

## DeKalb County GEGF Sales:

3/21 Franklin Twp, 160 A, \$10,710/A, PI=141.2;  
\$75.85/PI  
2/10 Kingston Twp, 201.88 A, \$8,995/A, PI=139.5;  
\$64.48/PI  
1/15 South Grove Twp, 144.08 A, \$8,100/A, PI=134;  
\$60.45/PI  
1/22 Pierce Twp, 80A, \$9,000/A, PI=139; \$64.75/PI  
3/11 Clinton Twp, 160 A, \$10,879/A, PI=141; \$77.16/PI  
2/23 PawPaw Twp, 204.97 A, \$7,508/A, PI=124.3;  
\$60.40/PI

Average price/PI: \$67.89; Median: \$67.04/PI. DeKalb County '21 sales remaining steady to date, some lower quality soils sold. Limited number of sales to date.



***"Your Farmland Specialists"***

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## Healthy Soils:

**Sustainability in Agriculture is one of the big topics of the past few years. There are many definitions. However, all definitions include maintaining successful production agriculture for the present and the future. All must start with and involve healthy soils.**

**Defining healthy soils is possibly the easy part. A recent Successful Farming article included "10 Traits of Healthy Soil" developed by Cornell University. They include:**

**Soil Tilth: It is crumbly, dark, and well-aggregated.**

**Sufficient Depth: Roots are able to dig deep to find water and nutrients.**

**Sufficient, but not excessive, supply of nutrients: Soil has balanced nutrient content for optimal plant growth and balanced nutrient cycling.**

**Good water storage and drainage: It's able to take in and store more water in medium and small pores, and also drain water from large pores.**

**Small population of plant pathogen and insect pests: Healthy plants can better defend themselves against a variety of pests.**

**Large population of beneficial organisms: These help with cycling nutrients, decomposing organic matter; and they are the base for soil structure.**

**Low weed pressure: Weeds compete for water and nutrients.**

**Absence of chemicals and toxins: Stable organic matter and diverse microbial activities limit the plant's ability to take up these toxins.**

**Resistant to degradation: Healthy soils can withstand environmental and pest challenges.**

**Resilience: Soil will rebound more quickly after negative events.**

**USDA defines healthy soil as: "Soil health, also referred to as soil quality, is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans." And further explain as: "Soil is an ecosystem that can be managed to provide nutrients for plant growth, absorb and hold rainwater for use during dryer periods, filter and buffer potential pollutants from leaving our fields, serve as a firm foundation for agricultural activities, and provide habitat for soil microbes to flourish and diversify to keep the ecosystem running smoothly."**

**Some of the 10 traits we know can be altered and improved. For instance, we know we can install both surface and subsurface drainage. Healthy soils should contain 25% air. Therefore, with drainage, water will drain from the large pores of the soil to allow oxygen to remain and beneficial organisms to live and thrive. We know that tillage plays a large role in maintaining good soil aggregation which leads to good root penetration.**

**Compaction must be minimized, and in many cases reduced tillage creates and/or allows more aggregation.**

**We also know that weed and insect pressure must be minimized. Every successful operation is constantly battling these pests, and we know if we minimize them this year, we will reduce the pressures in the future.**

**Many operations have addressed these "known" solutions toward building a healthy soil. These steps are all pieces of sound crop management. But, this has only addressed possibly half of the "10 Traits". How do we address the other traits? Are we addressing the soils as a living ecosystem?**

**Biologicals are a major topic recently. AgWeb Editors recently summarized U of IL plant physiologist Fred Below's presentation to the Commodity Classic 2021. Below suggests that biologicals offer opportunity for significant bushel gains from his studies.**

**Biologicals fit into three categories: plant growth regulators, beneficial microbes, and biostimulants. First, Below suggests that biologicals can greatly enhance residue efficacy. "Crop residue is nature's biological. That's what feeds the soil, and that's what leads to soil health, but it has to be managed to achieve its full value."**

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## Healthy Soils, cont'd:

Plant growth regulators “can provide stress relief on the root structure and enhance nutrient access to a crop.”

Beneficial microbes include three categories: Nitrogen-fixing bacteria, phosphorus-solubilizing bacteria (PSB), and mycorrhizal fungi (AMF). These work to increase plant-available N, increase available mineral phosphorus, and AMF's to extend the root system.

Enzymes such as phosphatases can be added to increase availability of organic phosphorus bound to organic matter. And humic/fulvic acids help chelate soil cations and feed microbes, and stimulate root zones.

Cover crops have proven to be beneficial to improved soil health in many studies. Providing plant and root growth between crops potentially allows additional food for the beneficial organisms as well as improves soil aggregation and drainage.

Conventional cropping operations utilize various pesticides. Are these pesticides becoming toxins for the soil microorganisms? Certified organic operations have eliminated the use of pesticides. Has this approach improved the living ecosystem of the soil?

In summary, there are still many questions to be answered regarding healthy soils. Studies are now focusing on the soils being a living ecosystem that can be improved with additives such as biologicals, cover crops and organic fertilizers and composts. Producers that are willing and able to adopt these new ideas will benefit by being on the forefront of the sustainable ag movement.

Source: AgWeb Editors, Successful Farming, Fred Below presentation

## Regenerative Agriculture:

Regenerative Agriculture is the latest trend in production agriculture, being presented by corporations due to consumer demand. But, what is Regenerative Agriculture?

General Mills is one of the first companies to set goals for regenerative agriculture. Their goal is to expand their programs to 1 million acres across North America. Here are the General Mills six (6) core principles of regenerative agriculture:

1. Understand context of you farm operation
2. Minimize soil disturbance
3. Maximize crop diversity
4. Keep the soil covered
5. Maintain living root system year-round
6. Integrate livestock

While the principles emphasize factors for soil health and efficient water use, they also emphasize biodiversity of crops, inclusion of livestock and economic resiliency in farming communities.

Some of General Mills pilot programs include: A Northern Plains oat pilot, a Southern Plains wheat pilot in KS, a Great Lakes dairy pilot in western MI, and conversion of the 34,000 acre Gunsmoke Farms in SD to a certified organic farm. Gunsmoke is producing organic wheat, oats, alfalfa, peas and Kernza

Cargill is a second company launching into various regenerative ag programs. Cargill has a goal “to advance regenerative agriculture practices across 10 million acres of North American row crop farmland by 2030.” Their goals include to “help implement soil health practices and unlock the climate change mitigating potential in farmland and natural ecosystems.”

Some of their pilot programs include:

A Soil Carbon Project to impact 100,000 acres in NE to help mitigate greenhouse gas emissions and adapt to the impacts of climate change in a key beef producing region.

The Soil and Water Outcomes Fund to help row-crop farmers in IA. Farmers are incentivized on a per-acre basis for adopting practices such as cover crops, reduced tillage and optimizing nutrient management.

Practical Farmers of Iowa to launch two programs focused on boosting adoption of cover crops in NE and along tributaries of Mississippi, Illinois and Ohio river waterways.

The term Regenerative Agriculture will have many definitions for many different companies. As we see to date, healthy soils goals will include cover crops, biodiversity of crops and reduced tillage. Beyond the farmer's perspective will be goals of reduced greenhouse gases and carbon sequestration to meet corporate climate change goals. We will be seeing many more companies joining in to meet their corporate climate goals through farming operations.

Source: General Mills & Cargill websites

## “LIFE ON THE FARM” By Eric Manges

### The Joy of Giving:

Several years ago I commented about the onslaught of letters, cards and emails that come through during this Christmas season. Since it is the season of giving, all the philanthropic non-profits want to take advantage and have us open our wallets. Apparently their efforts work because they are at it again this year.

My goal then is the same as now-to share the gift of time more than just money. Sharing time could provide companionship, friendship, a shoulder to lean on, or encouraging words through a crisis. But this year, as my wife recently noted, the joy of sharing time with others has been replaced by fear and anxiety. The pandemic has caused isolation from others for fear of spreading the virus. Can we safely even spend time with grandchildren and extended family? Has this become our new way of life!

How can we overcome this anxiety? Is this the life that God wants for us? In a recent Bible study we read Philippians 4:6-7: **“Do not be anxious about anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God and the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus.”**

This year in particular, may we be mindful to present our requests to God with thanksgiving. Let God's peace fill your life as you safely spend time with family, friends and neighbors. Speak of the peace God offers to those around you. Be an example of Joyful Giving.