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CROP WATCH

University of Nebraska Cooperative Extension
Institute of Agriculture and Natural Resources

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No. 2004-7, April 30, 2004

In 20-year sorghum rotation trial

Soybeans provide much more than 45 lbs N

UNL guidelines for fertilizing grain sorghum give a nitrogen credit of 45 lb per acre for sorghum following soybean as compared to continuous sorghum. Apparently, the actual nitrogen contribution is considerably greater.

For the last 20 years Gary Varvel and Wally Wilhelm, both soil scientists with the USDA-ARS in Lincoln, have been comparing grain sorghum yield response to nitrogen in continuous sorghum and sorghum after soybean. The research has been conducted on long-term plots at the University of Nebraska Agricultural Research and Development Center near Mead.

The soil is a silty clay loam with 3.1% organic matter. The land was disked once or twice before planting every year. The average yield was 103 bushels per acre for continuous sorghum and 107 bushels per acre for sorghum following soybean. For sorghum following soybean with no nitrogen applied during the 20 years of research, yields averaged 96.6 bushels per acre and topped out at 128 bushels per acre in one year. Nitrogen application resulted in a significant yield increase in only 8 of 20 years for sorghum following soybean, while yields were significantly increased in 19 of 20 years for

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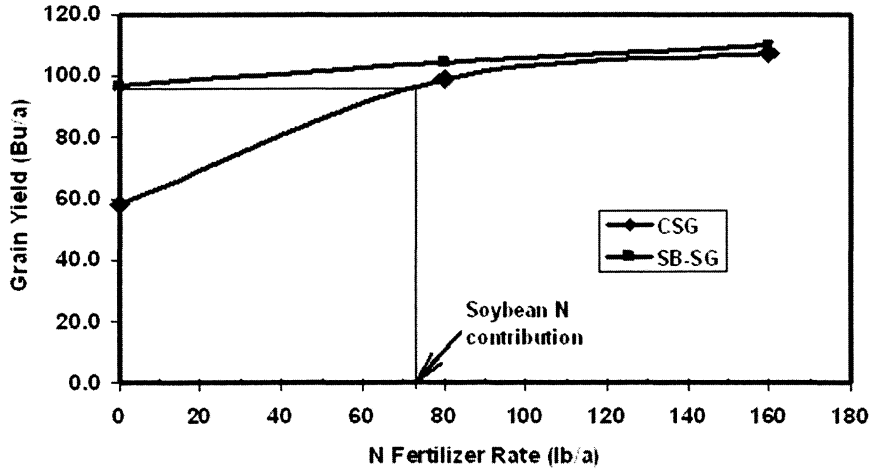

Figure 1. Sorghum grain yield response to nitrogen fertilizer in continuous sorghum (CSG) and soybean-sorghum (SB-SG) and the soybean nitrogen contribution (an average of 20 years).

Focus on Grain Sorghum

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Wheat diseases developing

Foliar diseases

Powdery mildew is present in southeast Nebraska wheat. Currently powdery mildew is on the lower and middle leaves and, depending on weather conditions (humid and overcast), may or may not move onto the upper leaves.

Flag leaves are just starting to emerge, but with warm weather the wheat will develop quickly.

If growers feel the need to treat for powdery mildew, that window is rapidly approaching for the fungicides Tilt, Quilt and Stratego. These products must be put on at flag leaf emergence. Normally, powdery mildew does not present a serious threat to Nebraska wheat, but under conditions of high humidity and irrigation it can be damaging if it becomes severe on the upper leaves and the head. If found in fields, its

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Ag briefs

Douglas Anderson, Extension Educator in Nuckolls and Thayer counties: Corn planting is just getting a good start. Wheat looks good after a slow start and alfalfa is starting to take off after early problems with army cutworm feeding. Weekend moisture is keeping people out of the fields. Subsoil moisture is probably adequate at this point.

Randy Pryor, Extension Educator in Saline County: We received 0.65 to 0.75 of rain throughout the area Saturday, helping to activate preplant herbicides and fertilizers. This was a big rain for farmers who had dried out their topsoil with pre-plant tillage.

The wheat crop looks good at this time, although this has been the type of spring that really shows the difference between well fertilized wheat fields and those that did not receive adequate nitrogen and/or phosphorous. Corn planting is 85% complete with many farmers finished. When area corn growers volunteered to help with the Southeast Nebraska Corngrowers Plot on April 26 (canceled due to wet conditions), you knew planting season had gone smoothly in April.

Alfalfa weevils emerged last week with feeding occurring in many fields. Farmers are encouraged to scout fields now for weevil. If you're trying to decide whether to treat your alfalfa or cut it early to avoid damage, see the April 9 CropWatch for a detailed story and treatment guide or see the NebGuide, *Managing the Alfalfa Weevil* (G-1208), available from your local Extension office or online at *http://ianrpubs.unl.edu/insects/g1208.htm*

Paul Hay, Extension Educator in Gage County: A lot of corn in this area has emerged and producers are planting soybeans. There has been some minor damage from cutworms – black and variegated.

Duey Lienemann, Extension Educator in Clay and Webster counties: Corn planting is on schedule. Soil temperatures seem to keep flirting with the 55 degree mark, but more soil warmup would be welcomed. We were pretty dry, so last weekend's rain was well received.

Wheat looks good in some fields, while other fields are showing some unusual damage which may be due to a lack of moisture to deliver plant nutrients. Wheat damage and development are somewhat inconsistent across fields -- some are just reaching the joint stage while others are well beyond it. I have received several reports of small and large field areas that are brown and appear to be dying. This may be due to last week's hot dry winds -- 60 mph gusts with consistent winds of 30-40 mph -- which may've dried plants or carried herbicide residue from nearby corn fields.

Pastures are coming on early, but unfortunately we're seeing a lot of wild oats. Alfalfa fields also have a good start. We had some early army cutworm damage and several farmers have reported the worst alfalfa weevil infestations that they've ever seen. All reports were from fields south of the Republican River.

Soybean cyst nematode update

Thirty-four soybean cyst nematode soil samples have been taken in fields from Rulo to Brownville. They were analyzed at the University of Nebraska Plant Diagnostic Lab for the number of cyst eggs per 100 cc's of soil.

The lowest egg count was 22 and the highest was 10,200. The average count of the positive samples was 1270. This year a University of Nebraska soybean cyst nematode variety yield test will be conducted on the Steve and Jerry Kennedy Farm just east of Nemaha.

Another 16-18 samples are being taken this week to follow pest development.

Table 1. Number of surveyed fields where soybean cyst nematode was found and not found, April 2004.

	+	-	*Total*
Upland Fields	3	10	13
Bottomland	12	9	21
Total Fields	15	19	34

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Grain sorghum -- a well-placed rotation crop

This year nationwide another 800,000 acres of milo will be lost to soybeans and corn. In Nebraska grain sorghum is grown from Steinauer to Ragan across southern Nebraska. It is well placed in one of the state's toughest growing areas for dryland crops. Southern Nebraska often has temperature and moisture variability that challenge crops and producers alike.

Milo is still a good crop choice for farmers who treat it like a true crop rather than something cheap to plant in the poorest fields. It is very responsive to rotation with soybeans and wheat. A three-crop rotation can be done with drills or air-seeding equipment without needing a cornhead on either no-till or conventional management.

Milo is also very responsive to no-till production, which can help provide significant water and cost savings. In a southeast Nebraska survey sorghum had yield increases of 13 bushels per acre following soybeans and 14.4 bushels per acre following wheat.

Table 1. Average crop yields on 1972 dryland rotational fields in southeast Nebraska, 1996-2003.

Crop	*Stubble*	*Tillage*	*Yield bu/ac*
Corn	Soybeans	Conventional	105.4
Corn	Soybeans	No-Till	104.3
Corn	Wheat	Conventional	109.5
Corn	Wheat	No-Till	114.1
Soybeans	Corn	Conventional	37.2
Soybeans	Corn	No-Till	38.3
Soybeans	Milo	Conventional	33.6
Soybeans	Milo	No-Till	34.8
Milo	Soybeans	Conventional	80.4
Milo	Soybeans	No-Till	93.4
Milo	Wheat	Conventional	89.1
Milo	Wheat	No-Till	103.5

Dryland crop yields reported in Table 1 are taken from an on-going farm field survey in southeast Nebraska and indicate the value of various rotations. The complete survey is available at the Gage County Extension Web site at *http://gage.unl.edu* (From the home page click to continue and select the PowerPoint presentation on the bottom center of the index page.) The complete study shows that milo competes well in southern Nebraska in profitable dryland crop rotations.

Paul Hay, Extension Educator
Gage County

Health benefits of sorghum explored further

Tannins, which are commonly found in red wine and tea, also are found in some types of grain sorghum. These tannins contain antioxidant compounds which can help protect against cell damage from oxygen-free radicals, a major cause of disease and aging. In fact, according to a report in the Journal of Agricultural and Food Chemistry, some sorghums contain antioxidant levels equal to or higher than blueberries, which are considered the gold standard for antioxidant levels.

"Ironically, we have tried for years to remove high tannin sorghum from U.S. sorghum hybrids due to their negative effect on feed efficiency and weight gain in animals, and we have worked hard to isolate these sorghums from the mainstream of our grain industry," says Dr. Jeff Dahlberg, NGSP research director.

"As Americans become more concerned about their health and what they are eating, specialty sorghums that contain high levels of antioxidants could become important sources of ingredients for use in functional, healthy foods," says Dahlberg. "We are also learning more about how regular, non-tannin sorghums may be healthier for you as well," he adds, noting that sorghum starch may take longer to digest than other cereals, and this has positive implications for diabetics.

"We are also a gluten-free cereal, and this makes sorghum a good choice for a wheat flour substitute in individuals unable to digest gluten — a condition known as celiac-sprue," adds Dahlberg.

To learn more about recent sorghum research on disease-fighting, nutritional benefits, production and management advances, and details on how to enter the national yield and management contest, visit the National Grain Sorghum Producers Web site at: **http://www.sorghumgrowers.com**

Urea hydrolysis model predicts nitrogen losses

As more producers reduce tillage on their fields, concern about the loss of preplant nitrogen increases. In the past when producers used anhydrous ammonia and knifed it into the soil, losses weren't a concern. Now, urea or UAN solutions are being used on more acres. Without incorporation, there is a potential for nitrogen loss with these sources. This occurs when urea is broken apart by the enzyme urease, which is found in soils and on crop residue.

A commercially available urease inhibitor can retard the function of this enzyme and conserve urea, hopefully long enough for rain or tillage to move the urea into the soil. A Cooperative Extension Circular, *Fertilizer Management For Conservation Tillage* (EC96-144), explains this process and gives the potential loss rates under various scenarios of temperature, pH and incorporation. The publication does not help predict loss under specific field conditions.

Agrotain International LLC, which produces a commercial urease inhibitor, has developed a computer program that models the loss potential from a field fertilized with urea or UAN solution. The model is based on information published by the National Fertilizer Development Center, Tennessee Valley Authority, in "Ammonia volatilization from urea fertilizers," edited by B.R. Bock and D.E. Kissel (1988). The calculator is available on the Internet at: *http://agrotain.com/calculator/calc2.html.*

Once downloaded and installed, the program is fairly straightforward and easy to use. The user needs to provide 24 pieces of information, but most of the needed information can be estimated using knowledge about the field. For example, soil moisture is estimated as wet, medium, dry, very dry. Based on the texture and estimated moisture input by the user, the program provides the actual inches of moisture. The output is given in pounds of nitrogen loss and percent of nitrogen applied loss. There is also an estimate of the yield effect of this nitrogen loss.

While I have not been able to find the actual equations used in the calculations and the documentation for the scientific basis of the model is not given, the model seems to conform to the generally recognized principles given in the Bock and Kissel publication.

In response to a producer question, I ran several scenarios for nitrogen loss. The table shows the output for this specific field. The field is in northeast Nebraska and has a pH of 7.6. I varied the initial soil moisture condition and the wind speed and had the model predict losses over 10 days. The situation presented contains a worse case scenario since the producer wanted to know the range of loss potential.

The results show that starting with dry surface soil, the warm daily temperatures, and high winds did not cause much nitrogen loss. As the soil surface became wetter the losses increased. Interestingly, with the wind speed reduced from 20 mph to 10 mph for a medium moisture soil, the nitrogen loss actually increased slightly (24 vs 25 lbs N/acre). The model does not explain these results, but it is likely that the slower winds increased the time the soil surface stayed wet and therefore the urease acted for a longer period causing slightly more nitrogen loss.

The value of using a model that has interaction effects in it, is that the cumulative effect of several factors can be estimated. As with the wind example above, the explanation may not be apparent initially. Using this model with the known weather conditions after nitrogen is applied will allow producers to make informed decisions about whether more nitrogen may need to be applied later in the season.

Charles Shapiro, Extension Soil Scientist – Crop Nutrition

Table 1. Volatilization losses as calculated by Agrotain software

Initial soil conditions:	Wet	Medium	Very Dry	Wet	Medium	Very Dry
Soil moisture (in)	1.0	0.5	0	1.0	0.5	0
Wind speed: (mph)	20	20	20	10	10	10
Day max temp (°F)	80	80	80	80	80	80
Evening temp (°F)	50	50	50	50	50	50
Texture	Sil Clay L	Sil Clay L	Sil Clay L	Sil Clay L	Sil Clay L	Sil Clay L
Tillage	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum
Residue	40%	40%	40%	40%	40%	40%
N form	UAN	UAN	UAN	UAN	UAN	UAN
N applied (lbs/acre)	195	195	195	195	195	195
Days to rain	14	14	14	14	14	14
Total N loss (lbs/acre)	38	24	0	29	25	0
Percent loss (%)	19.7	12.4	0	15.3	13.2	0

How particle size and distribution affect spray drift and pesticide efficacy

Spray particle size affects both drift and efficacy of pesticides. Reducing drift will benefit the environment as well as your bottom line as more of the product stays where it was intended to be used. Not limiting pesticide drift to acceptable levels may result in:

1) under or over application of chemicals and ineffective pest control;

2) losses and/or costly litigation if sensitive crops in adjacent fields are damaged;

3) unintentional contamination of foodstuffs from unacceptable pesticide residues;

4) pollution of air and water resources, and

5) the endangered health and safety of susceptible human and livestock populations.

By obtaining maximum efficacy from the pesticide applied, rates may be reduced and/or performance may be improved.

Most spray nozzle tips used for pesticide application produce a distribution of droplet sizes. Droplet size refers to the diameter of an individual spray droplet. The nozzle tip spray pattern is then made up of numerous spray droplets of varying sizes.

In the United States spray nozzle classification by droplet spectrum was developed and approved by the American Society of Agricultural Engineers (ASAE) in August 1999. This Standard, S-572, defines droplet spectrum categories for the classification of spray nozzles, relative to specified reference fan nozzles discharging spray into static air or so that no stream of air enhances atomization. This provides a means for relative nozzle comparisons based on droplet size only. The Standard is based on spraying water through the reference nozzles and nozzles to be classified.

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Table 1. Classification category threshold values for flat spray nozzles.

Classification category threshold	*Nozzle spray angle(°)*	*Nominal rated flow rate[1] (gpm)*	*Reference flow rate (gpm)*	*Reference operating pressure (psi)*
VF/F	110	0.10	0.13	65.3
F/M	110	0.30	0.31	43.5
M/C	110	0.60	0.51	29.0
C/VC	80	0.80	0.76	36.3
VC/XC	65	1.00	0.85	29.0

[1]Nominal rated flow rate is at 40 psi and is for nozzle size selection only.

Table 2. Comparison of spray retention in glyphosate-resistant corn from fine, medium, and coarse droplets.[a] (Feng 2003)

Droplet size	*Plant leaf area (±SE)*	*Maximal retention cm^{-2}[b]*	*plant retention (±SE)[c]*	*Expected Actual plant retention (±SE)[d]*	*Percent (actual/ expected)*
	cm^2	----------*microliter*----------			
Fine *(XR110015 at 34 PSI)*	160 ± 7	2.5	395 ± 18	187 ± 16	47 ± 2
Medium *(TT110015 at 34 PSI)*	162 ± 6	2.2	362 ± 14	133 ± 22	37 ± 7
Coarse *(AI 110015 at 34 PSI)*	150 ± 6	3.1	461 ± 19	172 ± 18	38 ± 4

[a] Glyphosate at 0.84 kg ae ha^{-1} was mixed with ^{14}C-glyphosate and applied with a track-sprayer (234 kPa and 187 L ha^{-1}) positioned 46 cm above the canopy. Data represent the mean of four replicates with standard errors (SEs).

[b] Maximal retention per square centimeter was measured from application to filter disks.

[c] Expected retention volume per plant was calculated by multiplying plant foliage area and maximal retention per square centimeter.

[d] Actual retention volume per plant was measured from radioactivity in leaf wash at 0 days after treatment.

The rest of the story

For more information on sprayers, check out these Cooperative Extension publications available from your local Extension Office or on the Web at *http://ianrpubs.unl.edu*:

- Fine Tuning a Sprayer with the "Ounce" Calibration Method (G-865)
- Plumbing Systems of Agricultural Sprayers (G-1020)
- Nozzles — Selection and Sizing (G-955)
- Set Up of Tillage, Planting and Directed Spray Equipment (G-1019)

Spray distribution, efficacy *(Continued from page 65)*

The classification category thresholds, nozzle spray angles, nominal rated flow ratings at 276 kPa (40 psi), reference flow ratings, and reference operating pressures are shown in *Table 1.*

Research by Feng, Chiu, Sammons, and Ryerse on the effect of droplet size on retention, absorption, and translocation of C-glyphosate was studied in glyphosate-resistant corn. Fine, medium, and coarse spray droplets were studied using a track-sprayer equipped with commercially available nozzles. Glyphosate-resistant corn was used to obtain measurements at field use rates in the absence of phytotoxicity. Spray retention on corn leaves was calculated based on recovered glyphosate per leaf area, and retention was higher with application of fine droplets (47%) than with application of coarse (38%) and medium (37%) droplets.

Absorption in corn leaves was directly correlated with droplet size and reached a plateau one day after treatment for all droplet sizes. Based on glyphosate recovered three days after treatment, coarse droplets showed the highest absorption (49%), followed by medium (35%) and fine (30%) droplets. Percentage of translocation also increased with droplet size.

Translocation was primarily toward strong sink tissues such as roots and young leaves. The results showed that large droplets have slightly reduced retention in corn but have increased absorption, resulting in increased translocation of glyphosate to growing sink tissues. See *Table 2* and *Figure 1.*

A Sympatec laser particle analyzer is being used at the West Central Research and Extension Center in North Platte to evaluate spray particle size. The analyzer is capable of detecting micron sizes in a range from 0.5 to 1750 microns. The width of the spray plume is analyzed by moving the nozzle across the laser with a linear actuator. System

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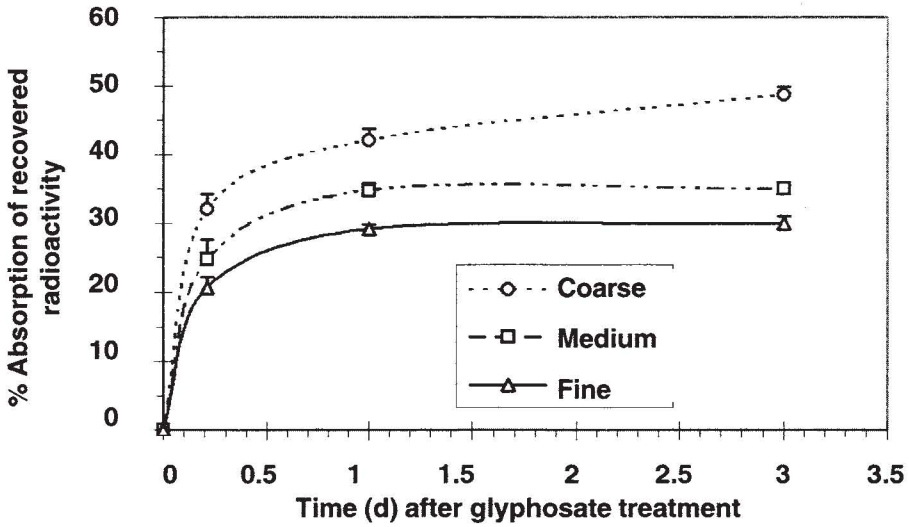
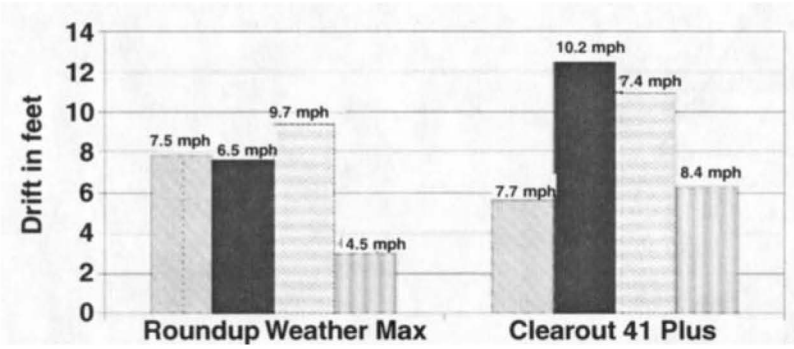
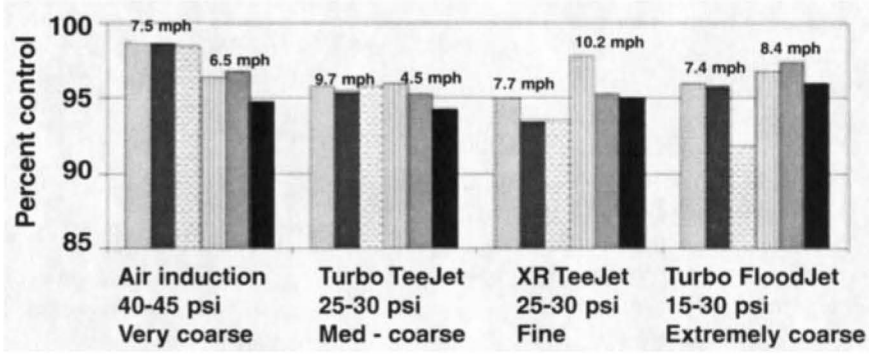


Figure 1. The effect of droplet size on time course of glyphosate absorption in glyphosate-resistant corn. (Feng 2003)



Vertical columns, from left to right represent: Air induction 40-45 psi, very coarse; Turbo TeeJet 25-30 psi, medium to coarse; XR TeeJEt 25-30 psi, fine; and Turbo FloodJet 15-20 psi, extremely coarse.

Figure 2. Spray drift from various nozzle types with Roundup WeatherMax and Clearout 41 Plus (Knezevic, 2003)



Herbicide treatments and weed species indicated by vertical columns, from left to right: Roundup WeatherMax overall, on velvetleaf, and on waterhemp and Clearout 41 Plus overall, on velvetleaf, and on waterhemp.

Figure 3. Efficacy of Roundup WeatherMax and Clearout 41 Plus (Knezevic 2003)

Spray distribution, efficacy (Continued from page 66)

Table 3. Percent of spray volume less than 210 microns and more than 730 microns with four nozzle types at various pressures, using water.

Percent of spray volume less than 210 microns for four nozzles.

	PSI								
Nozzle	*10*	*15*	*20*	*30*	*40*	*45*	*60*	*75*	*90*
11004 XR	14	21	31	35	37	43	--	--	--
11004TT	6	9	17	23	26	32	37	43	
11004AI	--	--	--	5	7	9	11	14	17
TF 2	4	8	12	18	20	--	--	--	--

Percent of spray volume greater than 730 microns for four nozzles.

	PSI								
Nozzle	*10*	*15*	*20*	*30*	*40*	*45*	*60*	*75*	*90*
11004 XR	--	1	0	0	0	0	0	0	0
11004 TT	--	20	16	4	3	3	2	2	1
11004 AI	--	--	--	23	13	14	7	5	2
TF 2	43	38	18	15	12	--	--	--	--

software generates reports and charts the results to user specifications.

Droplet characteristics such as volume median diameter and percent of volume 210 microns and less can be obtained. Particle size analysis is helpful in interpreting plot data and correlating it with applications made by nozzles commonly used on farms and by commercial applicators.

Research was conducted in 2003 to evaluate the effect of droplet size on the drift and efficacy of two glyphosate formulations at several Nebraska sites. The glyphosate formulations consisted of a isopropylamine salt and a potassium salt. A glyphosate rate of 0.42 pounds acid equivalent per acre was applied. Nozzle tips and pressures used in the study were: 11002 XR at a range of 25-30 PSI, 11002 TT at 25-30 PSI, 11002 AI at 40-45 PSI, and TF2 at 15-20 PSI. Small nozzle sizes were used due to the limitations of some research equipment. The trial was conducted in glyphosate resistant soybeans and in post winter wheat harvest stubble. Different nozzles types provide different droplet sizes.

Table 3 shows the percent of spray volume less than 210 microns and the percent over 730 microns with four nozzle types at various pressures with water. Spray particle size of approximately 200 micons and smaller are susceptible to drift while the large particles may not give as good a coverage.

Figure 2 shows the distance of spray drift from the various nozzle tips with the two glyphosate formulations. Wind speed measurements were taken during each treatment application. With Roundup WeatherMax and an average wind speed of 4.5-9.7 mph one would conclude there was little difference in distance of spray drift with the various nozzle tips. With Clearout 41 Plus the air induction and turbo flood reduced the distance of spray drift.

The efficacy of Roundup WeatherMax and Clearout 41 Plus with the various nozzle tips is shown in *Figure 3*. One treatment -- Roundup WeatherMax with the air induction nozzle tip -- was significantly better than the rest on waterhemp, while another one -- turbo flood jet with Roundup WeatherMax -- was significantly lower in efficacy on waterhemp. All other treatments were equal in efficacy with the various weeds.

Robert Klein, Extension Cropping Systems Specialist
Jeffrey Golus Extension Research Technician
West Central REC

Oats for pasture

Oat pastures are one of the newer grazing practices many people are trying this spring. Oat pastures respond well in a drought and can be long lasting and productive. They also can be disappointing if grazing isn't properly managed.

Oats grows rapidly. Once the plant is five to six inches tall, it quickly can shoot up to a foot tall. As nice as this sounds, once oats are that tall they may not stool out, tiller, and regrow after grazing very well. It's important to start grazing early and to graze hard enough to keep the oats vegetative and leafy, thereby stimulating the constant formation of new tillers. Generally, if grazing starts when plants are six to eight inches tall and about half the growth is removed, it will recover rapidly and tiller well.

After this first grazing to stimulate tillering, keep oats between six and sixteen inches tall using either continuous or rotational stocking. Begin with a light stocking rate -- about one animal every two acres, then adjust animal numbers as oat growth changes. Don't worry if a few plants head out. They might form seed that can naturally replant more pasture for fall grazing. But if many plants get tall and approach the boot stage, either plan one last hard graze-out or consider cutting for hay. Oat grazing looks promising for Nebraska producers, but we'll need to research and experiment a bit to perfect it.

Bruce Anderson Extension Forage Specialist

West Nile Virus surveillance begins; dead birds accepted for testing

The Nebraska Health and Human Services System (HHSS) is now accepting dead birds for testing as part of its surveillance program for West Nile virus. All birds of certain types will be accepted until two birds in each county test positive for the virus. Reports on dead birds will continue to be taken by HHSS throughout the season. Monitoring for West Nile virus using dead birds has proven to be an accurate means of predicting where the virus will show up in humans, according to Wayne Kramer, state medical entomologist with HHSS. In over half of the counties where West Nile virus was found in humans during the outbreak last summer, it had first been detected in the county's bird population. Early detection is important because it can heighten peoples awareness of the presence of the disease, Dr. Kramer said.

In 2002, the first bird to test positive was found in June. In 2003, the first bird was found in May. It=s difficult to say how early a positive bird will be found this year, Dr. Kramer said. West Nile virus is transmitted through the bite of a mosquito that has picked up the virus by feeding on an infected bird. In turn, the mosquito can pass the virus to humans. Last year, 2,496 cases of West Nile virus were reported in Nebraska, with 29 deaths. The virus has been found in all 93 of the state=s counties, in either mosquito, bird, horse or human populations.

Health and Human Services will accept reports of dead birds of any species, but the focus of the surveillance is on blue jays, crows, magpies, owls and hawks. Selected birds of the desired species that are in good condition may be collected and tested. Health and Human Services or local health departments will collect the birds, and all testing will be done at the Veterinary Diagnostic Center at the University of Nebraska-Lincoln. People who find dead birds should call their local health department to report them. (A list of the contact information for each county is available at *http://www.hhs.state.ne.us/wnv/contacts.htm)*

Although people have an extremely low risk of contracting this virus by touching a dead bird, precautions should still be taken. Bare hand contact with carcasses should be avoided and birds should be double-bagged using plastic bags and then frozen until they can be picked up.

Surveillance for West Nile is also conducted by testing pools of mosquitoes and flocks of sentinel chickens. Monitoring will be conducted at 21 sites throughout the state. While there may be some mosquitoes showing activity right now, these are not the type that carry West Nile virus, Kramer said. Those will appear later this summer, usually in August and September.

It is wise to take precautions, however, to reduce the risk by using insect repellent, wearing long-sleeved shirts and pants when outdoors and staying inside during peak mosquito hours at dusk and dawn. Prevent mosquito breeding by eliminating standing water in gutters, bird baths and tires. For more information on West Nile virus and the Nebraska surveillance program please visit the Health and Human Services Web site at *http://www.hhs.state.ne.us/wnv/index.htm.*

For questions involving dead bird reporting call 1-877-220-1237 or your local health department.

Daily GDD & ET updates for wheat
cropwatch.unl.edu

If alfalfa planting was delayed, consider options

Spring has moved in so fast that some producers may have started planting corn before they planted alfalfa. Normally, alfalfa should be planted by mid-May on dryland sites and by late May on irrigated sites. Planting later greatly increases the risk of hot, dry, windy weather killing new seedlings before they have enough root system to support their moisture needs.

Planting by the deadline may be difficult this spring. One way to plant more quickly is to seed no-till. Crop residues of corn, milo, beans, and small grains are not a problem for most drills, but ridges along the rows can make the field too rough for comfortable hay making in some places. Weeds can be controlled post-emergence using herbicides like Poast Plus or Select for grasses and Buctril, Pursuit, Raptor, and Butyrac for broadleaves. Mowing weeds also helps. A burndown spray using Roundup or Gramoxone before planting may be needed if weeds are present.

If you can't plant by the deadline and don't need the alfalfa for summer hay, it may be best to delay planting until August when seedlings won't have to endure the hot weather.

If you need a crop now, alternative crops would include sorghum-sudan hybrids and foxtail millet. Foxtail millet won't regrow after an early August hay, so it may work best. Sorghum-sudans will need to be sprayed or tilled before an August alfalfa planting. Berseem clover, any of the summer annual grasses like cane, pearl millet, and sorghum-sudan, or even soybeans for hay could be used if you decide to wait a full year before trying to plant again next spring.

Bruce Anderson
Extension Forage Specialist