

Make hay while the sun ...

... isn't shining. When rain keeps you from the fields month after month, here are some alternatives that could actually increase your production.

**By Troy Salzer
Minnesota Extension**

Last summer was a challenge for those of us trying to make hay, and that may not change.

Recently, Jerry Hatfield, a U.S. Department of Agriculture climatologist suggested our region was a lot wetter than normal last summer, and models predict that's likely to continue.

These conditions made it nearly impossible to harvest forage as dry hay. As a result, farmers have become frustrated without many options to produce quality feed.

Wrapping wet hay has benefits

When you wrap hay, you can harvest forage at a wide range of moistures (20 to 75 percent) with an ideal moisture content of 40 to 60 percent.

This flexibility allows farmers to make "hay in a day," cutting and baling within 24 hours if necessary. One producer told me that a day was as long as he would consider a weather forecast to be accurate.

In addition, quicker harvest reduces loss as it reduces leaf shatter, allowing the leaves to stay attached to the stalks and may increase the yield by 7 to 15 percent. Quality of less-mature forage is improved since you don't have to wait as long for a harvest window.



This can also decrease storage losses because the hay is essentially stored inside.

Three cuttings best overall

Previous data that I have collected suggests that a timely harvest of three crops (instead of just two) could increase yield by .75 to 1.25 tons per acre as well improving quality 12 to 18 percent based on forage energy values.

So consider implementing three cuts per season as a production practice. If you don't have your own machine, try to rent a wrapping machine or hiring someone. According to my calculations, the reduction in storage loss alone could cover the costs of wrapping the hay, not counting the flexibility of harvest and increased yield.

With all of these things in mind, try to be proactive and ready next spring by having a wrapper ready should you need it.

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Good soil helps the environment

If you want high-quality soil, think about nematodes, earthworms and a texture like cottage cheese.

Good-quality soil combined with conservation will boost yield and protect the environment, according to Extension educators at a September field day.

The event was organized by WLSSD's Field Green® biosolids program to help farmers learn about conservation techniques.

The field day focused on identifying a good soil, and identifying water features to maintain appropriate buffer zones. Extension educators Troy Salzer of Carlton County and Jane Anklam of Douglas County gave presentations. Field Green® staff demon-

strated computer mapping and field practices to protect water quality.

A high-quality soil absorbs and holds water better, has more bugs and microbes to convert organic matter into nutrients. A better soil will also support tractor tires better and have fewer ruts.

How do you tell if a soil is high quality? Here are a two tips.

First, a good soil has more bugs you can see with the naked eye— not just earthworms, but also the smaller nematodes. Soil is a complex ecosystem with lots of microbes, as small as bacteria and as large as earthworms. In fact, a gram of good soil will have up to 1 billion bacteria.

Second, good soil will crumble

in a texture similar to cottage cheese. Microbes, again, are the reason. In this case, it's fungi. Fungi create long filaments that move nutrients around and knit soil particles together.

How do you get there? Traditional farming's focus on nutrient management is a good start – a well-balanced diet gives soil a chance to improve.

The Natural Resources Conservation Service promotes four management principles to improve soil:

- Minimize disturbance (till as little as possible)
- Maximize soil cover
- Maximize biodiversity
- Maximize presence of living roots



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Conservation help is a phone call away

Conservation, productivity and profit can work hand-in-hand. Here's a guide to county, state and federal agencies that can help with advice and cost sharing.

Wisconsin

Local extension offices can help with nutrient management and general information.

Contacts:
Douglas County Extension,
(715) 395-1515.

Counties offer a number of programs with cost sharing through county conservationists. These programs can include help to finance projects like manure storage, livestock management, waterway buffers, grazing and stream crossings.

Contacts:
Douglas County
Conservationist,
(715) 395-1380.

Minnesota

County extension offices offer advice, resources and coordinate educational events.

Contacts:
Carlton County Extension,
(218) 384-3511

St. Louis County Extension:
Duluth, (218) 733-2807
Virginia, (218) 749-7120

The state of Minnesota offers the ***MN Agricultural Water Quality Certification Program***. The program is flexible and, once certified, a farmer can avoid new regulations for 10 years.

Contacts:
Carlton County Soil and
Water Conservation District,
(218) 384-3891

NRCS

The Natural Resources Conservation Service is a federal agency. Its programs include:

Environmental Quality Incentives Program (EQIP)

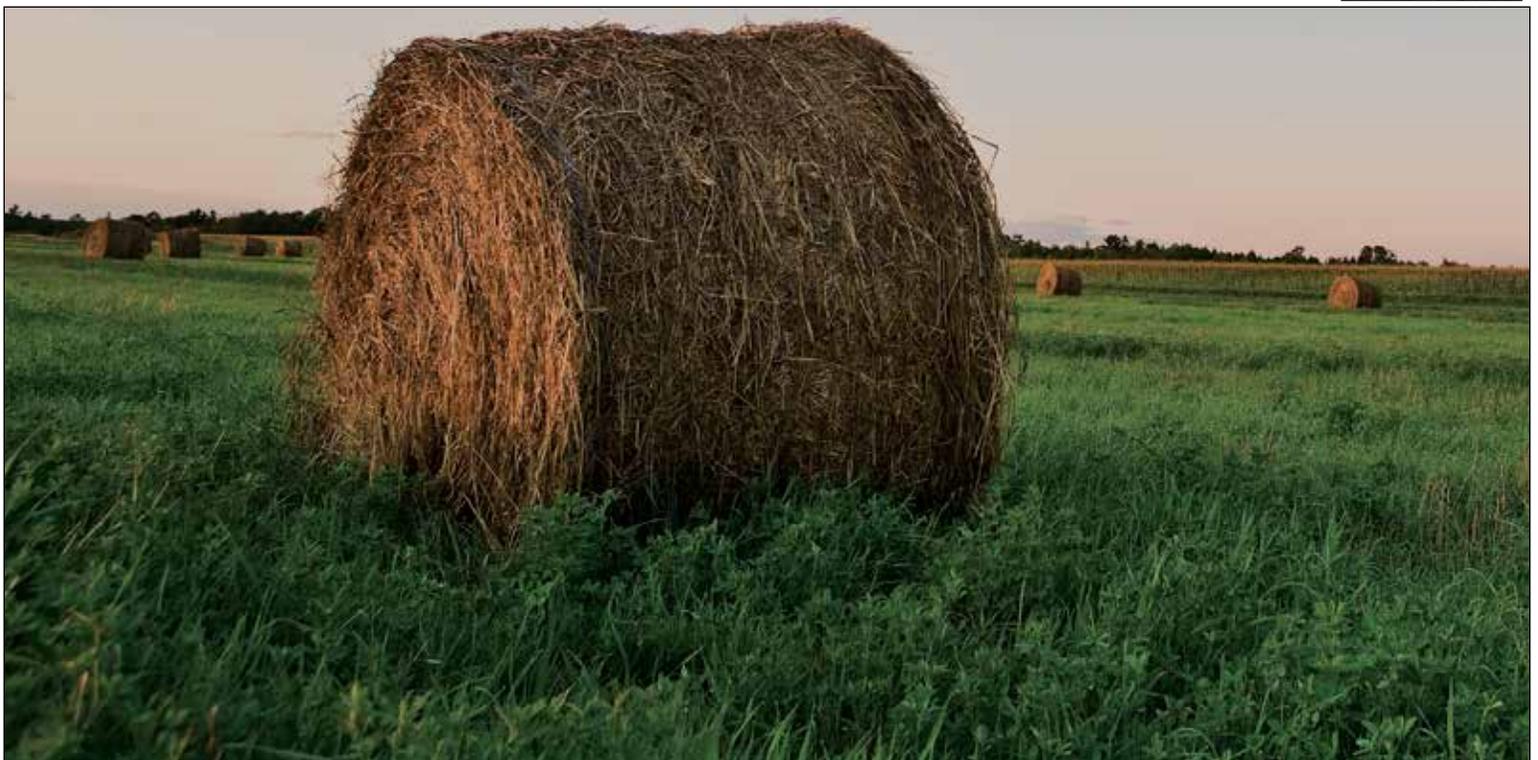
Cost sharing for practices that conserve natural resources while improving agricultural operations.

Conservation Stewardship Program (CSP)

Cost sharing for a number of conservation practices, including livestock grazing.

For information and details on which program may work best for your operation, contact your local NRCS office:

In Wisconsin, the Ashland NRCS, (715) 682-9117
In Minnesota, the Duluth NRCS, (218) 720-5209
www.nrcs.usda.gov





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Clear Answers for Clean Water®

Contact us

Have a question or want information on Field Green® biosolids? Here is a guide to our staff members:

If you're interested in enrolling a field in the biosolids program, have general questions, are a member of the public or are a government official, contact:

Craig Lincoln, Environmental Programs Coordinator,
(218) 740-4808 or craig.lincoln@wlssd.com

If you are an existing customer and would like to schedule a field or have questions on a recent application, contact:

Paul Wilken, Lead Land Application Operator,
(218) 740-4764 or paul.wilken@wlssd.com

For general questions, contact:

Todd MacMillan, Biosolids Supervisor,
(218) 740-4767 or todd.macmillan@wlssd.com



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