



North Dakota Grape Production on the Rise



Since 2002, six wineries have been established in North Dakota. To feed them, viticulturists (people who grow grapes) have expanded production from just a few hobby fields to several large-scale acreages. Indeed, North Dakota has a Grape Growers Association. In addition,

NDSU has an active research program that is not only evaluating winter-hardy varieties, but also is looking into the basic production practices.

One of the real concerns for this fledgling industry is the danger of pesticide drift onto these expensive vineyards (an average cost of \$6,000 is needed to establish just one acre of grapes). This is a very real concern, especially because grapes are extraordinarily susceptible to phenoxy herbicides. In 2004, North Dakota farmers and ranchers applied phenoxy herbicides (e.g., dicamba, MCPA and 2,4-D) to well in excess of 9 million acres of crop and rangeland. That does not include the routine use of these products in lawn care and along road rights of way.

This means the probability that drift will cause damage to some of these vineyards is very high. So, the North Dakota Grape Growers, in cooperation with the North Dakota Department of Agriculture, is encouraging users of these pesticides to be especially cautious when working near vineyards. A listing of these vineyards can be found in the table on page 8.

An excellent 2004 Extension publication from Oregon State University is available on this problem. It is titled "Preventing Herbicide Drift and Injury to Grapes." It is an eight-page, full-color publication. You can download it from the Web at:

<http://extension.oregonstate.edu/catalog/pdf/em/em8860.pdf>

Or you can purchase it from Oregon State University's publications office. Its telephone number is (541) 737-2513. The cost of the publication is \$4. Ask for "Preventing Herbicide Drift and Injury to Grapes," EM8860.

See North Dakota Grape Growers, page 8.

In this issue . . .

North Dakota Grape Production on the Rise	1
Coordinator's Comments	2
Waste Pesticide Collections Scheduled	3
Acute Pesticide Poisoning Associated with Pyraclostrobin Fungicide in Iowa in 2007	4
North Dakota Department of Agriculture Enforcement Actions from 2007	6
North Dakota Grape Growers	8

Need help with pesticide certification or general pesticide use issues?

Contact:

NDSU Pesticide Training and Certification Program
 Box 5051, Fargo, ND 58105-5051

Tel: (701) 231-7180

Fax: (701) 231-5907

E-mail: pesticid@ndsuxent.nodak.edu

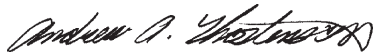
Internet: www.ndsupesticide.org

COORDINATOR'S COMMENTS

The following are my comments that were incorporated into a news release sent out in late March. I think they still are relevant.

Have a safe and profitable spray season.

Best regards,



Andrew A. Thostenson

Producers and Pesticide Applicators Need to be Patient With Each Other

High commodity prices have radically changed the economics of pesticide use, says a North Dakota State University Extension Service pesticide program specialist.

"With the potential for good returns on crops, producers will no longer be reluctant to apply relatively costly pesticides, as they have in the past," says Andrew Thostenson, NDSU Department of Plant Sciences. "For example, a few years ago, producers used to agonize about getting a high enough yield and quality boost to justify the expense of applying fungicides to control scab on small grains. Those days are gone. With crop prices this high, every pesticide application that can show even a modest return will be made."

Pesticide prices are on the rise, but not to the same degree as crop prices. This year, producers will have a great deal of money tied up in their crops. Crops that do not perform well because of poor techniques used by an applicator could result in a serious financial dispute between a producer and applicator.

"High commodity prices and high input prices for seed, fertilizer and pesticides mean that farmers who sustain losses from a misapplication or drift could be seeking damages," Thostenson says. "Damages could be sought from custom applicators or even neighbors in amounts that exceed \$100 per acre and could range as high as \$1,000 per acre, depending on the commodity, price or yield potential of the crop."

With every pesticide being applied that can be applied, there will be shortages of preferred products and equipment.

"Planning ahead is essential," Thostenson says. "Producers need to consider what the alternative is if they can't get the preferred pesticide."

Thostenson has these tips for producers:

- Have realistic expectations when hiring a custom applicator. The applicator may be very busy and may not be able to accept the job.
- There will be shortages of trained and experienced manpower to apply products in a timely manner. Be careful about hiring fly-by-night operators who promise good service and cheap prices, but have little or no experience dealing with the products the producer wants applied.
- With all the pesticides being applied, there will be a shortage of good spray days (winds of 3 to 10 miles per hour in a steady direction and without an inversion). This means that some pesticides will be applied during

unfavorable weather conditions, so drift may be a greater problem this year than in a typical year.

Thostenson also has advice for applicators:

- There will be no shortage of work during the spraying season, so consider turning down jobs that are high-risk or involve people who have unrealistic expectations.
- Do not overpromise. When expectations are not met, misunderstandings can arise.
- People will be under stress to get pesticides applied in a timely manner. This means people will be more physically tired or rundown than usual. This is when mistakes in judgment occur and application equipment has a tendency to fail.
- Plan, prepare and be patient. To do otherwise could lead to serious misapplication problems. The temptation will be great, but do not take unnecessary risks.

"Producers and custom applicators will be under intense pressure, which could lead to short tempers," Thostenson says. "Be mindful of this and exercise extreme prudence when interacting with people. A failure to do so may result in misunderstandings and disputes that lead to complaints being filed with the North Dakota Department of Agriculture or someone may seek out a law firm."

NDSU Agriculture Communication

Source: Andrew Thostenson, (701) 231-7180, andrew.thostenson@ndsu.edu
Editor: Rich Mattern, (701) 231-6136, richard.mattern@ndsu.edu

Waste Pesticide Collections Scheduled

Sixteen sites have been selected for the 2008 Project Safe Send collection of unusable pesticides, scheduled for July. (See list below for dates, times and locations.)

“This is a good time for anyone with pesticides – farmers, ranchers, chemical dealers and applicators, government agencies and homeowners – to take stock of their inventory and set aside unusable pesticides for disposal,” said Agriculture Commissioner Roger Johnson. “With 16 collection sites, no one will have to drive far to get rid of their waste pesticides safely, efficiently and at no charge.”

People with more than 1,000 pounds of pesticides should call Judy Carlson with the North Dakota Department of Agriculture at (701) 328-4997 to preregister. No other preregistration is required. A maximum of 20,000 pounds of pesticide per participant will be accepted.

Pesticide rinse water also will be accepted at any of the 16 collection sites. The first 100 pounds of rinse water will be taken free of charge; a fee will be applied for each additional pound.

Since 1992, more than 5,000 participants have used Project Safe Send to safely get rid of nearly 2 million pounds of unusable pesticides, including DDT, arsenic and mercury compounds. Project Safe Send is funded through the fees paid by pesticide manufacturers to register their products in North Dakota.

All collections are at North Dakota Department of Transportation (DOT) facilities unless otherwise noted. Collections will run from 9 a.m. to 3 p.m. local time.

Tuesday, July 8	West Fargo – County Highway Department shop, 1201 Main Ave. W.; south side of Main Avenue, ¼ mile east of Red River Valley Fairgrounds
Wednesday, July 9	Grafton DOT – take U.S. Highway 81 north through Grafton, cross the Park River to Division Street (Walsh County Highway 10); take Division Street to N.P. Avenue and then north to Commerce Street; DOT is on the south side of Commerce Street
Thursday, July 10	Grand Forks DOT – 1951 Washington St. N.; from I-29; take Gateway exit, go east to U.S. Highway 81 (Washington Street), then north one mile
Friday, July 11	Finley DOT – on North Dakota Highway 32 at north edge of Finley, east side of highway
Monday, July 14	Wahpeton DOT – ½ mile west of Wahpeton on North Dakota Highway 13
Tuesday, July 15	Lisbon DOT – take North Dakota Highway 27 west from the junction of North Dakota 27 and North Dakota Highway 32; go 1.2 miles; DOT is on the north side of North Dakota 27
Tuesday, July 15	Bismarck DOT – 218 Airport Road S.; from I-94, take exit 161, go south on Bismarck Expressway to Main Avenue, west on Main Avenue to 19th Street; go south on 19th Street across railroad tracks and turn right into the district yard
Wednesday, July 16	Ellendale DOT – north side of Ellendale, west of junction of North Dakota Highway 11 and U.S. Highway 281, north side of road
Wednesday, July 16	Bowman DOT – one mile west of Bowman, south side of U.S. Highway 12
Thursday, July 17	Jamestown DOT – 3568 81st Ave. N.E.; exit 256 on I-94, Woodbury Interchange, north about ½ mile, east side of street
Thursday, July 17	Belfield DOT – I-94 to exit 42, then ½ mile south on U.S. Highway 85; just left of U.S. Highway 85
Friday, July 18	Watford City DOT – on U.S. Highway 85, ¾ mile south of junction of U.S. 85 and N.D. Highway 23
Monday, July 21	Kenmare DOT – ½ mile east of junction of U.S. Highway 52 and Ward County Highway 2
Tuesday, July 22	Velva DOT – east side of North Dakota Highway 41, 1/3 mile south of the junction of U.S. 52 and North Dakota 41.
Wednesday, July 23	Harvey DOT – from the junction of business loop U.S. Highway 52 and North Dakota Highway 3, go north 1.5 miles and turn right on Sixth Street; continue about two blocks, on the north side of road
Thursday, July 24	Cando DOT – two blocks north of North Dakota Highway 17 on east edge of Cando, about one mile east of U.S. Highway 281

Acute Pesticide Poisoning Associated with Pyraclostrobin Fungicide in Iowa in 2007

The following article was published by the Centers for Disease Control and Prevention in its Morbidity and Mortality Weekly Report, Jan. 4, 2008, Volume 56, Numbers 51 and 52, pages 1343-1345. Pyraclostrobin is marketed in North Dakota under the trade names Headline, Cabrio EG, Cabrio Team, Pristine and Insignia.

Pyraclostrobin is an agricultural pesticide product used to kill fungi (e.g., blights, mildews, molds and rusts). Hazards to humans from pyraclostrobin exposure include eye injury and skin irritation. In July 2007, the Iowa Department of Public Health (IDPH) received reports of five events involving pyraclostrobin that sickened 33 people, including 27 migrant workers who were exposed in a single incident during aerial application (i.e., crop dusting). This report describes those five events and provides recommendations for preventing additional illnesses associated with exposure to pyraclostrobin.

Event A: On July 23, 2007, the IDPH received media reports that migrant workers in a field had been exposed inadvertently to pyraclostrobin fungicide by a crop-duster plane on July 22. An IDPH investigation identified 27 cases of acute illness among the potentially exposed workers; all illnesses were associated with off-target drift of the pyraclostrobin to an adjacent field, owned by a different grower, where workers were detasseling field corn. The IDPH learned that the pilot had seen the nearby workers, yet proceeded to apply the fungicide. Some workers reported feeling wet droplets on their skin and seeing mist coming from the aircraft.

All 27 people with acute illness were Hispanic and residents of Texas. Twenty were male and seven were female; median age was 46 years (range: 15 to 74 years). All received skin decontamination on-site by a hazardous materials team before being transported to an emergency department for observation until their symptoms resolved. All cases were categorized as being of low severity. The most common symptom was upper respiratory tract pain or irritation (26 patients), followed by chest pain (20 patients). Three patients had nausea and one patient each had pruritis, skin redness, eye pain, weakness, headache, dizziness and chest pain.

The Iowa Department of Agriculture and Land Stewardship (IDALS) began an investigation on July 23 that included collection of soil and vegetation samples from the corn-field where the detassellers had been working and samples of worker safety glasses and hats. All samples tested positive for pyraclostrobin, even though the samples were collected the day after the pyraclostrobin application and after substantial evening rainfall. Before this incident, the field had not been treated with pesticide (i.e., herbicides containing atrazine and topramezone) for 40 days. On Aug. 1, IDALS suspended the commercial pesticide applicator license of the crop-dusting company that applied the fungicide; an administrative law judge later revoked the license.

Event B: On July 20, a crop-duster pilot aged 55 visited an emergency department with first-degree

chemical burns after skin and inhalational exposure to pyraclostrobin fungicide that occurred when his plane crashed during takeoff, spilling the liquid fungicide. Emergency department personnel consulted the Iowa Poison Center (IPC) and IDPH was notified of the case. The pilot was admitted to the hospital for observation for two days and the case was categorized as being of moderate severity. Although inhalational exposure occurred, the pilot reported no respiratory symptoms.

Events C, D and E: During July 2007, IPC notified IDPH of three additional events involving five cases of acute pesticide poisoning associated with pyraclostrobin exposure that resulted from off-target drift of pyraclostrobin from nearby aerial applications. All five illnesses were of low severity; all the people who were exposed consulted IPC but did not otherwise seek medical care. On July 5, a man aged 54 experienced headache and eye pain after pyraclostrobin exposure while riding a motorcycle near a field. On July 12, a woman aged 40 reported eye pain and headache, and a man aged 49 reported eye pain, headache and dizziness after pyraclostrobin drifted into the yard of their home. On July 14, a man and woman both aged 20 reported eye pain and conjunctivitis after pyraclostrobin drifted into the yard of their home.

In all five of these cases, symptoms subsided after the exposed people moved indoors or away from the pyraclostrobin-treated fields.

Reported by: R.M. Gergely, MAg; B.W. Hokel, Iowa Department of Public Health; G.M. Calvert, MD, Division of Surveillance, Hazard Evaluations and Field Studies, National Institute for Occupational Safety and Health; S.E.

Editorial Note

The cases described in this report are the first published accounts of human illness caused by exposure to pyraclostrobin or any of the other strobilurin chemical compounds used as agricultural fungicides. Pyraclostrobin has a toxicity category of II; the product label warns that pyraclostrobin exposure can cause substantial, although temporary, eye injury and skin irritation but can be fatal if swallowed. Contact with eyes, skin or clothing should be avoided. After a cornfield has been treated with pyraclostrobin, workers should be prohibited from entering that field for seven days to perform detasseling unless they are wearing appropriate personal protective equipment (i.e., coveralls and chemical-resistant gloves). Although upper respiratory symptoms are not mentioned on the product label warnings, 26 of the 27 workers exposed in event A experienced these symptoms, perhaps as a result of irritation of the upper respiratory mucosa by a mechanism similar to that causing skin and eye irritation.

The strobilurin fungicides, including pyraclostrobin, are relatively new to the U.S. agricultural market. Pyraclostrobin was approved for sale in the United States in 2002 for use on a limited number of crops, but was not approved for use on corn until December 2004. During 2007, the first year of widespread use on field corn, pyraclostrobin was applied to an estimated 1.5 million acres of corn in Iowa. Increased use of pyraclostrobin on corn likely is attributable to several factors, including increased planting of corn in the same field in successive

seasons, which is associated with increased fungal disease risk to the corn plant; high demand for corn to produce corn-based ethanol; and aggressive fungicide marketing by agricultural-chemical dealers. In addition, strobilurin fungicides, especially pyraclostrobin, might increase corn yield in the absence of disease by directly stimulating plant growth, although field trials to document this have produced inconsistent results. No cases of illness related to exposure to trifloxystrobin and azoxystrobin, the other two strobilurin fungicides licensed in Iowa, were reported to IDPH during 2006 or 2007.

The 27 workers sickened in event A were detasseling corn (i.e., removing tassels from corn plants to prevent auto-pollination and enable hybridization). Although the field where these workers were detasseling had been treated previously with atrazine and topramezone, both of which can produce mucosal irritation, 40 days had elapsed since that treatment. Workers may return to a field 12 hours after such treatments. Therefore, these herbicides were unlikely to be responsible for the illnesses reported July 22.

In the United States, cases of pesticide-related illness and injury are identified through state-based surveillance systems, several of which are supported by the National Institute for Occupational Safety and Health (NIOSH) through the Sentinel Event Notification System for Occupational Risk (SENSOR)-Pesticides program. Data from SENSOR-Pesticides and the California Department of Pesticide Regulation were reviewed to identify cases associated with pyraclostrobin exposure through 2005. A total of 12 cases were identified; however, only

one of these cases was associated with pyraclostrobin application to corn. The other cases were associated with applications to grapes (five cases), other fruits (four), almonds (one) and tomatoes (one). One case occurred in 2003 in Michigan, three cases occurred in 2004 in California and eight cases occurred in 2005 (six in California and one each in Florida and Washington). All cases were work-related; six occurred among pesticide handlers, five occurred during routine agricultural work (not involving pesticide application) and one occurred in a mosquito-control worker in a vineyard treated with pyraclostrobin. Patients reported combinations of skin, eye, respiratory, gastrointestinal, nervous system/sensory and systemic symptoms. Two cases were of moderate severity and 10 were of low severity. None of the patients were hospitalized.

The events described in this report reinforce the importance of compliance with existing pesticide regulations and pesticide label requirements. Pesticide applicators must avoid aerial applications of pesticides when workers are in nearby fields, application methods must minimize off-target drift of pesticides and farmers should consider the potential adverse health effects on humans when weighing the risks and benefits of pesticide use. Greater use by crop-dusting pilots of educational programs offered by the National Agricultural Aviation Association (e.g., Professional Aerial Applicator Support System) also might help reduce the incidence of acute illnesses resulting from exposure to pesticide.

Access to the references for this paper can be found on the Web at: <http://198.246.98.21/mmwr/preview/mmwrhtml/mm5651a3.htm>

North Dakota Department of Agriculture Enforcement Actions from 2007

Dave Phillips, Pesticide, Feed and Fertilizer Enforcement Supervisor

The access to and use of pesticides are vital to our state's economy and the quality of life in North Dakota. Our farmers and ranchers depend on pesticides as an effective tool to manage weeds, insects and diseases. However, pesticides are not just used in agricultural settings. They are utilized by individuals, businesses and government agencies to control pests in urban and homeowner settings, as well as disease vectors. When used properly, pesticides are important tools to manage economic, nuisance and public-health pests. However, use of pesticides comes with inherent risks. State and federal pesticide regulations, aimed at mitigating the risk of pesticides to humans and the environment, have been enacted through time. As the state's lead pesticide regulatory agency, the North Dakota Department of Agriculture is responsible for

ensuring compliance with both state and federal laws and regulations.

The department utilizes various strategies to bring the public into compliance with state and federal pesticide requirements. The preferred approach is to offer outreach assistance to people desiring to correct their compliance deficiencies. In addition, the department conducts inspections of pesticide dealers, storage and handling facilities, and applicators to ensure that they are distributing, storing and using products legally. The department responds to complaints of alleged misapplications or illegal sales activities. Sixty-five complaints were filed last year, which is above the nine-year average of 50.

When noncompliance is identified through inspections or investigations, the department responds in a number of ways, including warnings, suspension or revocation of a person's certification or use of civil

penalties (fines). All of these approaches are intended to change behavior and bring people into compliance. For the most part, civil penalties are reserved for high-risk violations or when warnings have been ineffective.

In the reporting year 2007, the department conducted a total of 759 inspections and complaint investigations. In 401 of these, no violations were found. In another 269 of the cases, a warning was determined to be sufficient to correct noncompliant behavior. These are the preferable results. Civil penalties were issued in only 89 cases and these were instances of high-risk or repeat violations.

Off-target pesticide applications continue to be an issue in the state, accounting for 31 percent of the cases in which civil penalties were issued. Fourteen penalties were issued to repeat violators. Human endangerment resulted in three civil penalties. While we regard all pesticide violations as being serious, we pay special attention to violations that result in human endangerment.

Enforcement Penalties from 2007

First Name	Last Name	Firm	City	State	Violation	Fine	Repeat Violation
Dale	Altoff	Apiary	Mooreton	ND	Label Violation	\$ 1,000	
LeRoy	Brandt	Apiary	Towner	ND	Label Violation	\$ 1,000	
Kevin	Coye	Midwest Pest	Fargo	ND	Label Violation	\$ 1,400	
Roger	Duchscher	Private	Rugby	ND	Label Violation	\$ 1,000	
Jason	Heilman	Private	Rugby	ND	Label Violation	\$ 1,000	
Dennis	Helmers	Apiary	Souris	ND	Label Violation	\$ 600	
Joaquin	Llerenas	Apiary	Linton	ND	Label Violation	\$ 200	
Joel	Anderson	Grand Forks Weed Board	Grand Forks	ND	Illegal Sales to Uncertified Customer	\$ 1,000	
Bruce	Bachmeier	Wholesale Ag Products	Carrington	ND	Illegal Sales to Uncertified Customer	\$ 1,000	
Merle	Block	Johnson Oil	Rolette	ND	Illegal Sales to Uncertified Customer	\$ 1,600	Yes
Edward	Cuskelly	Helena Chemical Co.	Dickinson	ND	Illegal Sales to Uncertified Customer	\$ 400	
James	Diepolder	Better Ag Development	Willow City	ND	Illegal Sales to Uncertified Customer	\$ 1,600	
William	Lanners	Wilbur Ellis	Minot	ND	Illegal Sales to Uncertified Customer	\$ 400	
Greg	Novak	Farmers Elevator	Forest River	ND	Illegal Sales to Uncertified Customer	\$ 600	
Shane	Timm	Agriliance Ag Co-op	Hettinger	ND	Illegal Sales to Uncertified Customer	\$ 400	
Brad	VanOverbeke	Farmers Union Southern Valley	Fairmount	ND	Illegal Sales to Uncertified Customer	\$ 600	
Bob	Blegen	Private	Churches Ferry	ND	Worker Protection Standard	\$ 500	
Randy	Heck	BTR Farmers Co-op	Leeds	ND	Worker Protection Standard	\$ 500	
Jim	Sitar	Agriliance Harvey	Harvey	ND	Worker Protection Standard	\$ 500	
Mike	Veer	UAP	Devils Lake	ND	Worker Protection Standard	\$ 100	Yes

First Name	Last Name	Firm	City	State	Violation	Fine	Repeat Violation
Remy	Bosche	Bosche Enterprises	Fargo	ND	User Not Properly Certified	\$ 200	
Clint	Cogdill	City of Burlington	Burlington	ND	User Not Properly Certified	\$ 200	
Dennis	Enger	Mayville Park District	Mayville	ND	User Not Properly Certified	\$ 200	
Richard	Finneman	Private	Wibaux	MT	User Not Properly Certified	\$ 200	
Dave	Johnson	City of Valley City	Barnes	ND	User Not Properly Certified	\$ 200	
Lyle	Mathews	Lake Region State College	Devils Lake	ND	User Not Properly Certified	\$ 400	
Jerry	Nypen	Lower Yellowstone Irrigation	Sidney	MT	User Not Properly Certified	\$ 200	
John	Paulson	Valley City State University	Valley City	ND	User Not Properly Certified	\$ 200	
Casey	Roaldson	Arrowood	Wimbeldon	ND	User Not Properly Certified	\$ 400	Yes
Robert	Schmidt	L-5 Lawn Service	Grand Forks	ND	User Not Properly Certified	\$ 200	
Gary	Swart	G & L Carpet Cleaning	New Rockford	ND	User Not Properly Certified	\$ 600	
Roger	Wagner	Grafton Farmers Co-op	Grafton	ND	User Not Properly Certified	\$ 400	
Jason	Kazenbach	Krochus Landscaping	Fargo	ND	User Not Properly Certified	\$ 400	
Mike	Carroll	Private	Forest River	ND	Illegal Purchases-No Certification	\$ 200	
Victor	Meier	Private	Hurdsfield	ND	Illegal Purchases-No Certification	\$ 400	
Travis	Meier	Private	Hurdsfield	ND	Illegal Purchases-No Certification	\$ 200	
Travis	Messer	Plains Grains and Agronomy	Enderlin	ND	Illegal Purchases-No Certification	\$ 600	
Paul	Mutch	Private	Larimore	ND	Illegal Purchases-No Certification	\$ 200	
Marla	Reede	Private	Lemmon	SD	Illegal Purchases-No Certification	\$ 300	
Douglas	Toussaint	Private	Wahpeton	ND	Illegal Purchases-No Certification	\$ 600	
Marlow	Werth	Private	Lehr	ND	Illegal Purchases-No Certification	\$ 200	
Mark	Brekke	Brekke Aerial Service	Grafton	ND	Off-target Application	\$ 300	
Thomas	Chisolm	Private	Circle Pines	MN	Off-target Application	\$ 300	
Bruce	Fossum	Allied Agronomy	Jamestown	ND	Off-target Application	\$ 800	Yes
Gary	Glyten	Sprayers Inc.	Mandan	ND	Off-target Application	\$ 300	
Troy	Jangula	Private	Hazelton	ND	Off-target Application	\$ 600	Yes
Terry	Johnson	Rolette Farmers Union	Rolette	ND	Off-target Application	\$ 600	
Art	Kauk	Private	Jamestown	ND	Off-target Application	\$ 300	
Travis	Lambourn	Private	Bowman	ND	Off-target Application	\$ 300	
Joe	Laskowski	Spencer Wilson Farm	Minot	ND	Off-target Application	\$ 600	
Delmar	Leapaldt	Private	Woodworth	ND	Off-target Application	\$ 600	
Dan	Materi	Private	Strasburg	ND	Off-target Application	\$ 300	
Ben	Meier	Sprayers Inc.	Mandan	ND	Off-target Application	\$ 600	Yes
Louis	Nicoli	Private	Valley City	ND	Off-target Application	\$ 200	
James	Olsen	Olsen Spraying Inc	Cando	ND	Off-target Application	\$ 800	Yes
Maynard	Rathjen	Private	Hazen	ND	Off-target Application	\$ 600	
Charles	Richards	Private	Argusville	ND	Off-target Application	\$ 600	
Mike	Saewert	Saewert Bros.	Davenport	ND	Off-target Application	\$ 600	
Mathew	Schanilec	Agrimax Grafton	Grafton	ND	Off-target Application	\$ 600	
Mathew	Schanilec	Agrimax Grafton	Grafton	ND	Off-target Application	\$ 600	
Mathew	Schanilec	Agrimax Grafton	Grafton	ND	Off-target Application	\$ 600	
Harlan	Schluchter	Private	Cavalier	ND	Off-target Application	\$ 600	
Steve	Schneier	Schneider Aerial	Rugby	ND	Off-target Application	\$ 300	
Curt	Schorsch	Sprayers Inc.	Mandan	ND	Off-target Application	\$ 600	
Karla	Schrodeder	Chemlawn	Fargo	ND	Off-target Application	\$ 200	
David	Stokka	ROW Applicators	Cooperstown	ND	Off-target Application	\$ 600	
Andy	Tibert	Agrimax Grafton	Grafton	ND	Off-target Application	\$ 600	
Rick	Wenzel	Private	Wimbeldon	ND	Off-target Application	\$ 300	
Allan	Baumgartner	Farmers Union Oil	Wishek	ND	Incomplete Records	\$ 200	
David	Carlson	Arrowood Prairie Co-op	Wimbeldon	ND	Incomplete Records	\$ 200	Yes
Donna	Eichele	Lloyd Crop Management	Fessenden	ND	Incomplete Records	\$ 200	Yes
Ken	Eli	Agriliance	Cooperstown	ND	Incomplete Records	\$ 600	
Ferrel	Helm	Helm Flying Service	Harvey	ND	Incomplete Records	\$ 200	Yes
Sandi	Kessler	Cando Farmers Grain	Cando	ND	Incomplete Records	\$ 100	Yes
Jim	Kirkeide	Kirkeide's Northland Seed	Fessenden	ND	Incomplete Records	\$ 200	
Kevin	Manning	Rolla Co-op Grain	Rolla	ND	Incomplete Records	\$ 100	
Trygg	Olson	Arrowood Prairie Co-op	Carrington	ND	Incomplete Records	\$ 200	Yes
Jason	Pladson	Galesburg Elevator	Galesburg	ND	Incomplete Records	\$ 200	Yes
Jerry	Steinke	Green Thumb Lawn Service	Williston	ND	Incomplete Records	\$ 200	
Paul	Straley	Private	Carrington	ND	Incomplete Records	\$ 200	
Scott	Vetter	Private	Kintyre	ND	Incomplete Records	\$ 200	
Waylon	Deaver	United Agronomy	Berthold	ND	Human Endangerment	\$ 1,800	
Warren	Raguse	Private	West Fargo	ND	Human Endangerment	\$ 1,800	
Jeff	Krochus	Krochus Landscaping	Fargo	ND	Human Endangerment	\$ 6,550	
Scott	Smith	Hazelton Farmers Union	Hazelton	ND	Environmental Endangerment	\$ 800	Yes
Andrew	Werlinger	Private	Hauge	ND	Environmental Endangerment	\$ 1,000	
James	McLeish	McLeish Air Spray	Hazelton	ND	Failure to Notify of Report of Loss	\$ 200	
Greg	Novak	Nodak	Fargo	ND	Unregistered Pesticides	\$ 175	Yes
Steve	Metcalf	Agriliance	Mayville	ND	Operated in a Faulty, Careless, Negligent Manner	\$ 2,500	

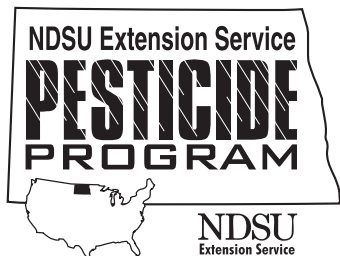
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North Dakota Grape Growers

Listing Reported by the North Dakota Department of Agriculture – Feb. 12, 2008

COUNTY	TOWNSHIP RANGE SECTION QUARTER-SECTION	FNAME	LNAME	BUSINESS PHONE SEC PHONE
Adams	129 096 12 SE	Wayne and Jennifer Seamands		(701) 567-4650
Cass	141 053 35 NE	Lisa Gray	NDSU Horticulture Research Farm	(701) 231-8063 (701) 231-7971
Cass	141 053 35 NE	Harlene Hatterman-Valenti	Horticulture Research Arboretum	(701) 799-7063 (701) 231-8536
Cass	140 054 33 NE	Steve and Rodney Hogen	Red Trail Vineyard	(701) 367-5278 (701) 238-3337
Foster	147 066 31 NE	Kathy Wiederholt	CREC	(701) 652-2951 (701) 652-1230
Kidder	143 070 31 SE	Sandy Barnes	Deer Lake Vineyard	(701) 252-4299 (701) 269-2320
Morton	140 089 15 NE	Ken and Mary Ann Duppong	Duppong Farm and Vineyards	(701) 878-4167 (701) 226-0654
Morton	140 089 14 NW	Ken and Mary Ann Duppong	Duppong Farm and Vineyards	(701) 878-4167 (701) 226-0654
Pierce	151 072 26 SW	Jerry and Darlene Axtman		(701) 324-2948 (701) 693-5970
Ransom	130 054 19 SW	Sue and Paul Anderson		(701) 282-9714 (701) 261-4638
Ransom	134 057 11 SW	John and Cindy Steffes	Prairiewood Winery	(701) 683-5866 (701) 683-9048 Chris Toyne
Richland	136 051 23 NW	David Ludwig	ME Vineyard	(701) 730-3712
Richland	132 049 30 SW	Don and Donna Thiel	Double D Vineyards	(701) 545-7415
Richland	132 048 26 SW	Steve and Lucinda Wallner	Dakota Breeze Vineyard	(701) 642-1940 (701) 640-2402
Stark	137 091 14 NW	Ken Traynor	Clara Creek Vineyard	(701) 974-4218 (701) 290-6521
Traill	144 051 06 SE	Randy and Sara Garrett		(701) 436-4152 (701) 430-0086
Traill	144 052 06 NW	Jim and Val Anderson	Twisted Sisters Vineyard	(701) 636-5926 (701) 430-1284
Traill	144 053 24 NW	Greg Krieger	Long Shadow Vineyards	(701) 488-2669 (701) 430-0281
Traill	144 052 06 NW	Kurt and Cheryl Elliott	Twisted Sisters Vineyard	(701) 786-2712 (701) 430-1101
Ward	153 081 05 NW	Alan Verbitsky	Sawyer Nursery and Vineyard	(701) 720-7711 (701) 838-5513
Ward	154 083 02 SW	Alan Verbitsky	Crystal Springs Vineyard	(701) 720-7711 (701) 838-5513
Ward	155 084 13 NW	Jeff and Diana Peterson	Souris Valley Vineyard	(701) 852-7598 (701) 340-3229
Ward	155 081 32 NW	Timothy Effertz		(701) 838-3261 (701) 833-2776
Williams	154 102 25 NE	Lorna Bradbury	WREC	(701) 774-4315 (701) 770-7066