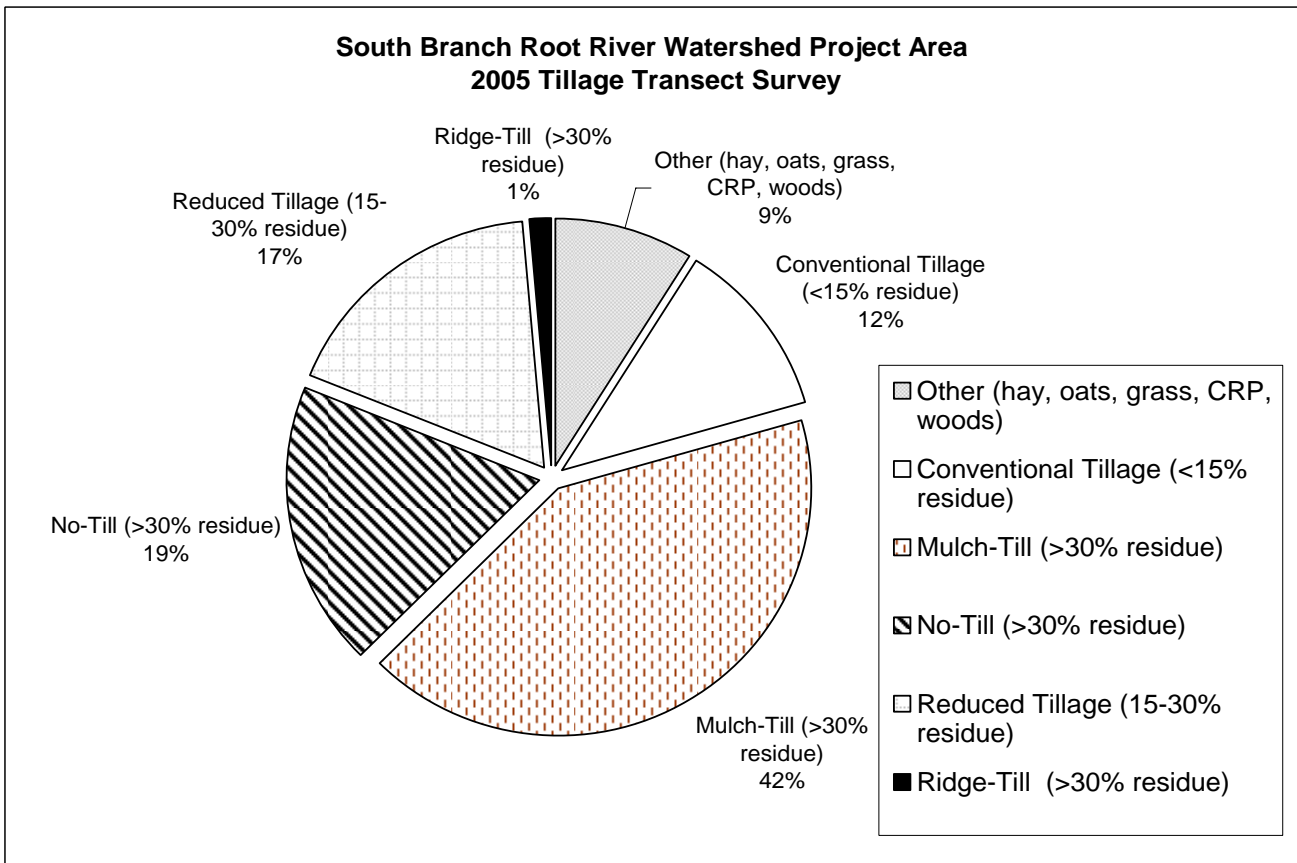
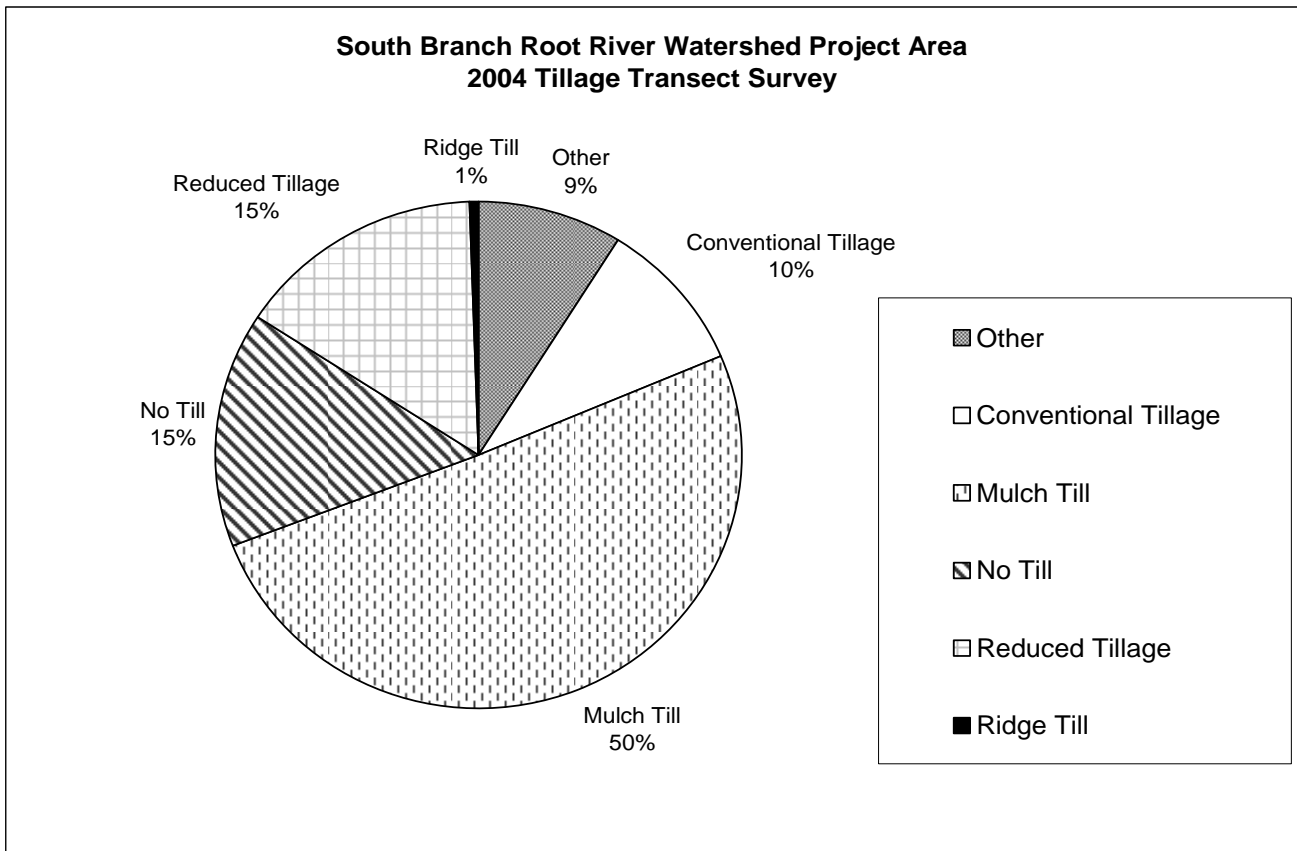
On the flip side, there are still 10 to 12 percent of the fields that are being conventionally tilled (less than 15 percent residue). Another 15 to 17 percent of the fields are in reduced tillage with only 15 to 30 percent residue remaining. Fields with less than 30 percent residue are more susceptible to erosion, especially if the tillage is occurring in the fall. Slope and soil characteristics are also factors in how easily the soil will erode.

As an example, soils that were originally formed where the native vegetation was forests are more likely to erode. Cropped areas in these soil types may need to be managed differently from those with soil types formed where prairie grasses were the native vegetation. Maintaining residue is one management practice that would reduce erosion. These areas may also be suitable for re-establishing trees as a long-term investment to provide supplemental income when conventional crop prices are low.

BUFFER BONUS PAYMENTS FOR CONSERVATION TILLAGE

Producers can receive a \$7/acre payment for adopting a conservation tillage practice that increases the amount of residue left on fields that are adjacent to conservation buffers. Planting a cover crop is also eligible for the \$7/acre buffer bonus payment. An additional \$4/acre is available for developing and implementing a nutrient management plan on acres adjacent to buffers. These practices can be combined to receive a combined payment. For example, planting a cover crop and no-tilling a crop into the cover crop residue would receive a payment of \$14/acre. Low-interest loans are also available for purchasing conservation tillage equipment. Contact your local SWCD office for more information.

The pie charts below compare the tillage transect survey results from 2004 with those from 2005.



WORK PROGRESSES ON JD#1 CLEANOUT

*Rick Morrison, Drainage Inspector
Mower County*

The cleanout of the J.D. #1 drainage system is progressing fairly well. Mayer Digging of Osage, Iowa has the contract to remove the trees and brush and has been working on that since January when weather permitted. They have less than a mile to complete that part of the project. All the wood is either piled to be burned or piled to be hauled away for manufacturing. There were some trees left standing that were not in the immediate area of the open ditch and would not be in the way of the dredging of the ditch.

Freeborn Construction, Albert Lea, MN, has the contract for the actual cleaning of the open ditch. They have moved their equipment onto the site and plan to start the last week of March or the first week of April. The contractors were required to have an erosion control plan in place so hopefully the downstream impact will be very minimal. The Mower County SWCD along with the NRCS department are working with several landowners to implement filter strips next to the open ditch once the cleaning is completed.

*And let this be the law: If anyone intentionally pollutes the water of another, whether the water of a spring, or collected in reservoirs, either by poisonous substances, or by digging, or by theft, let the injured party bring the cause before the warden of the city.
-- Plato, Laws, c. 400 B.C.*

AMERICAN FARMLAND TRUST NUTRIENT BMP CHALLENGE

Minnesota farmers are eligible to participate in a new program offered by the American Farmland Trust (AFT). The BMP Challenge allows farmers to try Best Management Practices (BMPs) for nutrients and reduced tillage risk-free. This "performance guarantee" is an opportunity to try the BMPs without the risk.

One or more corn fields can be enrolled (up to 120 acres) before applying commercial fertilizer. Normal fertilizer rates are applied to a check strip in each field. On the balance of the field, university-recommended BMP fertilizer rates for N, P and/or K are applied with the help of a crop advisor. The entire field (check strip and balance) is managed exactly the same way. A crop advisor helps set up the check strips. For those already applying fertilizer at BMP rates, help is available for evaluating even lower rates using the side-by-side approach. At harvest, yields are assessed and the farmer receives a payment if the yield less the fertilizer cost results in a net loss.

Through grants from NRCS, the Great Lakes Protection Fund, McKnight Foundation and others, American Farmland Trust compensates CCAs for a number of these program-related services. Farmers with a negative net-economic-return are compensated for the loss - ensuring earnings at least as good as before taking the BMP Challenge. Farmers who save dollars or increase income are asked to contribute a small portion of those savings to support the BMP Challenge program.

The CHALLENGE is backed by a commercial service agreement provided by Agflex, an Iowa corporation. Agflex is not an insurance company and does not sell insurance. The CHALLENGE is not insurance and pays you only for losses due to nutrient insufficiency.

These programs are designed for farmers growing corn for grain and/or silage. For more information, please contact Regina Hirsch at 608-873-8393 or email to regina.hirsch@sbcglobal.net.

Combined with the Buffer Bonus payments offered through the South Branch Root River Watershed Project (\$7/acre for reduced tillage and \$4/acre for nutrient management), any profits can be increased or any losses can be further offset. Contact Donna Rasmussen at 765-3878, ext. 122 or at donna.rasmussen2@mn.nacdn.net if you are interested in combining these programs.

Fillmore SWCD
900 Washington St. NW
Preston, MN 55965

CREP COMES TO SE MINNESOTA

The second round of the Conservation Reserve Enhancement Program (CREP) is here, and southeast Minnesota has 51,000 acres that can be enrolled. CREP combines the federal Conservation Reserve Program (CRP) with the state Reinvest in Minnesota (RIM) easement program to provide long-term easements to set aside marginal cropland. Highly erodible land, wetland restorations, riparian (streamside), flood reduction, and ground water protection areas are all eligible if they meet the program criteria. The easements are either permanent or 45 years (15-year CRP contract that is concurrent with a 45-year RIM easement). Payments and incentives can range from \$2500 to \$2900/acre. Cost share of up to 100% is available for construction and seeding. Sign up for CREP is continuous and extends through the current federal farm bill which ends in 2007. For more information, contact Mower SWCD at (507)434-2603 or Fillmore SWCD at (507)765-3878.

LIVESTOCK ON THE LAND: ECONOMIC AND ENVIRONMENTAL BENEFITS

The New Look at Livestock Initiative is in the process of developing a video and Power Point presentation for non-farm audiences that explains the economic and environmental benefits of having livestock in southeastern Minnesota. Livestock production brings in over \$450 million in revenues to this region. Livestock also increase the amount of permanent vegetation on the land as hay and pasture, which reduces soil erosion. If your group would like to have this presentation for an upcoming meeting, contact the Fillmore SWCD office at (507)765-3878, ext. 3.

Now our biggest environmental problems come from our own actions, our own choices, rather than pollution produced by big business.

-former Minnesota Governor Jesse "The Body" Ventura, quoted in "Ventura: Pollution control starts with individuals," *St. Paul Pioneer Press* April 24, 2001