Red clover, rye, and others, when fit into a cash crop rotation, give benefits to soil health, yields, and water.

Cover crops offer a world of good, says Alan Sundermeier, educator, agriculture and natural resources, OSU Extension.

Cover crops protect soil from erosion. “A lot of times erosion is not an obvious thing,” said Sundermeier, author of the OSU Extension fact sheet Cover Crop Fundamentals. “But over time, it really takes away soil productivity,” which lowers yields. Stopping erosion also improves water quality by limiting washed-in soil and nutrients.

Cover crops hold nutrients, especially from manure, in the soil. Spread manure on a bare field, and you risk having rainfall wash it away. But grow cover crops on that field, and they’ll absorb the manure’s nutrients, convert them into root mass and biomass, and store them in the soil, where the cash crops that follow can use them. That action of grabbing nutrients is good for both crop growth and reducing phosphorus runoff, a cause of the algal blooms plaguing waters such as western Lake Erie and Grand Lake St. Marys.

Cover crops interrupt pest cycles. Some pests need certain types of host plants to feed on. Soybean cyst nematodes, for example, require soybeans or other legumes. You can starve them out by following your soybeans with a nonlegume cover crop such as buckwheat.

Cover crops raise soil moisture. Cover crop roots loosen compaction, retain water, and make channels down through the soil. The channels boost rain infiltration. The cash crops that follow can access that moisture, such as during a drought. “It’s in times of stress that this really pays off,” Sundermeier said.

Cover crops feed beneficial soil organisms. Those soil friends—trillions of them—build up soil organic matter and boost the health of the soil. Without a living crop on the land—a cover crop in between cash crops—they go hungry for parts of the year.

It’s not too late this year to get started, Sundermeier said. In Ohio, you can plant hairy vetch in October after soybeans, and you can plant rye in December after corn.

“Start small, and start simple,” he said. “You don’t want to do the whole farm in one shot if you’re not comfortable with that. And maybe just use a single species or two.”

Learn more at soilhealth.osu.edu, go.osu.edu/covercropbasics, and mccc.msu.edu.
Managing manure during the winter

With animals, comes manure. Sometimes, lots of it.

Knowing where to put that manure is crucial, particularly in the winter when the ground is less likely to absorb the manure, leaving it vulnerable to running off a field and into nearby streams and lakes.

Farmers with a significant number of livestock (at least 700 dairy cows, 1,000 beef cows, or 2,500 finishing pigs) can’t apply their animals’ manure to frozen or snow-covered ground, but the manure generated from Ohio farms with fewer numbers of animals can be applied to the ground during the winter as long as state regulations are followed.

“We want to do the best job we can to keep nutrients on the field. It’s the sensible thing to do,” said Glen Arnold, manure management specialist, agriculture and natural resources, OSU Extension.

Farms that are within watersheds of western Lake Erie or Grand Lake St. Marys, both of which have dealt with harmful algal problems in surface waters, have to abide by some additional state regulations. Farmers in Mercer County, regardless of the number of livestock they own, are barred from spreading manure during the winter if their farms are in the watershed of Grand Lake St. Marys, which covers most of the county.

Landowners of northwest Ohio farms that drain into the western Lake Erie Basin, must adhere to the following regulations for applying manure to frozen or snow-covered fields:

- Unless the manure is incorporated into the soil, it cannot be spread if there’s a greater than 50 percent chance of at least one-half inch of rain within 24 hours.
- Manure can’t cover more than 20 continuous acres of land without a 200-foot buffer around those 20 acres.
- No more than 5,000 gallons of liquid manure or 5 tons of solid manure can be applied per acre.
- A growing crop—such as cereal rye wheat, forages, or a pasture—must be in the ground before any manure can be applied to that ground.

For more information about applying manure to farm fields, visit go.osu.edu/manure-reg-ohio.

“We want to do the best job we can to keep nutrients on the field.”

GLEN ARNOLD
manure management specialist, agriculture and natural resources, OSU Extension
The annual series is designed to help tax preparers learn about federal tax law changes and updates as well as learn more about issues they might encounter when filing individual and small business 2018 tax returns, said Barry Ward, director of the OSU Extension Income Tax School program.

Also included during the series of two-day schools is information on preparing agricultural-related taxes, Ward said.

The schools are intermediate-level courses that help tax preparers, accountants, financial planners, and attorneys advise their clients, he said. Continuing education credit for accountants, enrolled agents, attorneys, and certified financial planners is also offered.

“This is an important year for tax education, as the new tax law creates some challenges for tax practitioners to prepare themselves for the next filing season,” Ward said.

The series also features a separate, two-hour ethics webinar that will broadcast Dec. 12 at 1 p.m. and Dec. 14 at 10 a.m. The webinar is approved by the IRS and is available at no extra charge to participants enrolled in one of the two-day tax schools.

The preregistration fee for each two-day school is $375, with a late registration fee of $425. The fee includes all materials, lunches, and refreshments. The deadline to enroll is 10 business days prior to the first day of each school. Also, for $250, participants can choose to attend just the first day of a two-day school. Additionally, participants can purchase the 2019 RIA Federal Tax Handbook and the Wolters Kluwer Master Tax Guide for a discounted fee of $40 each.

The schools run from 8 a.m. to 5 p.m. on the following dates.

**Oct. 31–Nov. 1:** Ole Zim’s Wagonshed, 1387 State Route 590, Gibsonburg.

**Nov. 5–6:** Sheraton Suites, 1989 Front St., Cuyahoga Falls.

**Nov. 7–8:** Ashland University Convocation Center, 820 Claremont Ave., Ashland.

**Nov. 13–14:** Presidential Banquet Center, 4548 Presidential Way, Kettering.

**Nov. 15–16:** Old Barn Out Back, 3175 W. Elm St., Lima.

**Nov. 26–27:** Der Dutchman Restaurant, 445 S. Jefferson/U.S. 42, Plain City.

**Nov. 28–29:** Ross County Service Center, 475 Western Ave., Chillicothe.

**Dec. 3–4:** Ohio University, Zanesville Branch Campus Center, 1425 Newark Road, Zanesville.

**Dec. 5–6:** The Ohio State University, Fawcett Center, 2400 Olentangy River Road, Columbus.

Additionally, a daylong webinar about agricultural and natural resources income tax issues will be broadcast Dec. 17 from 9 a.m. to 3 p.m. Registration is $150 at go.osu.edu/AgIssuesReg.

More information on the workshops, including how to register, can be found at go.osu.edu/taxschools. Participants may contact Ward at 614-688-3959 or ward.8@osu.edu for more information.
Get set to soil test

Without an accurate soil test, a farmer can’t determine exactly how much, if any, nutrients should be added to the soil. Too few nutrients can reduce crop yields; too many can lead to some of those nutrients running off the field and into streams and lakes. Not only is that a financial loss to a farmer, it’s also a potential harm to nearby waterways. For more, visit ohioline.osu.edu/factsheet/AGF-513.

Healthier beverages

A team of CFAES scientists has been awarded an $891,000 grant from the U.S. Department of Agriculture’s National Institute of Food and Agriculture to develop a new process to preserve foods and beverages. Called Ultra-Shear Technology, this method will allow beverage companies to produce healthier beverages by reducing thermal exposure through elevated pressure, shear, and controlled times and temperatures. The result? Healthy beverage options without chemical additives or preservatives.

Conference to discuss outlook for agriculture

Experts of the federal farm bill, trade policy, and commodity markets are among the speakers who will offer insights at the 2018 Agricultural Policy and Outlook Conference (go.osu.edu/2018-ag-policy-outlook-conf) on Nov. 2.

The CFAES Department of Agricultural, Environmental, and Development Economics hosts the annual event, which will be held at the Nationwide & Ohio Farm Bureau 4-H Center, 2201 Fred Taylor Drive, in Columbus.

Due to space limitations, this event will also be offered via webinar, but registration is required at go.osu.edu/2018-ag-policy-outlook-conf-attend.

Solar energy resources

Interested in adding solar energy to your farm? CFAES has fact sheets such as An Introduction to On-Farm Solar Electric Systems, a six-part bulletin series called “Solar Electric Investment Analysis,” and other resources to help. Find them at energizeohio.osu.edu, the website for Energize Ohio, a signature program of OSU Extension. Click on the “Energy Library” button.

Links to food safety

Have questions about canning and food preservation? CFAES experts might have the answers. OSU Extension family and consumer sciences experts offer hands-on classes on food preservation and canning at locations throughout Ohio, and they have produced several YouTube videos on the subjects. They also offer recipes and other resources for food preservation and canning. For more information, visit go.osu.edu/food-preservation.