

Conservation Highlights



Timing Manure Application to Avoid Neighbor Nuisances

*From University of Nebraska-Institute of Agriculture & Natural Resources:
Rick Koelsch-Professor of Biological Systems Engineering*

Roughly half of all neighbor complaints of livestock odors originate from land application of manure. A weather forecast and a little knowledge of odor dilution can be a powerful tool for keeping your neighbors happy, or at least avoiding those irate phone calls. This article summarizes those weather conditions that should be considered when planning manure application.

INSIDE THIS EDITION:

Timing Manure Application to Avoid Neighbor Nuisances 1, 4-5

Rain Barrel Contest Winners Announced 2

Area IV Envirothon 3

Educational Canoe Float 3

Collecting Milkweed for Monarchs..... 6

Check Weather Forecast Prior to Manure Application 6

2018 Fish Sale Flyer 7

Soil Fertility Workshop Announced 8

Darke Co Commissioners Thank You 9

Homer Gardener Cover Crop Seed 9

Scholarship Winner 9

Ag & Conservation Tour 10

Fall Soil Sampling 11

Incorporation of manure into the soil is always the “best” practice for controlling odor. Soil is an excellent filter for removing odors released by manure. However, maintaining residue cover for protecting soil quality and erosion and conserving water does not always allow for manure to be incorporated.

When manure cannot be incorporated, the next 36-hour period after land-applying manure is the most critical. Why? Good drying conditions over the next two days can significantly reduce the release of odors. In addition, the next two evenings are the most likely time when neighbors will experience manure’s odors. Especially, when applying manure without incorporating it, pay close attention to the next 36-hour weather forecast.

Predicted Wind Direction

Wind direction is the single most critical information for selecting fields. Odor plumes travel in the same direction as wind and spread out laterally very little. By identifying the edges of the field perpendicular to the wind and the wind’s direction, one can quickly identify the neighbors at greatest risk and those unlikely to be impacted.

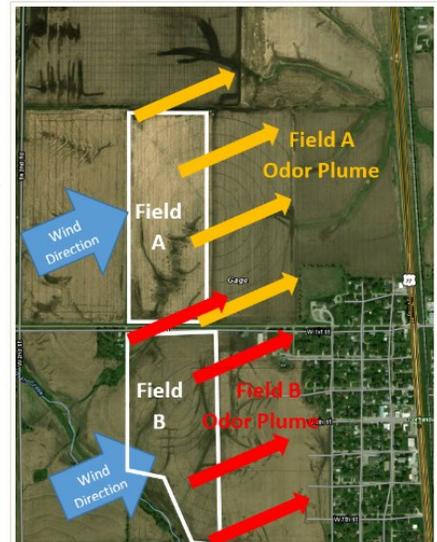


Figure 1. Wind direction is an important predictor for identifying which neighbors are at risk.

Cont'd on Page 4

“Serving Conservation Needs in Darke County Since 1955”

Darke SWCD Staff Members

- Brian Cope — Technician**
- Jared Coppess — District Administrator**
- Elizabeth Farver — Nutrient Mgmt Technician**
- Tim Rank — Technician**
- Doug Steinbrunner—Wildlife Specialist/Technician**
- Daniel Francis- Pheasants Forever Wildlife Biologist**

Darke NRCS Staff Members

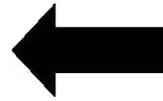
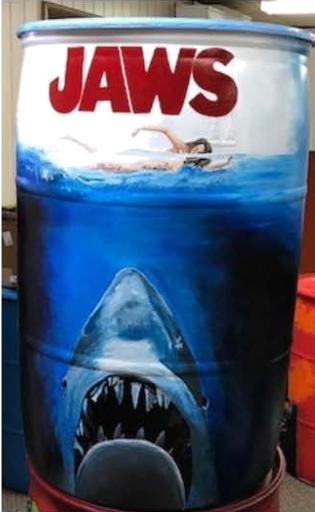
- Jim Bennett — District Conservationist**
- John Bleill — Civil Engineering Technician**
- Webb Flowers—Soil Conservationist**

DARKE SWCD OFFICE HOURS

Monday — Friday
8:00 AM — 4:30 PM

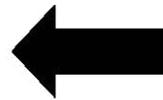
Rain Barrel Contest Winners Announced

The theme for this year's rain barrel contest was "Classic Movie Posters" and schools were asked to choose a classic movie or movies and remake the movie poster(s) on their barrel. Congratulations to Greenville Art Class for their winning barrel. Below are all of the entries. The barrels were displayed at the Darke County Fair and throughout the community to promote rain barrel use.



1st Place
Greenville Art

2nd Place
Greenville Art



3rd Place
Tri-Village Art

Greenville FFA



Area IV Envirothon Held at Possum Creek Metro Park

The Ohio Area 4 Envirothon is a competitive, academic, outdoor team event for high school students which tests their knowledge in five areas; Aquatic Ecology, Forestry, Soils, Wildlife, and a Current Environmental Issue (CEI). This year's CEI topic was Western Rangeland Management. The event is designed to stimulate and reinforce the students' interest in environment and our natural resources and encourages cooperative decision making, team building and problem solving.



Greenville #1



Ansonia #1

Students who participate gain a greater awareness of natural resources and environmental issues, a better understanding of interrelationships between living and non-living components of the environment and an increased interest in further science study. Teams consist of five members from the same school and though each student contributes his or her personal best, the score that counts at the end of the day is the TEAM score.

The Area IV Envirothon was held at Possum Creek Metro Park in Montgomery County. This year 93 teams from 19 counties competed in the Area IV Envirothon, three teams from Darke County participated. Greenville #1 placed 16th, Ansonia #2 placed 19th and Ansonia #1 placed 65th. Darke SWCD would like to thank our county schools for participating.



Ansonia #2

Educational Canoe Float Held June 8th



On June 8th, the Darke & Miami Soil & Water Conservation Districts, along with the Stillwater Watershed Project and the Park Districts of Darke & Miami County teamed up to host an educational canoe float on Greenville Creek. Over fifty canoers and kayakers participated in the event that launched from Alice Bish Park and ended at the Bear's Mill. Ohio Department of Natural Resources had a fish shocking demonstration and participants learned about different fish species found in our area.



Timing Manure Application to Avoid Neighbor Nuisances Cont'd

For the two land application site options illustrated in Figure 1 (Field A and B), Field A presents a much smaller risk to nearby neighbors. By choosing a land application site ½ mile to the north of Field B for this southwest wind, the risk has been dramatically reduced in this example. Paying attention to the wind directional forecast for a 36-hour period after applying manure, allows a person to gauge the risk of odor affecting neighbors.

Evening Hours and Manure Application

Can you recall a time when you observed smoke cloud hanging near the ground? Often this is observed as air temperatures are cooling and when winds are light, which most commonly occurs during evening and nighttime hours. Under these conditions the smoke is not being diluted and is being held near the ground for all to experience. Although we cannot see odors, the exact same atmospheric conditions create the greatest risk for neighbors experiencing odors (Table 1).

Under daytime conditions, odor plumes are generally rising, being diluted with fresh air to where odors are unlikely to be noticed by your neighbors. Bright sunshine and warming air is best for dispersing odors. Higher wind speeds (especially at night) also encourage greater mixing of fresh and odorous air, and reducing the odor risk. Note that nighttime hours with low wind speeds are the conditions most likely to expose neighbors to odors from land application.

Weather Forecasts and Odors

Weather forecasts that provide 1) wind direction and speed; 2) sky conditions, and 3) temperature can be extremely valuable in deciding when and where to apply manure. Many weather services provide this information in their forecasts. [Aviation Weather Report and Forecast](#) (Figures 2 and 3) shares the important forecast information in an easily reviewed visual format.

Table 1. Atmospheric conditions and their risk of holding odors near the ground.¹

SURFACE WIND SPEED (MPH)	DAYTIME SOLAR RADIATION			NIGHTTIME CLOUD COVER	
	STRONG	MODERATE	SLIGHT	>50%	<50%
<4.5	Very Low Risk	Very Low Risk	Very Low Risk	High Risk	High Risk
5 to 7	Very Low Risk	Very Low Risk	Low Risk	High Risk	High Risk
7 to 11	Very Low Risk	Low Risk	Low Risk	Low Risk	High Risk
> 11	Low Risk	Low Risk	Low Risk	Low Risk	Low Risk

¹ Based upon Pasquill-Giffort air stability classes (Pasquill, 1961).

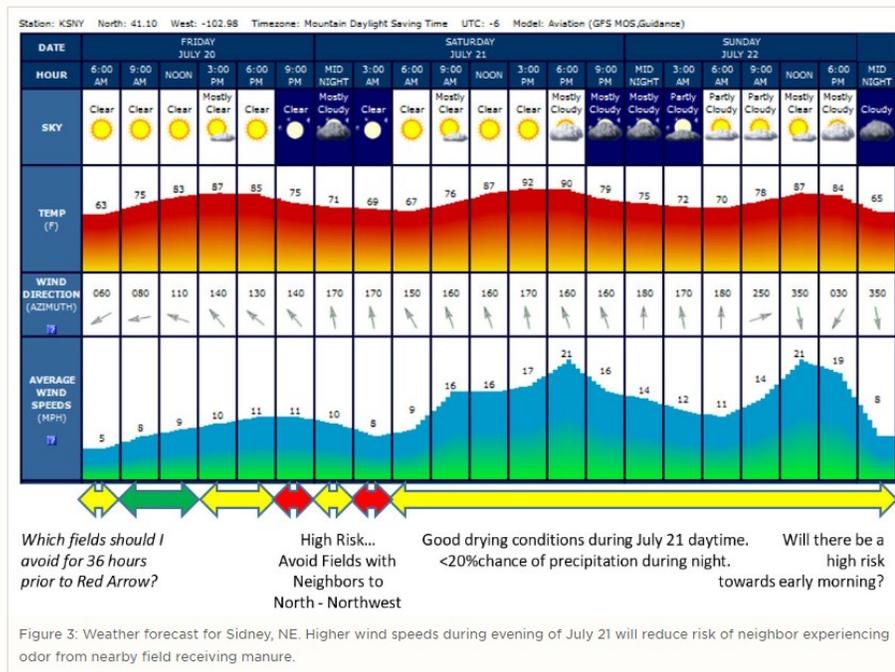
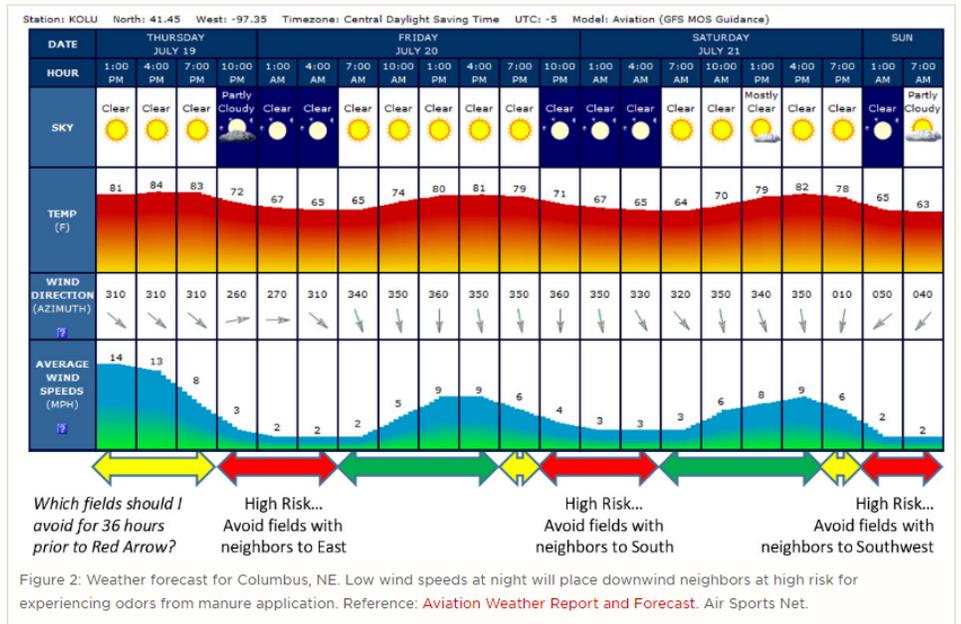
For the Columbus Nebraska forecast (Figure 2), note that nighttime conditions will be producing higher risks for neighbors for the immediate future. No extended periods of good drying conditions are available before the high risk night conditions occur.

Question: If waiting for more desirable weather conditions is not a choice, what is my best option under these conditions?

Answer: Note the forecasted nighttime wind direction and use this information to select a land application site with the fewest downwind residences (mainly to the south and east in this example).

The weather forecast for Sidney (Figure 3) suggests that neighbors to the north of a land application site on July 20 are at risk for odor. Spreading manure on July 19 and 20 should be avoided if neighbors reside to the north. Conditions for applying manure are more favorable on July 21 for good drying conditions and nighttime conditions that will disperse odors quickly. July 21 might be a good day for manure application on fields with greater neighbor pressure.

Picking the right weather conditions for land applying manure, may not improve your popularity in the community, but it can go along way with improving your community's acceptance of livestock systems.



Reference:

Pasquill, F., The Estimation of the Dispersion of Windborne Material, The Meteorological Magazine, Vol. 90, No. 1063 (1961).

Original article published at:
<https://water.unl.edu/article/animal-manure-management/timing-manure-application-avoid-neighbor-nuisances>

To access a weather report from the Aviation Weather Report and Forecast:

1. Under "Get Locations", select a Region (or state) and click on "Go",
2. Under "Get Forecast", select an airport location closest to your own and click on "Go"
3. Your weather forecast should now appear for a three day period. Note: you may have to scroll down the page to see your report.

Collecting Milkweed for Monarchs

Darke SWCD will once again be a collection point for common milkweed pods and seed. Milkweed is the only host plant for the Monarch butterfly for egg laying and caterpillar rearing. It also serves as a food source for Monarchs as well as many other pollinator species. The disappearance of milkweed across the U.S. has contributed to the 80% decline of the eastern monarch butterfly population over the last 20 years. We are working hard to change this and you can help! Let's make our collection efforts in 2018 even better by following these tips:

- Make sure that before you collect seed, you become familiar with the common milkweed to avoid harvesting pods from similar plants such as hemp dogbane and swamp milkweed.
- It is best to collect the pods when they are dry, grey, or brown.



- Store the pods in paper bags; plastic bags collect unwanted moisture.
- Put the date and county collected on the bag when you turn them in.
- Keep the pods in a cool, dry area until you can deliver them to our drop off location.

Check Weather Forecast Prior to Manure Application

As wheat harvest approaches completion, Darke SWCD staff encourages livestock producers and farm operators to be attentive when applying manure to local fields. From social media to increasing public awareness about livestock facilities and issues with some lakes and rivers throughout Ohio, producers are under increasing scrutiny, especially when handling manure. It is important to check and print the weather forecast prior to any manure application. The weather forecast can be found at www.weather.gov and searched by your zip code. You should keep the printed weather forecast with your other manure application records, such as application rate, source, etc.

Remember, if there is greater than a 50% chance of rainfall of more than 1/2-inch forecast within 24 hours, manure application is not recommended. More information about nutrient management can be found by visiting our website, www.darkeswcd.com.

Current conditions at Versailles Darke County Airport (KVES)
 Lat: 40.27°N Lon: 84.53°W Elev: 1007ft

Fog/Mist
59°F
 15°C

Humidity 100%
 Wind Speed Calm
 Barometer 30.07 in
 Dewpoint 59°F (15°C)
 Visibility 2.50 mi
 Last update 2 Aug 7:15 am EDT

More Information:
[Local Forecast Office](#)
[Store Local TV](#)
[3 Day History](#)
[Mobile Weather](#)
[Hourly Weather Forecast](#)

Extended Forecast for 4 Miles ESE Ansonia OH

Today	Tonight	Friday	Friday Night	Saturday	Saturday Night	Sunday	Sunday Night	Monday
High: 82°F	Low: 63°F	High: 83°F	Low: 64°F	High: 84°F	Low: 67°F	High: 85°F	Low: 67°F	High: 85°F

Detailed Forecast

Today	Patchy fog before 10am. Otherwise, mostly sunny, with a high near 82. South wind 3 to 7 mph.
Tonight	Patchy fog after 3am. Otherwise, partly cloudy, with a low around 63. South wind around 6 mph.
Friday	A slight chance of showers and thunderstorms after noon. Patchy fog before 10am. Otherwise, mostly sunny, with a high near 83. Southwest wind 3 to 8 mph. Chance of precipitation is 20%.
Friday Night	Partly cloudy, with a low around 64. West wind around 5 mph becoming calm in the evening.
Saturday	Mostly sunny, with a high near 84. Southwest wind 3 to 6 mph.
Saturday Night	Mostly clear, with a low around 67.
Sunday	Mostly sunny, with a high near 85.
Sunday Night	Partly cloudy, with a low around 67.
Monday	A chance of showers and thunderstorms after 2pm. Mostly sunny, with a high near 85. Chance of precipitation is 30%.
Monday Night	A chance of showers and thunderstorms. Mostly cloudy, with a low around 68. Chance of precipitation is 40%.
Tuesday	Showers and thunderstorms likely. Mostly cloudy, with a high near 82. Chance of precipitation is 60%.

Topographic Map For Forecast

ANNUAL FISH SALE — OCTOBER 18, 2018



Effective pond management involves managing the fish populations, aquatic plant levels and water temperatures among other factors. To help with part of this management, Darke SWCD will be having their annual fish sale this fall. Some of the species available will be Largemouth Bass, Hybrid Bluegill, Redear Sunfish, Channel Catfish, and White Amur (grass carp).

Order and payment must be received in the Darke SWCD office by Monday, October 15, 2018 before 4:00 PM.

All orders are to be **picked up at 2:30 PM on Thursday, October 18, 2018.** Our office is located at 1117 South Towne Court, Greenville, Ohio 45331. For more information, please call 937-548-1715, Extension 3.

All money is subject to refund if insufficient orders are received.

Tip for Transport: A five gallon bucket and lid with your pond water will hold 100 fingerling fish. A large trash can with a plastic bag can also be used.

STOCKING RECOMMENDATIONS FOR NEW PONDS	
Species	No. per Acre
Largemouth Bass	100
Bluegill Sunfish	500
Channel Catfish	100
Red Ear Shell Cracker	500
Black Crappie	100
Yellow Perch	100
Hybrid Bluegill	300
White Amur	6-8



MAKE CHECKS PAYABLE TO: **DARKE SWCD.** PAYMENT MUST ACCOMPANY ORDER.
LAST DAY TO ORDER IS OCTOBER 15, 2018.
WE MUST HAVE YOUR PHONE NUMBER ON THE ORDER FORM!

Send order form below and payment to: Darke SWCD, 1117 Southtowne Ct, Greenville, OH 45331

SPECIES	SIZE	PRICE	# OF PACKETS	TOTAL COST
Yellow Perch	2-3"	\$20.00 for 25		
Bluegill Sunfish	2-4"	\$20.00 for 25		
Channel Catfish	4-5"	\$20.00 for 25		
Largemouth Bass	2-3"	\$22.00 for 25		
Black Crappie	2-4"	\$22.00 for 25		
Redear Sunfish	2-4"	\$22.00 for 25		
Hybrid Bluegill	2-4"	\$22.00 for 25		
Koi	6-8"	\$12 per fish		
White Amur	8-10"	\$14.00 per fish		
Minnnows		\$2.50 for 25		
TOTAL:				

NAME: _____ PHONE: _____

ADDRESS: _____

Soil Fertility Workshop Registration Now Open!

As the farm economy becomes tighter and the environmental pressure greater on farmers, understanding your soil fertility and nutrient needs becomes ever so important. The Darke Soil and Water Conservation District (SWCD) will again be hosting the Soil Fertility & Nutrient Management Workshop Series beginning in November. This is a four-part workshop that begins with the basics and ends with a farm plan for up to 50 acres on your farm. For a mere \$25.00, you can register, but space is limited. Register early to guarantee your spot in this workshop geared toward helping farmers better understand soil needs and efficient nutrient use.

The Darke SWCD along with its partners at Shelby SWCD, OSU Extension and Otte Ag LLC are excited to announce another round of this workshop series. Your \$25.00 registration includes meals, reference materials, and two soil samples. That's over a \$100.00 value! Thanks to our partners, we are able to offer this at an affordable rate of \$25.00. The workshop series dates are being finalized, look for more information coming soon. We will have a meeting in November, December and late January at the North Star Community Center located at 124 East Star Road, North Star. The early to mid January meeting will be a tour of Brookside Lab in New Bremen. Find more information about dates and times at www.darkeswcd.com.

Each workshop will begin with a meal followed by presentations related to environmental stewardship, basic agronomy, commercial fertilizers, manures, nitrogen testing, Tri-State Fertility Recommendations, the fertilizer value of manure, and the development of a farm plan based on the Tri-State Spreadsheet. Participants will be given a binder full of reference materials, record sheets and each speakers presentations. The binder is meant to be a tool and reference guide when the workshop is complete.

“Understanding the benefits of proper nutrient management are two-fold, lower input costs and reduced environmental impairments. These are two goals any farmer should have because they relate to money and protecting the land,” said Jared Coppess, District Administrator for Darke SWCD.

Each workshop will begin with a meal followed by presentations related to environmental stewardship, basic agronomy, commercial fertilizers, nitrogen testing, tri-state fertility recommendations for P&K, using imagery data, manure as a nutrient source and its fertilizer value, and record keeping. Participants will be given a binder full of reference materials, record sheets

and each speaker's presentation. The binder is meant to be a tool and reference guide when the workshop is complete.

If you are a Certified Livestock Manager (CLM) or a Certified Crop Advisor (CCA), participation in this workshop will earn you credits toward keeping your certification(s) current. Participants who attend all four sessions will be eligible to receive their Fertilizer Certification from the Ohio State University. Each session will have a sign-in sheet to verify attendance and proper disbursement of credit hours.

Registrations will be accepted until the class is full, space is limited to 30 people. Registration isn't complete until you have paid the \$25.00 registration fee. For more information please visit www.darkeswcd.com or call 937.548.1752. Make \$25.00 registration payable to Darke SWCD and mail or drop off at 1117 Southtowne Court, Greenville, Ohio 45331.

Understanding the benefits of proper nutrient management are two-fold, lower input costs and reduce environmental impairments. These are two goals any farmer should have because they relate to money and protecting the land. Given recent water quality events around Ohio and the nation, agriculture is under the microscope when it comes to nutrient use and management. Register today for the Soil Fertility & Nutrient Management Workshop Series to help improve your farms bottom line and impact on the environment.



4R Tomorrow

Right Source

Right Rate

Right Time

Be Part of
the Solution

Thank you Darke County Commissioners!

Matt Aultman, Mike Rhoades and Mike Stegall

The Darke Soil and Water Conservation District Board of Supervisors and Staff would like to thank the Darke County Commissioners for their financial support and dedication to soil and water conservation. The annual financial assistance from the county is matched by funds from the state which enables the District to continue to provide assistance to all Darke County landowners.

Thank You!

Home Garden Cover Crop Seed For Sale

Due to an increase in interest for cover crops, Darke SWCD is offering 2 cover crop blends for use in your home garden. We sell our Fall Mix, an oat-radish blend, and our Winter Mix, a cereal rye-radish blend. Both mixes can be purchased in a one pound bag for \$3.00.

WINTER MIX

cereal rye & radish blend

COVER YOUR GARDEN! ONLY \$3.00 PER POUND

Improve your garden's health with cover crops. When used properly, cover crops can suppress weeds, add nutrients, conserve water, preserve soil structure, enhance microbial action in the soil, contribute organic matter and much, much more! These all lead to a healthy soil in your garden and can help increase production next year.



1117 South Towne Ct
Greenville, OH 45331
937.548.1715, Ext.3

COVERS APPROXIMATELY 700 SQ. FT.

COVER CROP TIPS:

- * Prepare garden area
- * Spread evenly, by hand or seeder, incorporate with rake
- * Radish will kill ~19° F
- * CAUTION: Radish may smell when decaying
- * Cereal Rye will need to be terminated in spring (till, crimp, herbicides)

SEED PROVIDED BY



www.darkeswcd.com

Down Home Farms Versailles, OH 937-417-6817	
NET WEIGHT	1.0 lbs
Cereal Rye	90%
Diakon Tillage Radish	10%
Germination	85.50%
Pure Seeds	99.00%
Other Crop Seed	0.30%
Inert Matter	0.69%
Weed Seeds	0.01%

fall mix

oat & radish blend

COVER YOUR GARDEN! ONLY \$3.00 PER POUND

Improve your garden's health with cover crops. When used properly, cover crops can suppress weeds, add nutrients, conserve water, preserve soil structure, enhance microbial action in the soil, contribute organic matter and much, much more! These all lead to a healthy soil in your garden and can help increase production next year.



1117 South Towne Ct
Greenville, OH 45331
937.548.1715, Ext.3

COVER CROP TIPS:

- * Prepare garden area
- * Spread evenly, by hand or seeder, incorporate with rake
- * Cover Crop blend will kill ~19° F
- * CAUTION: The radish may smell when it is decaying

www.darkeswcd.com

SEED PROVIDED BY



COVERS APPROXIMATELY 640 SQ. FT.

Down Home Farms Versailles, OH 937-417-6817	
NET WEIGHT	1.0 lbs
Oats	80%
Diakon Tillage Radish	20%
Germination	91.17%
Pure Seeds	98.31%
Other Crop Seed	0.29%
Inert Matter	1.36%
Weed Seeds	0.02%
Noxious Weeds	NONE

Darke SWCD Scholarship Winner Announced

Each year Darke SWCD awards a scholarship to a graduating high school senior pursuing a degree in an agricultural or natural resources related field. This year's recipient is Jacob Subler. Jacob will be pursuing a degree in civil engineering technology- land surveying and mapping at the University of Akron. Jacob is pursuing this degree because he sees the importance of helping the environment through design and mapping.

Jacob is a 2018 graduate of Greenville Senior High School and worked part time with Mote and Associates. Congratulations Jacob!

Agriculture & Conservation Tour of Darke County

On August 31st, Darke SWCD along with Ohio State University Extension held a tour highlighting agriculture and conservation practices in Darke County. The purpose of the tour was to emphasize the importance of agriculture and conservation for our elected officials and show them some of the changes in recent years. Below are pictures from the event. This year's hosts were The Stucke Family, The Overholser Family, Indian Stone Farms and Endless Pint Brewing. Thank you to our hosts and to all attendees!



ATTENTION HOME GARDENERS!

Lawn & Garden
SOIL SAMPLING



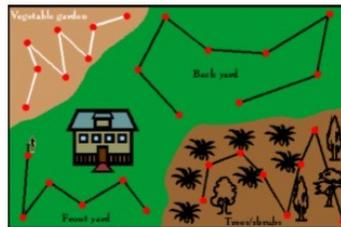
\$15.00



Have you ever wanted to pull soil samples from your lawn or garden but not been sure what to do with them? Are you interested in learning how to responsibly improve your lawn's health or your garden's production? If you answered "yes" to either of these questions, then this soil sampling opportunity is for you. Darke SWCD will be a drop off point for your soil samples. Darke SWCD has information on how to properly pull a representative soil sample available online or in the office. Once your sample is pulled, bring it to our office by October 15th before 4:00PM. Your soil sample will be sent to the lab for analysis and results will be back in your hands to make the appropriate adjustments for next year's garden crop, flower bed planting or lawn mowing season. Call us at 937-548-1715, Ext. 3, email jared.coppess@darkeswcd.com or visit our website, www.darkeswcd.com, for more information.

Responsible fertilizer application begins with understanding what your soil needs!

RIGHT: Example of how to pull a representative soil sample from your lawn or garden area. Pull 12-18 plugs in a zig-zag pattern.



LEFT: A soil probe makes pulling samples easy. Stop by the office to borrow one of ours "free of charge".

TURN YOUR SOIL SAMPLES IN BY :
OCTOBER 15, 2018

More information available at www.darkeswcd.com

Darke SWCD

1117 South Towne Court
Greenville, OH 45331

Phone: 937.548.1715, Ext. 3

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**Serving conservation needs
in Darke County since 1955**



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Conservation Highlights

SEPTEMBER 2018

CALENDAR OF EVENTS

Milkweed Pod Collection	September 1st through October 31st
Prairie Days	September 29th-30th
Data in Agriculture and Manure Application Field Day Celina, OH—RSVP @ 419-586-4209	Tuesday, October 2nd 11:30am-4:00pm
Soil Sample Submission Deadline	Friday, October 5th
Columbus Day— Office Closed	Monday, October 8th
Darke SWCD Annual Fish Sale— Orders Due	October 15th
Darke SWCD Annual Fish Sale— Fish Pick-up	October 18th 2:30pm
Veterans Day— Office Closed	Monday, November 12th
Annual Meeting & Banquet	Monday, November 19th 6:30pm

VISIT US ONLINE:
www.darkeswcd.com
Follow us on Facebook & Twitter