



Farm Views

Nitrogen can increase soybean yields

New data suggests applying nitrogen fertilizer during soybean reproductive stages, may increase yields. Kansas research showed an increase of up to five bushels per acre when nitrogen was applied at the beginning of pod set. This stage usually occurs in late July and is known as the R3 stage when the soybean plant nodules begin to produce nitrogen. Nitrogen, applied through a center pivot, may work best since the application with water will prevent leaf burn.

In this study, yield responses were similar between the two rates of 20 and 40 pounds of nitrogen per acre. Five bushels of soybeans would contain about 20 pounds of nitrogen, so consistently achieving a five-bushel response would be a very efficient use of nitrogen fertilizer.

Previous research hasn't documented consistent yield increases from applied nitrogen. While the Kansas data shows an economic response to a moderate amount of nitrogen, producers are advised to consider this management technique on a small scale before adopting it widespread.

Soybeans use soil nitrogen

early in the season. Soybean leaves can use soil nitrogen until after the last leaf is fully expanded. Then soybeans begin to rely on the nitrogen fixed by symbiotic bacteria in the root nodules. Soil supply of nitrogen may reach a low point in late July or early August. Applying nitrogen at the R3 stage may be the best timing to provide soil nitrogen before the plant switches to using the root-nodule produced nitrogen.

Other studies have documented yield increases from manure applications to soybeans. The slow release of nitrogen from a moderate manure application also may provide later season nitrogen for soybeans. However, too much nitrogen mid-season will inhibit nodulation and not increase total yields.

The data from Kansas indicated that yield response may be more likely in higher yield fields of more than 60 bushels per acre. With more late-season soybean fertilization, seventh-ranked Nebraska, may produce even more than 165 billion bushels than it did in 1998. (TD)

SOURCE: Charles Shapiro, Ph.D., soils scientist, NU/IANR

Controlled traffic in fields

Random traffic from tillage, planting and other operations can track up to 90 percent of a field's soil surface. Controlling that traffic can reduce soil compaction, but not eliminate it. The first pass through a field can cause 80 percent of the wheel compaction. Once a traffic lane has been driven on, subsequent passes with similar loads have little effect on the amount of soil compaction, giving an advantage of minimizing traffic.

Controlling field traffic entails spacing wheels of all vehicles so they run between the crop rows and having wheel tracks in the same interrow position year after year. Controlled traffic lanes improve traction, soil load bearing and timeliness of planting and harvesting operations, while minimizing potential yield reduction from compaction.

The concept of controlling traffic, separates traffic zones from root zones. Controlled traffic keeps compaction where it is less detrimental to root development and uptake of

nutrients and water. Fertilizer placement and furrow irrigation practices can be modified as these traffic zones are established and the traffic lanes are known.

Containing traffic helps the lanes become harder, which makes getting into a wet field easier. There will then be a zone where crops will grow well. Find a scheme to reduce traffic. Properly spaced wheels require careful planning to achieve a successful controlled traffic pattern. Kits are available to help with wheel spacing. Ridge-till is a good system to work in and can set up permanent ridges. Combine or tractor axle extensions are available and specially shaped hubs are available to get extra space.

For more information on controlling traffic in fields, see EC96-780 "Equipment Spacing for Ridge-Till and No-Till Row Crops," available from your local cooperative extension office for \$1.00. (TD)

SOURCE: Bobby Grisso, Ph.D., biological systems engineer, NU/IANR

Pesticide container recycling program

Every year, about one million plastic agricultural pesticide containers are used in Nebraska. This amounts to about three-quarters of a million pounds of plastic that must be disposed of. Plastic lasts for centuries when buried in a landfill, shortening the life of the landfills and wasting the resources that were used to manufacture the containers in the first place.

Lancaster County Extension will be coordinating a program again this year, which gives producers a chance to contribute to the health of the environment, by recycling these containers. The Lancaster County program will be coordinating 19 sites in an 11 county area in Southeast Nebraska in 1999.

At each collection site, pesticide containers will be inspected by a trained individual to make sure they have been properly rinsed. Only white and yellow 1 and 2-1/2 gallon pesticide containers with the

labels and caps removed will be accepted. Yard and garden pesticide containers are brown and cannot be recycled with the white and yellow containers. Oil bottles and antifreeze jugs are also unacceptable.

After inspection, the containers are stored until sufficient quantities have been gathered to bring in a chipper. The jugs are inspected a second time by the chipper company employees and then processed into small chips, which greatly reduces the volume and makes it feasible to transport the materials long distances. Chips are taken to plants that melt the plastic material and mold it into new products. Recycled pesticide containers do not enter the general plastics industry. The material is currently being recycled into plastic fence posts, nailing strips that can be embedded into poured concrete walls, industrial pallets, field drain tiles, speed bumps and parking

lot tire stops.

The extension office obtained grant funding four years ago to purchase two dedicated semi-trailers where the containers can be stored until there is a sufficient quantity to bring in a chipper. Each agribusiness firm cooperating in this project has agreed to move these trailers and set them up in preparation for the recycling day they will be hosting. The businesses also pay a small fee to cover the costs of providing the technical assistance during collection days. This project would not be possible without their support.

Most collection days have been scheduled for Tuesdays or Fridays (see the schedule below). Some sites will accept containers by appointment. Please call ahead before leaving containers at any of these sites. (TD)

1999 Pesticide Container Recycling Program

Collecting Clean Containers from 9:00 a.m. to 3:00 p.m.

Collection Site	Date	Location	Agribusiness Contact
Frontier Co-op	June 15	Mead	Brian Reid (402) 624-2075 or 480-1252
Farmers Coop Co.	June 18	Waverly	Jim McGill (402) 786-2665
Firth Co-op	June 25	Firth	Ron Preston (402) 791-5837
Greenwood Farmers Co-op	June 29	Elmwood	Russ Tederman (402) 994-2585
Farmers Co-op Elevator Co.	July 2	Fairbury	Richard Zenger (402) 729-2330
Farmers Co-op Elevator Co.	July 9	Plymouth	Barry Jung (402) 656-3231
Farmers Cooperative Co.	July 13	Bennet	Bill Moates (402) 782-2295
Farmers Co-op Elevator Co.	July 16	Wilber	Brian Genrich (402) 821-2351
Dorchester Co-op	July 23	Milford	Jerry Nauenburg (402) 761-2126
Lancaster County Fair	Aug. 6	Lincoln	Tom Dorn (402) 441-7180
Farmers Co-op Co.	Aug. 10	Burr	Bill Heffner (402) 848-2381
Southeast Nebraska Co-op	Aug. 24	Hwy. 4 & 136 E. of Beatrice	Randy Timm (402) 228-3458 or 662-3885
Otte Oil & Propane	Aug. 27	Wahoo	Dan Otte (402) 443-3563

Multiple Day Sites

Agribusiness	Dates	Location	Agribusiness Contact
Farmers Co-op Asso.	May-August	Tamora	Jon Kruse * (402) 523-4225
Cedar Ridge Spraying Service, Inc.	May-August	RR2, Ashland	Jerry Newsham * (402) 944-2436
Farmers Union Co-op	May-August	Gretna	Loren Katt * (402) 332-3315
Frontier Co-op	2nd & 4th Saturdays May 22 - Aug 28 8 a.m. - Noon	David City	Marv Hilger (402) 367-3319
Frontier Co-op	May-August	Mead	Brian Reid * (402) 624-2075
Lancaster County Extension	April 1 - June 10	444 Cherrycreek Rd, Lincoln	Tom Dorn (402) 441-7180

Tips to wash pesticide-contaminated clothing

Clothing worn when applying pesticides should be laundered differently because of the residues in the clothing.

Pesticides can be absorbed through the skin, making proper laundering an important step in reducing pesticide poisoning. Usually symptoms from handling such clothing are minor, such as headaches, coughing, dizziness and skin or eye irritation.

The person doing the laundry should be told when clothing is contaminated. Such clothing should be handled carefully and separated from other laundry. Avoid touching pesticide-contaminated clothing with bare hands; wear chemically resistant gloves when handling.

Pre-rinsing or pre-soaking helps to get clothes cleaner and reduces health risks. A stain

remover can help get visible stains out of clothes. Also use heavy-duty liquid detergent and hot water – the hotter the water, the cleaner clothes will get. Use the longest wash cycle and wash clothing two to three times if heavily soiled or if pesticides are highly toxic.

Be sure to run the washing machine through one cycle empty with hot water and

continued on page 5

A REMINDER FOR INTERNET USERS:

Lancaster County Extension Office has a new, shorter home page address: www.lanco.unl.edu
Some shortcuts:
www.lanco.unl.edu/food
www.lanco.unl.edu/ag
www.lanco.unl.edu/enviro
www.lanco.unl.edu/neblines
www.lanco.unl.edu/hort
www.lanco.unl.edu/family
www.lanco.unl.edu/4h
www.lanco.unl.edu/contact