

# EEN REGENERATE

**A Monthly Faith & Agriculture Newsletter**

## WELCOME TO THE JULY ISSUE OF REGENERATE!

**This issue features articles illustrating the benefits of regenerative agriculture, an invitation to our next Faith & Agriculture Webinar, a brand new Q&A feature "From the Field," as well as some tips and recipes for summer canning!**



## Regenerative Agriculture: A Global Imperative

**By Gabe Brown**

Society is facing many challenges, from climate issues including wide swings in temperature and moisture, to water quality and quantity issues, to low farm profitability, to the decline of rural communities, to our human health crisis. It is my belief that all of these can be linked, at least in part, to the degradation of our soil.

For that reason, it is imperative that we come together as a society and find “Common Ground for Common Good.” That common ground is regenerative agriculture. Regenerative Agriculture is best defined, in my opinion, as “farming and ranching in synchrony with nature, to repair, rebuild, revitalize and restore ecosystem function, beginning with all life in the soil and moving to all life above the soil.”

Over the past eighty odd years, the degradation of our soil has accelerated. Approximately 30 to 75 percent of the carbon that was once in our arable soils is now in the atmosphere. This leads to multiple negative effects: lower water infiltration, lower water holding capacity, less food for biology, lower nutrient cycling, and lower nutrient density in the food produced in/on those soils.

We can change that, as illustrated by the picture below.



	Sample A	Sample B
Organic Matter	9.4%	1.7%
Water Infiltration Rate (Inches per hour)	32.0	0.5
Depth of Soil Aggregates in inches	48+	3.5
Synthetic Fertilizer Use	No	Yes
Pesticide Use	No	Yes
Tillage Use	No	Yes
Cover Crops Used	Yes	No
Animal Integration	Yes	No
Cash Crop Species Used	8	3

From this analysis, we can see that Farm A can infiltrate sixty-four times more water, thus reducing the amount of nutrients leaving that farm.

Farm A can also hold over five times more water per foot of the soil profile. (Approximately 188,000 gallons compared to approximately 34,000 gallons.) This greatly reduces downstream flooding issues while making Farm A much more resilient to drought.

Farm A uses significantly less input, thus increasing profitability. It also produces more food per acre, food which is higher in nutrient density.

The only difference between these two farms is their management, or as I prefer to call it, stewardship. You see, each farm and ranch are a direct reflection of the person stewarding that land.

Farmers and ranchers need to practice regenerative agriculture. But driving that change will take each and every one of us. Here is what you can do:

- Buy regeneratively grown and raised food.
- Support your local regenerative farmers and ranchers.
- Demand that your local school systems serve regeneratively grown and raised foods.
- Support regenerative non-profit educational organizations.
- [Be a voice](#) for regenerative agriculture.

Let us all unite and find Common Ground for Common Good.

## Growing Cover Crops to Diminish the Impact of Extreme Weather

By Tim Olsen

Often referred to as the Book of Wisdom, the Old Testament book of Proverbs provides a Biblical guide to living a life of abundance and virtue. Proverbs tells us to seek out wise advisors, “Listen to advice and accept instruction, that you may gain wisdom in the future.” Proverbs 19:20 (EVC).



Recently, two of EEN's wise farm advisors were asked about the benefits of growing cover crops on their farms during this past spring's wet weather. Agriculture leader, Ray Gaesser, who farms 5,000 acres with his son near Corning, IA said that because growing cover crops nurtures resilience in the soil he was able to plant soybeans when his conventional tillage neighbors could not. To understand the wisdom of growing cover crops to diminish the impact of too much rain he suggests reviewing the [Annual Report of the 2019-2020 National Cover Crop Survey](#). It surveyed 1,172 farmers nationwide following the wet year of 2019.

Farming 7,000 acres near Luverne, MN, Shawn Feikema, who farms with his wife Becky, says that managing cropland with cover crops and conservation tillage provides several benefits. For example, he says that cover crops limit soil erosion during heavy rains and flooding. He goes on to say that the cover crop of winter rye enhances soil drying for spring planting by pulling water out of the soil. This cover crop's fibrous root system supports heavy farm equipment that reduces the impact of soil compaction. Soil compaction decreases crop yields. Shawn and Becky Feikema are featured in the award-winning documentary, [From the Heartland](#).

God's gift of wise advisors like Ray Gaesser and Shawn and Becky Feikema, can guide the development of a resilient agriculture system that cares for creation, sustains national food security, feeds a hungry world, increases farm & ranch profitability, and revitalizes rural communities during a future of more intense and frequent extreme weather.

Ray, Shawn, and Becky represent hundreds of Christian men and women who are inspired by faith to listen to wise advice as they move toward the adoption of best practices for improving soil health, reducing soil and water erosion, and enhancing biodiversity. Financial incentives and long-term dedicated technical advice will provide the support needed for more farmers and ranchers to gain the confidence to use conservation tillage and grow cover crops.

## How You Can Respond

Join us in supporting American farmers by sending a message to policy makers about the benefits of the conservation programs in the Farm Bill, including climate-smart, soil-smart practices that protect against the impacts of extreme weather.

[Send Your Message Here](#)

## FAITH & AGRICULTURE WEBINAR



Reducing the Impact  
of Extreme Weather  
with Regenerative  
Agriculture

Featuring Gabe Brown

EEN EVANGELICAL  
ENVIRONMENTAL NETWORK



Join EEN on **Thursday, August 15 at 8pm ET/7pm CT** for another Faith & Agriculture Webinar where you can hear more from North Dakota farmer, Gabe Brown.

Gabe's webinar will highlight how regenerative agriculture practices can reduce damage to soils, crops, water quality, and property during extreme weather events and unnatural disasters influenced by a changing climate.

[Register Here](#)

REGENERATE FEATURE

## FROM THE FIELD

QUESTIONS FROM YOU. ANSWERS FROM OUR NATION'S FARMERS.

**Question from EEN Social Media:**

*"I've read that no-till farming relies more heavily on herbicides than traditional tillage. What are the environmental pros and cons of tilling versus no-till for farming a crop such as corn?"*

**Answer from Shawn and Becky Feikema of Feikema Farms in Luverne, MN:**

Thank you for your interest in farming and specifically the concept of herbicide use in conventional tillage versus no till for crop production. The benefits of no till or strip till (where only a small strip of soil is minimally tilled) are many and well known: erosion prevention, increased water infiltration, higher organic matter, better soil structure, and increased soil biodiversity to name a few.

Weed control is an issue in any type of agriculture system. In a conventional tillage system, soil is tilled for weed control, often multiple times, usually in addition to herbicide use. The bare, disturbed soil often exposes more weed seeds and has less competition for germination. Weeds must be controlled to some degree for the desired crop to grow properly and yield acceptably well.

In a no-till system, the residue from the previous crop is left on the surface, acting as a mulch to prevent weed germination. Often, a cover crop is used, providing more mulch and shade, further inhibiting weed germination and growth. Yes, herbicides are often used in a no till system as well. A system of soil management including no or minimum tillage, cover crops, crop rotations, effective nutrient management and herbicide use when necessary is the best option for optimum yields to feed the world. This type of system is still developing as new techniques are tried and implemented. When switching to a no-till system, sometimes there are trade-offs, and sometimes that includes additional herbicide use to control weeds instead of tillage—basically gaining the benefits of reduced erosion and other improved soil qualities in exchange for additional herbicide use. Better soil health will keep the soil from eroding and thus the herbicide will remain where it is effective and also filtered, not transported by wind and/or water as in a conventional tillage system.

The decisions we make as farmers are complex and imperfect. We are living in a world affected by sin and in our efforts to “subdue the earth” (Gen 1:28), weeds are unfortunately a fact of life. Most farmers, however, have a goal of reducing both tillage and herbicide use as much as the conditions allow and is practical. Tillage and herbicides cost money, and reducing both is usually economically and environmentally beneficial.

The most promising technology that is available right now for weed control and the reduction of herbicide use is the mounting of cameras on a sprayer boom that can identify and distinguish between a corn plant and a weed and spray only the weed. This technology has been shown to reduce herbicide use by 50-75%.

REGENERATE FEATURE

# COME TO THE TABLE

RECIPES TO BRING FAMILIES AND COMMUNITIES TOGETHER

EEN EVANGELICAL ENVIRONMENTAL NETWORK



## Preserving Summer- It's Canning Season!

By Amber Lounsbery

Dust off those canners...it's canning season! Although there is no "official" canning season, summer and fall are the most popular times to can as produce is fresh and typically bountiful.

Homemade pickles and jams were a staple of my childhood but I was never involved beyond licking the sticky, red

jam off of the funnel when my mom was done. And then her interest in water bath canning was pretty much over by the time I was 15. It was up to me to carry on the tradition.

Canning and pickling are more than just practical skills – they're an art form that allows us to create memories and traditions that can be passed down through generations. Whether you're spending a sunny afternoon picking berries at a local farm or gathering vegetables from your own garden, the process of preserving allows us to slow down, connect with nature, and appreciate the abundance of each season.

No matter if you are new to canning or a "seasoned" pro, here are some tips to get started on your canning adventure.

**Make sure you have all of your supplies in advance.** Stock up on jars, lids, pectin, sugar, lemon juice and other consumables you may need for your recipes. Also check to make sure your canner(s) are in working order. Hot water bath canners shouldn't be rusty and pressure canners should be checked annually to ensure gauges work and gaskets are still sealing.

**Make space for all of your new canned goods.** An ideal space for canned goods is in a cool, dry room... typically a root cellar in the olden days. With the age of air conditioning and better insulation, more options can be had to store your canned goods for a longer term.

**Start canning with a plan.** This plan might be dependent on what you have planted in your garden, what you might purchase at a farmer's market/store or what you can forage in your area. It makes no sense to can grape jelly if your family won't eat it. Likewise, the amount you can should match the needs of your family.

**Put together the recipes you want to use.** Keeping track of these in a notebook or printed in a binder, will help with planning and allow you to make adjustments and notes about taste, quality, etc.

**Figure out when the best time to can is.** Timing is crucial to ensure you are canning food at it's peak.

There's no denying the satisfaction that comes from opening a jar of homemade jam or pickles months after they were made, knowing that each bite is a taste of summer or fall preserved in time.

## Award Winning Mulberry Jelly

This recipe won me a county fair best of show and Ball Canning Award and when shared with others also won them awards. It was also featured on an episode of Savor Dakota on South Dakota Public Broadcasting in 2018.

3.5 Cups mulberry juice  
5 Cups sugar  
1 Box pectin  
2 Tbsp lemon juice (optional)



Cover mulberries with water and simmer until berries have cooked down and a thicker juice is produced. Strain juice in a jelly bag. Put 3.5 cups of strained mulberry juice in a tall pot. Add pectin and stir to dissolve. Add lemon juice and bring to a boil. Once boiling, add the 5 cups of sugar all at once. Stir to dissolve and bring to a boil again. Once a boil that you can stir down is going, start timing for 3 to 5 minutes. Be careful your pot doesn't overflow. At the end of time, remove the pot from the heat and skim foam as needed. Ladle into prepared jars (hot liquid, hot jars) leaving  $\frac{1}{4}$  inch headspace. Use a debubbling tool to get out any air pockets. Wipe rims with a paper towel and water. Add flats and rings and tighten just finger tight. Water bath can for 5 minutes for elevations less than 1000 ft. Add more time for higher elevations. Makes 6 to 7  $\frac{1}{2}$  pint jars.



## Homemade Applesauce

This is an easy recipe that's enjoyed by all ages. It can work with just about any variety of apple.

12 lbs. apples-peeled (optional), cored, quartered and treated to prevent browning.

Water

4 Tbsp lemon juice

3 Cups granulated sugar (optional)

Cinnamon, nutmeg, all spice (optional)

In a large stainless-steel pot, combine apples with just enough water to prevent sticking (you can also use a crock pot). Bring to a boil over medium high heat. Reduce heat and boil gently stirring occasionally for 5 to 20 minutes, until the apples are tender. Remove from heat and let cool slightly for about 5 minutes. Working in batches, transfer apples to a food mill or food processor and puree until smooth. Return apples to the pot. Add sugar if using, add lemon juice; bring to a boil over medium-high heat, stirring frequently to prevent sticking. Reduce heat and simmer while filling jars. Ladle hot applesauce into hot jars, leaving  $\frac{1}{2}$  inch headspace. Remove air bubbles. Wipe rim and add lids and bands. Place jars in boiling water bath canner, ensuring they are completely covered with water. Process both pint and quart jars for 20 minutes. Makes about 8 pint jars or 4 quart jars.

## **Spicy Pickled Green Beans**

Green beans in season can be very affordable if you didn't grow them in your garden. A little effort turns them into a luxury item that can go great alongside a sandwich or as a compliment to a Bloody Mary.

2 pounds green beans  
2 Cups apple cider vinegar  
2 Cups water  
2 tbsp pickling salt  
12-16 garlic cloves, peeled & sliced  
4 tsp dill seed  
4 tsp red chili flakes  
3 tsp brown mustard seeds  
2 tsp black peppercorns



Wash and trim your beans so they fit your jar. Leave about ½ inch of headspace, then remove. Combine vinegar, water, and salt in a medium saucepan and bring to a boil. Divide the garlic clove slices, dill seed, red chili flakes, mustard seeds and peppercorns evenly between the four jars. Pack trimmed beans tightly into jars over the spices. Pour the boiling water brine over beans leaving approximately ¼ inch headspace. Gently tap the jars on the counter to loosen any trapped air bubble. For stubborn bubbles, use a chopstick to wiggle them free. Wipe rims, apply lids and rings and process in a hot water bath for 10 minutes. When time is up, remove jars and set on a towel on the counter to cool. Makes 4 pint jars.

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