

Helpful Tips for Reducing Soil Erosion

Soil erosion is an annual problem throughout the Eastern Corn Belt. Recent research estimates that farmland across the Corn Belt looses close to 4 tons of soil/acre each year due to erosion. In addition, even under the best conditions topsoil buildup is very slow, if it occurs at all. Soil particles can be detached and moved out of a field by both wind and water. Wind can pick up small soil particles, transporting them long distances. Water moving along the ground surface can remove a thin sheet of soil, create small channels, or wash out large gullys.

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PERFORM PLANTER CHECKS NOW Improve corn emergence and yield potential



2016 PLANT HEALTH Weed resistance a cause for concern



2016 PLANT HEALTH Will GLS and NCLB be an issue this year



2015 YIELD CONTEST WINNERS Congrats to all who participated

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FACTORS THAT CONTRIBUTE TO EROSION

- 1. Rainfall—soil erosion increases as length or intensity of rainfall increases
- **2. Slope Length/Grade**—soil erosion is worse on longer/steeper slopes because water moves faster across the soil
- **3. Vegetation/residue**—growing plants and residue protect the soil from rain impact, slow down flowing water and increase infiltration of water into the soil, as well as protecting the soil from wind erosion.
- 4. Soil Texture/Structure—Courser soils (sands) with larger pores allow for faster infiltration (less erosion) of water than soils with finer textures (clays). Soil structure is the arrangement of sand, silt, and clay particles into aggregates. Good structure at the soil surface will also allow for increased infiltration, poor structure leads to more runoff and erosion. Poor structure is associated with low organic matter, equipment traffic on wet soils, and exposure of disturbed soil to adverse weather.

THE COSTS

- **1. Yield Potential**—soil erosion removes topsoil, which is high in organic matter and contains the nutrients essential for crop growth. Erosion generally decreases yield potential.
- 2. Nutrients—nutrients needed for crop growth are located in the topsoil where fertilizers, crop residues, and manure are applied; soil erosion will decrease the nutrient content.
- **3. Water Holding Capacity**—loss of topsoil organic matter can change the overall texture of a soil and result in lower water holding capacity

- **4. Organic Matter**—topsoil is high in organic matter where crop residues and manure have been added to the soil. Erosion usually results in decreased organic matter
- **5. The Environment**—water quality in streams, lakes, etc. can be greatly negatively affected by sediment and nutrients that are brought in by soil erosion. Wind erosion can result in reduced air quality.

POSSIBLE SOLUTIONS

- 1. Reduce Tillage—tillage exposes soil to the environment and makes it more likely to be eroded by wind or water
- 2. Manage Crop Residue—keeping crop residues on the soil surface helps protect soil from wind, rain, and running water. Residue can protect soil from erosion when crops are not growing in a field
- **3. Grass Waterways**—maintaining grass waterways in low areas where a high volume of runoff is possible will slow the speed of running water and allow for sediment to be kept in the field.
- **4. Cover Crops**—cover crops allow protection for a field during times of the year when crops are not growing. Cover crops protect the soil from wind, rain, and running water.
- **5. Row Width/Direction**—narrower crop rows will canopy sooner and allow for better protection of the soil. Crop rows that are planted perpendicular to slopes will decrease runoff and increase infiltration vs. rows that are planted in the same direction as the slope.

Soil erosion has a large number of negative effects to both crops and the environment. It is important to use various management practices to protect the soil's surface and minimize the likelihood of erosion

By Matt Hutcheson, CCA, Product Manager Phone: 937-414-6784 matt@seedconsultants.com



Take Time Now to Perform Planter Checks and Maintenance

Less than 21/2 months from now, corn and soybean plantings will be underway in the southern areas of the SCI Sales area. Central and Northern areas will not be far behind once planting begins. With projected corn and soybean prices for the fall of 2016 being somewhat lower than 2015, growers need to make sure their planting equipment is mechanically sound. This could give you an added edge when you get in the field, allowing you to start the best crop stand and produce the best vield. Poor stand establishment can cost you lost bushels later on.

Less than optimum planter performance can result in uneven seed depths and plant spacing. Seed needs to be properly spaced within the row for above average crop performance and helps to eliminate row skips.

Past university research has shown that uneven corn emergence has a greater impact on yield than uneven plant spacing. Ten days of field emergence delays can push back the growth stages between plants in the same row. The younger, smaller plants could produce nubbin ears and very little grain.

Maintenance Steps

Check the metering units on the planter; take apart and clean thoroughly. Metering units should be calibrated every 400 acres. In finger-pickup systems, replace broken fingers and worn seed brushes. Belts should be flexible and not cracked, if so, replace the belts.

Level the planter or alter it to slightly uphill for optimal performance. Planters running downhill can cause loss of ground and closing wheel pressure, as well as depth issues.

Firming wheels, seed openers, and coulters should be all in a line. Adjust when not aligned correctly. Refer to your planter's manual for optimum tire pressure. Proper tire pressure ensures proper operation throughout the planting process. Check for worn chains, lubricate and replace as needed. Seed opener discs need to be set at a minimum diameter (your operator's

manual will tell you the proper diameter.) If not set correctly, seed will not be dropped at the proper depth. Seed firmers are designed for better seed placement and presses seed down in the furrow. Tension of the seed firmer can be bolt adjusted. If you have no adjustment space left, replace the seed firmer.

The purpose of seed-applied insecticides is to protect against insect damage to the seed. However, the grower needs to make planter adjustments and follow lubricant recommendations when using these treatments. If not followed, these treatments can affect seed-plantability for some planters; overseeding in some and underseeding in others.

To maximize yield potential in 2016 and to get the most return on your crop, take time now to replace necessary parts and make the correct adjustments before starting field work this spring.

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2016 PLANT HEALTH

WEED RESISTANCE A Cause for Concern in 2016

When glyphosate-tolerant crops first emerged in the early 1990's, agriculture embraced this technology as a means for cutting back on the amount of herbicides applied on crops. Weeds, if not controlled, reduced crop yields and added a higher cost per acre, affecting farmer's income. Glyphosate, the active ingredient in Roundup, and glyphosate resistant seed made the farmer's and the retail chemical industry job easier; one herbicide to control weeds with less inventory of other weed compounds.

In the last 15 years, university weed scientists, the ag retail industry, and farmer's themselves started to see a shift from weed control from glyphosate and ALS product applications, in crop and post crop, to certain weed's resistance of both of these chemical compounds. No longer can we depend upon one herbicide to control weeds but need a system's approach with pre and post applications having different modes of action to control the resistant weeds that exist in our crops today. From the last count, at least 14 different weed species exist with one or more forms of resistance from different herbicides including glyphosate. There are nine modes of action to control weed pressure however ALL have documented weed resistance. There are two weeds to keep in mind that will cut yield potential of standing crop of soybeans if not address with a management strategy.

PALMER AMARANTH

Palmer Amaranth is part of the pigweed family that germinates in warmer conditions and grows fast. This weed has multiple seed heads per plant producing close to a million seeds. Need Burndown and Early Post applications are needed for control of this weed to be weed effective, 3" or less for best control. Growers need to consider hand weeding prior to plant's seed head production if not controlled. Where weed exists, good management strategy is to rotate herbicides as well as deep tillage, burying the seed when necessary especially in no-till situations. In the fall, plant cereal rye as a cover crop and then crimp the standing rye the following spring. By doing so it will suppress emergence of Palmer Amaranth.

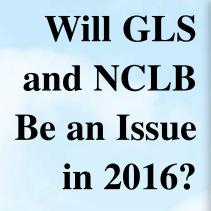
MARESTAIL

Marestail is located throughout eastern and central parts of the US. It adapts well to no-till crop production and can be found in roadsides and border areas. For best control and higher yield potential, an effective burndown with residual herbicides should be used especially with at least 8 ounces of metribuzin being part of the residual herbicide package in heavy infestations. The best control of marestail occurs when herbicides are applied to plants 4" tall or less. Tillage does help to control marestail. If one has a heavy infestation of this weed, consider planting Liberty Link Soybeans and spraying Liberty/Ignite post to be effective in controlling this weed without giving up yield. However, growers will still need a good, pre-emerge residual program with effective burndown prior to the post Liberty application.

A study completed in 2011 by Bayer Crop Science, showed close to 20 million acres of US farmland with resistant weeds costing growers almost 2 billion dollars in lost income. No longer can farmers depend upon one herbicide, 1 mode of action, to control weeds. What we have learned is that glyphosate can still be an effective part of your weed management program as long as multiple products with different modes of action are part of the program as well. This problem of weed resistance is not going away soon, we need to re-think and react with a systems approach to weed management and still make a profit per acre.

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Multi-year and multi-location information is a better predictor of future performance. Hybrid and variety responses are variable and subject to any number of environmental, disease and pest pressures. Refer to an authorized dealer for the latest and complete listing of traits and score for each product. All products are trademarks of their manufacturer.



During the 2015 growing season Gray Leaf Spot (GLS) and Northern Corn Leaf Blight (NCLB) developed in some corn fields, affecting yield and stalk quality. You might ask; "Will these diseases be a problem next year?" The answer to this question depends on several factors.

The fungi that cause the development of these diseases overwinter on crop residue. If GLS and NCLB developed in 2015, the fungus will be present on residue in 2016. The development of these diseases also depends on environmental factors. Warm, humid weather favors growth of GLS and NCLB. Periods of heavy dew, fog, or light rain will provide the needed conditions for these leaf diseases to develop. For either GLS or NCLB to become a problem in 2016, the fungi need to be present in the field in addition to favorable weather conditions. Fortunately, producers can make some management decisions to hinder the growth of GLS and NCLB and lessen their impact should they develop:

1. Crop Rotation: Research shows that crop rotation is one of the most effective ways to mitigate problem diseases.

2. Plant Resistant Hybrids: Hybrids with stronger disease resistance will not be affected as much as those susceptible to disease—talk to your seedsman or agronomist about resistant hybrids.

3. Till Crop Residue: Clean tillage will help break down crop residue, reducing the chance GLS or NCLB will become a problem.

4. Fungicides: Fungicides are recommended for susceptible hybrids where the disease pressure is high.

The best way to determine if disease is developing is to scout fields; recognize the environmental conditions that will contribute to disease growth/spread and know how to identify diseases. NCLB symptoms are brown or tan cigar-shaped lesions, ranging from one to six inches in length. GLS symptoms are tan or gray rectangles with parallel or straight sides, ranging from half and inch to four inches in length. When scouting, make sure to take a pocket field guide along—they are a great resource for identifying problems and determining management options.

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2015 Seed Consultants' Yield Contest Winners

2015 Project 300 Corn Yield Contest

Rank	Customer	Brand	Yield	City	State
1	Terry Vissing	SCS 1125AMX™*	270.74729	Marysville	IN
2	Tim Bishop	SCS 1085AM™*	263.7721	Queenstwon	MD
3	David Fisher	SCS 10HR43™*	253.5527	London	ОН

2015 Corn Test Weight Contest

Rank	Customer	Brand	Test Weight	City	State
1	Richard Mills	SCS 1131™*	62.5	Howard	ОН

2015 Project 100 Soybean Yield Contest

Rank	Customer	Brand	Yield	City	State
1	Terry Vissing	SCS 9385RR™*	84.6	Marysville	IN
2	Tim Bishop	SCS 9434RR™*	82.105	Queenstown	MD
3	John Nolt	SCS 9314RR™*	77.235	Plymouth	ОН

2015 LibertyLink Soybean Yield Contest

Rank	Customer	Brand	Yield	City	State
1	Andy Cooper	SC 3325LL™	72.8	Hillsboro	ОН

2015 Double-Crop Soybean Contest

Rank	Customer	Brand	Yield	City	State
1	Alex Dirksen	SCS 9314RR™*	38.6995	Versailles	ОН







to Our Four
State Winners in
the 2015 NCGA
Yield Contest

JAMES JACOBS

SCS 10HR43™* brand 276.9825 Bu/Ac 1st Place Ohio No-Till/Strip-Till Non-Irrigated

MATT MILLESS

SCS 1135^{™*} brand 254.8025 Bu/Ac 3rd Place Ohio No-Till/Strip-Till Irrigated

DAN WATCHMAN

SCS 1125AMX^{™*} brand 249.4837 Bu/Ac 3rd Place Ohio Irrigated

MICHAEL DAHLKE

SCS 11RR31™* brand
235.8370 Bu/Ac
1st Place Alabama
No-Till/Strip-Till Non-Irrigated





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Between the Rows Updates from Daniel Call, general manager

Congratulations to our 2015 National Corn Grower yield contest winners! Thank you goes to James Jacobs, Matt Milless, Dan Watchman, and Michael Dahlke for entering Seed Consultants elite genetics for their National Corn Grower competition plots. These growers have proven that with attention to detail and use of best practices, yields can be achieved in a less than ideal growing season.

With our four State Winners in 2015, Seed Consultants now has four National Winners and 35 State Winners in the National Corn Growers Yield Contest since 2008. Truly impressive statistics and we are extremely proud! No other Eastern Corn Belt-based company can boast those sorts of impressive results during that time.

Our tremendous performance over the past eight years proves SCI can compete with anyone in the seed industry when it comes to yield performance. We have achieved these results by maintaining our focus on Eastern Corn Belt genetics which handle our unique growing environments and challenges in years like 2015. This is the advantage SCI has over our competition as a regional seed company. Our focus, testing, and product selections are all based on the best options for the area we sell. Our customers reap the benefits of this strategy with on-farm performance.

Seed Consultants will continue this product focus in the years to come. We have several new products we will bring to your farm for the 2017 growing season. We believe these new releases will continue to allow SCI to hold our competitive position within the industry, and our outstanding performance in the NCGA yield contest in the future.

Congratulations again to our winners! We thank everyone who entered Seed Consultants hybrids in the 2015 yield contest. If you have never entered in the NCGA yield contest talk to your local seedsmen about getting involved. It gives growers an opportunity to try different methods for achieving extra yield potential by making a few changes in their corn production strategy. Good luck to all of our 2016 NCGA yield contest entrants!

General Manager

Successfully.



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