

# How Prairie Strips Help Keep Our Water Clean from Farm Pollution (3-5)

## Keywords:

- Prairie Strips
- Farm Runoff
- Water Cleanliness
- Antimicrobial Resistance
- Soil Health

## Abstract (Summary):

This paper is about an experiment done by scientists to see if planting strips of prairie grasses and flowers on farms can help stop bad stuff from manure, like germs that don't get sick from medicine, from getting into the water. They found out that these prairie strips are really good at cleaning the water and keeping the soil healthy. This is important because it helps make sure our water stays clean and safe.

## Introduction:

Hello, young scientists! Have you ever seen a farm with fields of corn or soybeans? Well, sometimes farmers use manure (which is animal poop) as a fertilizer to help their crops grow. But, there's a problem. This manure can have tiny germs that are tough and don't get sick from medicines, which can be bad for people and animals. The good news is that scientists at Iowa State University found a cool way to help solve this problem using something called prairie strips!

## What are Prairie Strips?

Prairie strips are like little belts of wild grass and flowers that are planted right in the

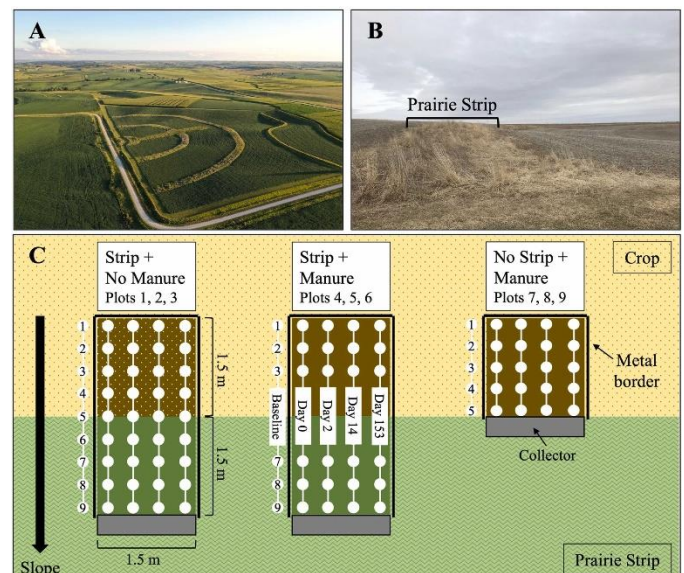
middle of farm fields. They are filled with native plants, like the ones that used to grow all over Iowa before farms were there.

## Why Did Scientists Do This Experiment?

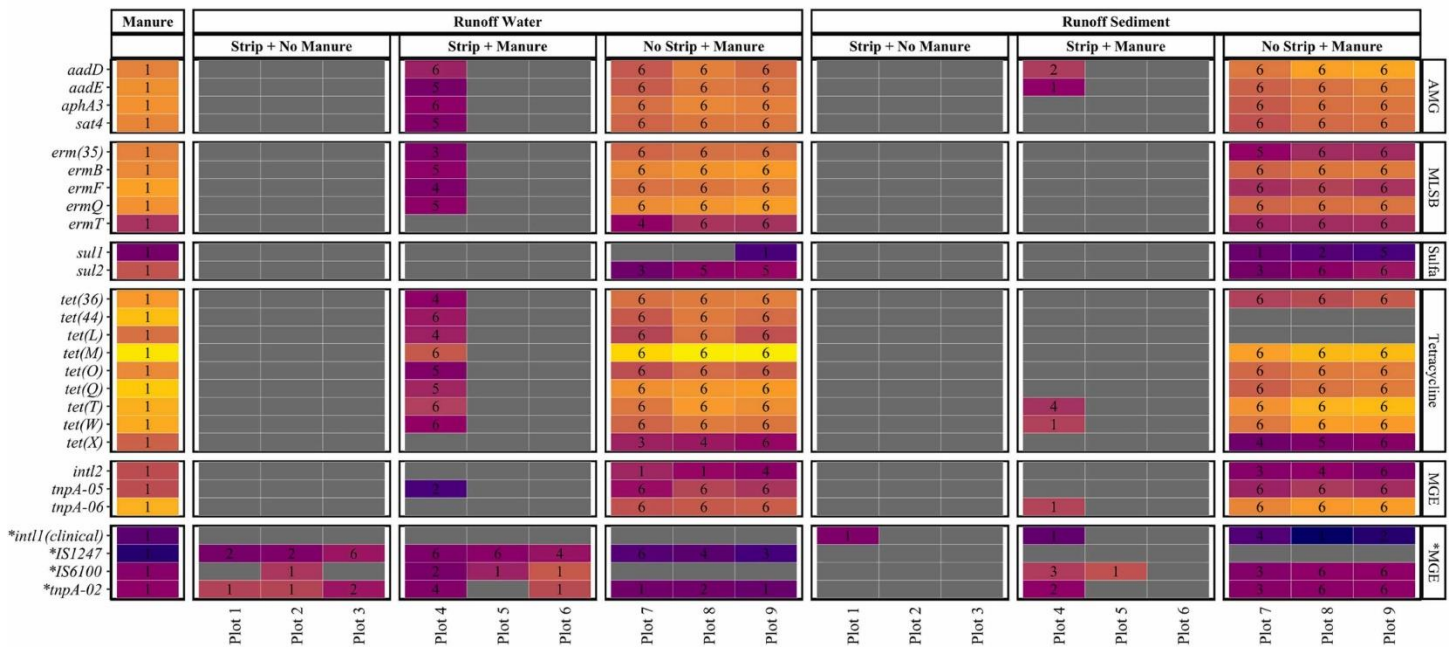
The scientists wanted to see if prairie strips can stop the bad germs in manure from getting into the water when it rains. When it rains on a farm, the water can wash away some of the manure and take it into rivers and lakes. This is called runoff. The runoff with manure can have germs that are resistant to antibiotics, which are medicines that usually kill germs.

## How Did They Do the Experiment?

The scientists made small fields at their farm and did different things to them. Some fields had manure and prairie strips, some just had manure, and some had neither. They then used a machine to make it rain on these fields and collected the water that ran off. You can see what the researchers did in the diagram below.



Natural Log of Relative Gene Abundance  
-9 -6 -3



### What Did They Find?

They found that the fields with prairie strips had much cleaner water running off them. The prairie strips acted like a sponge and a filter. They absorbed the water and caught the bad germs and kept them from getting into the rivers and lakes. The scientists also checked the soil in these strips over time and noticed that it became healthier and had fewer bad germs. The diagram above shows how many germs they found in each plot.

### Why Is This Important?

This experiment is really important because it shows us a natural way to keep our water clean. Instead of using chemicals or machines, we can use plants to help us. This is good for the environment, the animals, and us!

### Conclusion:

The scientists learned that planting prairie strips on farms is a great idea. It helps keep the water clean by stopping bad germs from getting into it. This is good news for everyone, especially people who live near farms and rely on clean water. Maybe in the future, more farms will have these colorful strips of wild grasses and flowers, making the environment healthier and prettier!

Isn't it amazing how plants can help us in such big ways? By working with nature, like using prairie strips, we can solve problems in ways that are good for the Earth. So next time you see a field with a strip of wildflowers and grasses, remember, they are not just pretty, they are helping keep our water clean!