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EXTENSION

2023



Upcoming Webinars

- **March 15 - Safely Using a Steam Canner to Preserve the Bounty of the Harvest**
- Barbara Ingham, professor and Extension food safety specialist, University of Wisconsin-Madison
- **March 22 - What does Time Temperature Control Mean for Food processors/Entrepreneurs?**
- Byron Chaves-Elizondo, assistant professor and Extension food safety specialist, University of Nebraska Lincoln



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Presenter

Audio Settings



Chat



Raise Hand

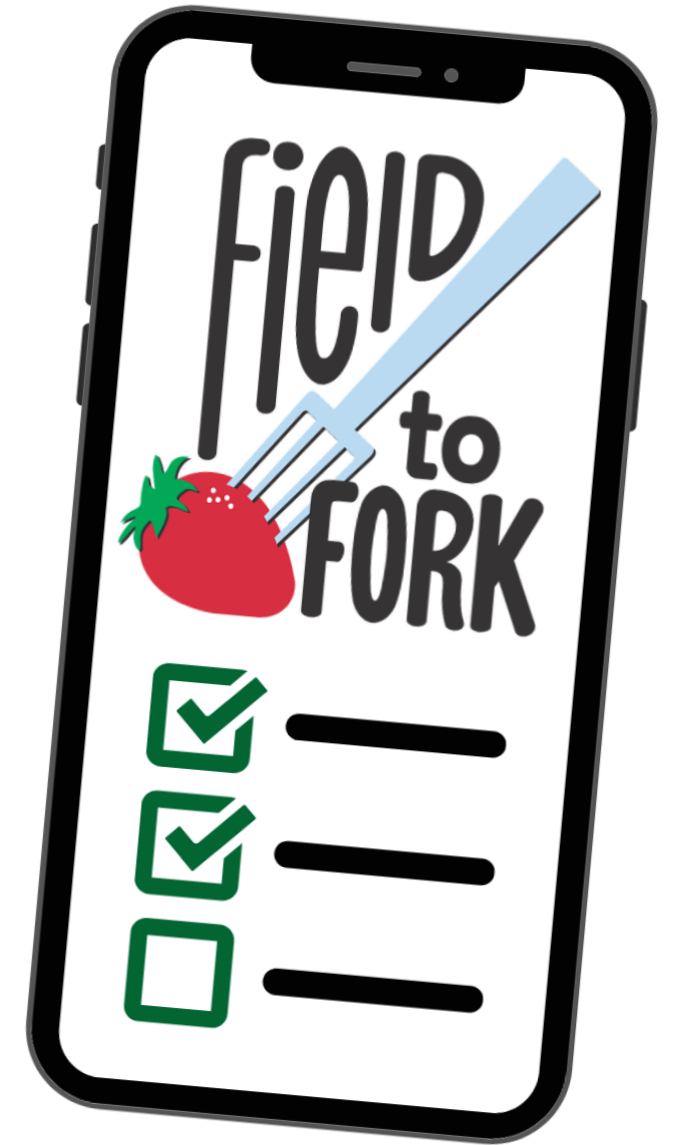


Q&A

Leave

- **Please complete the short online survey** that will be emailed to you after today's webinar. It will take just a couple minutes!
- Be sure to sign up for an opportunity to win a prize in the drawing. After submitting the survey, a form to fill out with your name/address will appear.

Acknowledgement: This project was supported by the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service through 21SCBPND1069. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.





March 8

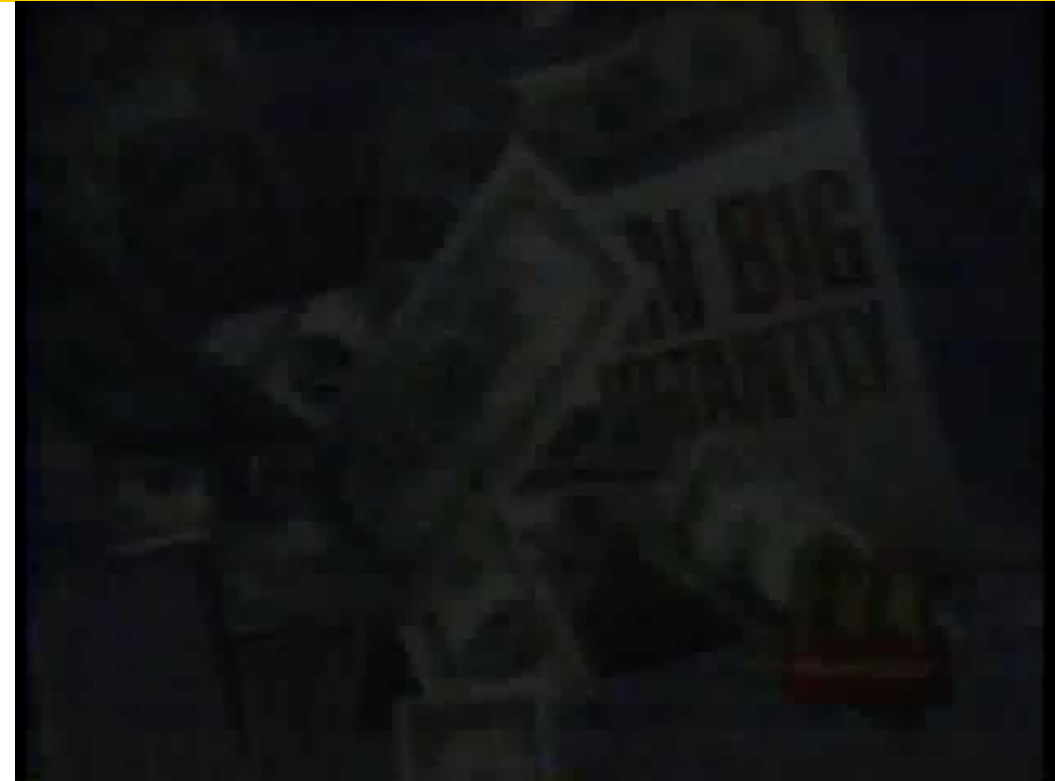
What Gardeners Should Know About Pesticides

Andrew Thostenson, Extension pesticide safety specialist, NDSU

Perhaps we should call this, What Gardeners Should NOT Know About Pesticides?



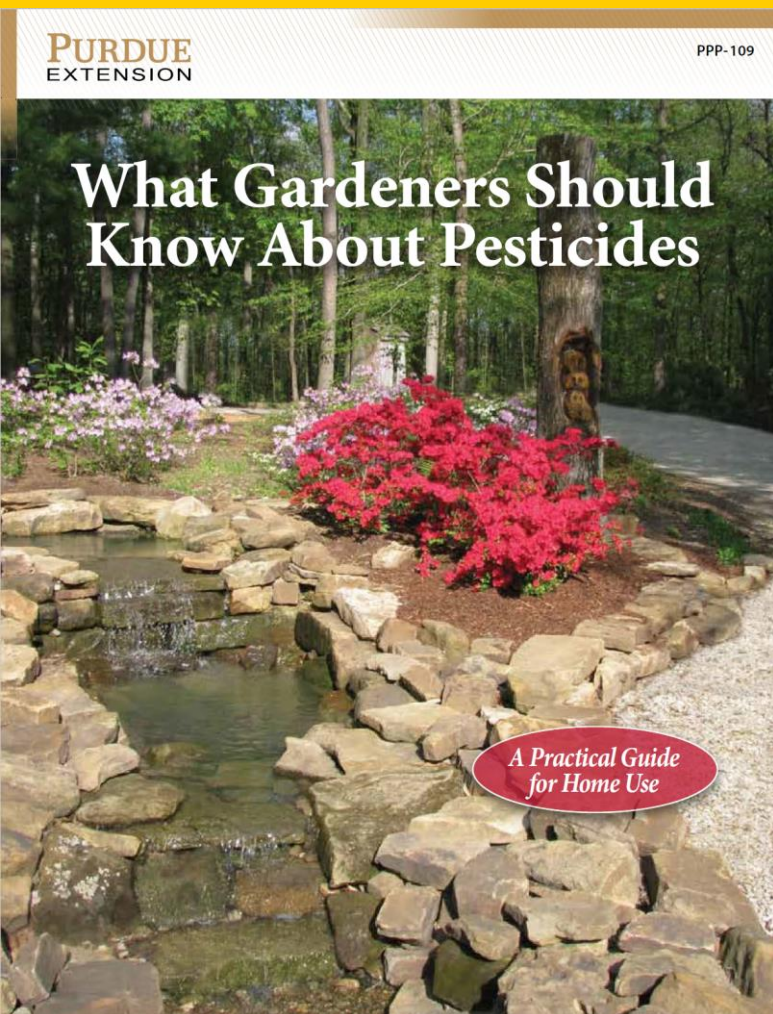
So easy you
can do it with
your head
buried!



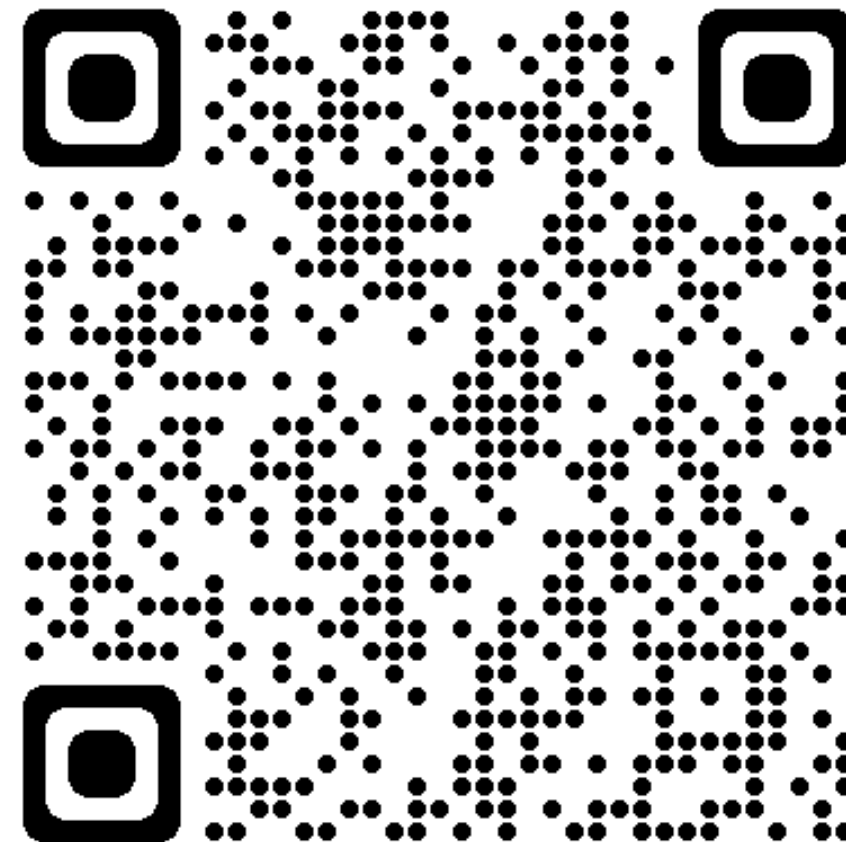
1970s vintage television
commercial

1996 television commercial

Many of the comments I will make today come from the following publication from Purdue



Managing Unwanted Critters Around the Landscape
Start Healthy and Aim for Green
Pests Are in the Eyes of the Beholder
Personalized Pest Management
Choose Control Options that Fit Your Philosophy
Pesticides Classified by What or How They Control
The Label Directs Safe, Effective, and Legal Use .
Check Your Inventory Before You Buy Pesticides
Selecting Pesticides at the Store
Be Prepared for an Emergency
Think Before and During Application
Finish the Job by Cleaning Up
Troubleshooting Why It Didn't Work
Preventing the Problem From Recurring
Conclusion
Acknowledgments
Disclaimer



Additional Comments from this NDSU Publication

H1096 (Reviewed April 2022)



Pesticide Safety: A Guide for Gardeners and Homeowners

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Former Pesticide Programs Specialist

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Pesticide Programs Specialist

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North Dakota State University
Fargo, North Dakota

Pesticides include natural and man-made substances such as insecticides, herbicides, fungicides, disinfectants and rodenticides. They are used to help control, destroy or repel destructive pests such as insects, weeds, plant disease organisms, germs and rodents.

Pesticides can increase the quality and quantity of our food supply, prevent disease and improve the comfort and aesthetics of our environment. The use of pesticides is not without risks. Every pesticide applicator is responsible for preventing harm from occurring to humans, pets, livestock, wildlife or the environment.

Is a Pesticide Necessary?

■ Identify the problem and the pest. Is controlling it necessary? Will it cause unacceptable damage? Consider all control options, including alternatives to pesticides, such as hoeing; hand weeding; excluding the pest with barriers; sanitizing the area; and/or removing food, water or cover for the pest.

Choose the Right Pesticide

- Choose the lowest toxicity pesticide that can be used legally on the target area, crop or plant and that will control the pest safely and effectively.
- Plan ahead and buy no more pesticide than you need.
- Keep pesticides separate from other items in a shopping cart and make sure they are wrapped in a separate bag at the checkout stand.
- Transport pesticides in the trunk of the car instead of the backseat to avoid contaminating the car interior in case of breakage.
- Make sure you have the proper safety and application equipment available and know how to use it.

Read and Follow the Label Directions

■ As a pesticide applicator, you are legally responsible for reading, understanding and following the label directions. Pesticide labels usually will contain the following sections:

■ **Product name:** This indicates the type of pesticide or what types of pests it will control.

■ **U.S. EPA registration number:** Make certain the product you purchase has a number. This is your assurance that the product has been reviewed properly and approved for use according to label instructions.

■ **Ingredient statement:** It lists the amount of each active ingredient and the total amount of inert ingredients.

■ **Signal word:** This indicates the toxicity of the product.

• Products labeled "DANGER POISON" and accompanied by a skull and crossbones symbol are highly toxic.

• Products labeled "DANGER" without the word "POISON" or the skull and crossbones symbol can cause severe skin injury or irreversible eye damage.

(continued on next page)

Special Precautions When Using Pesticides

■ Examine the area to be treated and the surrounding area. Does the area have any plants or animals that could be harmed by the pesticide? Don't spray if you cannot guarantee they will not be injured. You are responsible for any damage that could occur.

■ Wear all protective clothing and equipment listed on the label. The minimum protection most products require is long-sleeved shirts, long pants, socks and shoes to avoid direct skin exposure. More toxic materials may require waterproof coveralls, chemical-resistant gloves, safety glasses, goggles, etc.

■ Use pesticides only on plants or sites designated on the label.

■ Calibrate the sprayer or applicator to apply the correct amount. Applying more pesticide than the label states is illegal and unsafe.

■ Use all chemicals in well-ventilated areas to avoid inhaling fumes. Work outdoors if possible. Use protective gloves and/or masks when required by the label instructions.

■ Don't spray on a windy day (above 10 miles per hour or above label limits) because the spray could drift on you or into a neighbor's yard.

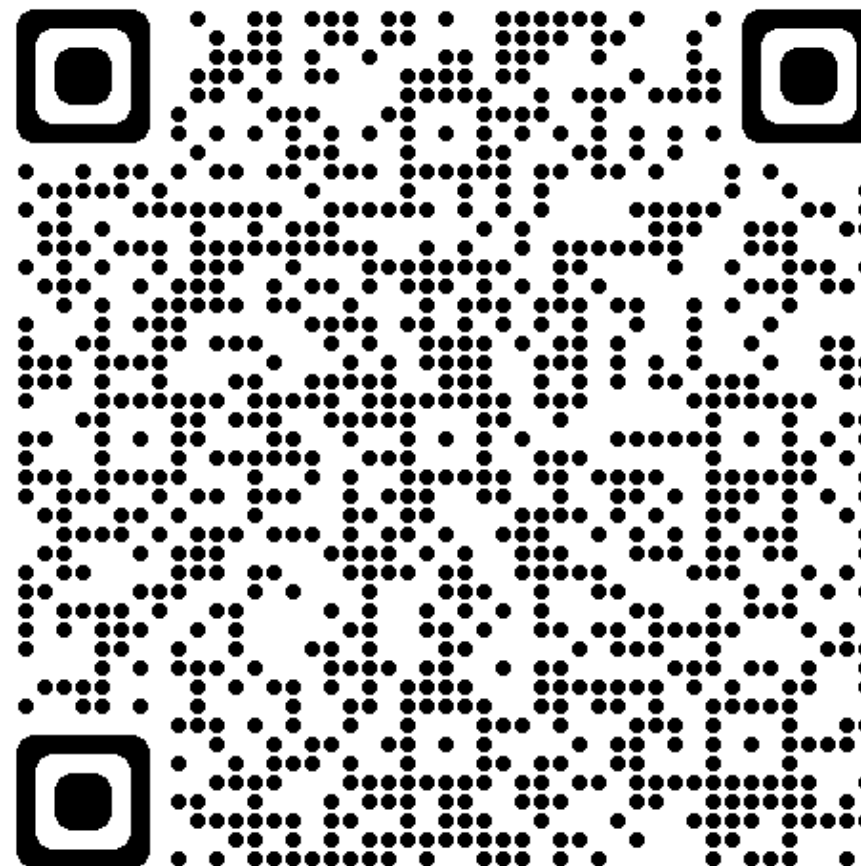
■ Do not eat, drink or smoke when using pesticides because traces of the chemicals may be transferred from hand to mouth.

■ Wash hands thoroughly with soap and water after handling pesticides and before eating or using the bathroom.

■ Avoid wearing soft contact lenses when dealing with pesticides. Soft contact lenses may absorb vapors from the air and hold them against your eyes.

■ Always avoid unnecessary exposure to pesticides. Be especially careful to keep children, pregnant women, sensitive individuals and pets away from areas where pesticides are being or have just been applied.

■ An alternative is to hire a professional pesticide applicator. Be sure the applicator is certified and has good references.



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Pesticides...



- ...include natural and man-made substances such as insecticides, herbicides, fungicides, disinfectants and rodenticides.
- They are used to help control, destroy or repel destructive pests such as insects, weeds, plant disease organisms, germs and rodents.
- Pesticides can increase the quality and quantity of our food supply, prevent disease and improve the comfort and aesthetics of our environment.
- The use of pesticides is not without risks. Every pesticide applicator is responsible for preventing harm from occurring to humans, pets, livestock, wildlife or the environment.

Pesticides, Regulatory Status

- Restricted Use Pesticides—may only be bought/sold and used by people who are certified
- General Use Pesticides, also called NOT Restricted Pesticides, may be bought/sold and used without certification
- Most pesticides sold in this country must be registered by the U.S. Environmental Protection Agency
- ALL pesticides offered for sale and use in North Dakota must be registered with the North Dakota Department of Agriculture

Database of Pesticides Registered in ND



Pesticide Database Searches

The following selections will search the North Dakota Department of Agriculture databases of pesticides. This information is compiled solely from pesticide registration data submitted by companies who wish their products to be sold in the state of North Dakota, combined with data from the EPA with regard to ingredients, pests and sites.

NOTE: Information on this site is provided to help users and dealers identify pesticides that are registered for distribution and use in North Dakota. Use this site for research purposes only. Users must consult and follow the label on the container and any supplemental labeling accompanying the product or provided by the registrant. Labels viewed and/or downloaded from this site are not necessarily enforceable.

Please select from the following options

[Search by Company Name](#)

[Search by Company ID](#)

[Search By Product Name](#)

[Search By EPA Registration Number](#)

[Search By Pesticide Type](#)

[Search By Formulation Type](#)

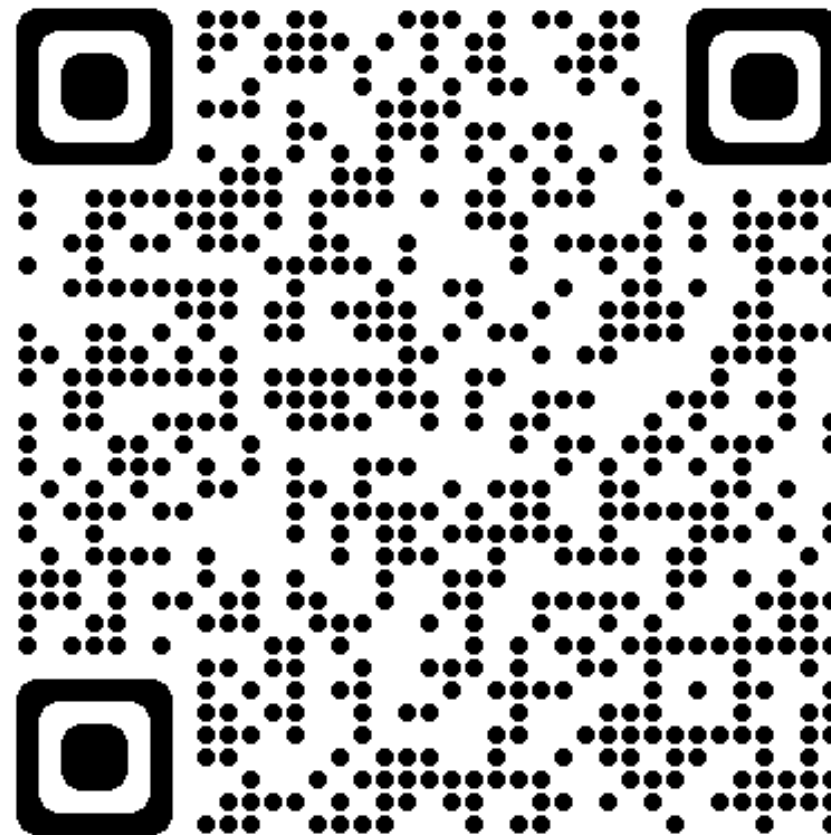
[Search By Active Ingredient](#)

[Search By Multiple Criteria](#)

[Show All 25B products](#)

[Show all FDA Exempt Products](#)

[Search By Restricted Use Products \(RUP\)](#)



The label tells you if the product is Restricted, or not

RESTRICTED USE PESTICIDE

Due to Acute Oral, Dermal and Inhalation Toxicity and Risks to Aquatic Organisms and Wildlife.

For retail sale to, and use only by Certified Applicators or persons under the direct supervision of a Certified Applicator, and only for those uses covered by the Certified Applicator's certification.

TERBUFOS GROUP 1B INSECTICIDE

COUNTER[®] 20G SMARTBOX[®]

CLOSED LOADING SYSTEM
SYSTEMIC INSECTICIDE - NEMATICIDE

FOR USE IN FIELD CORN, FIELD CORN GROWN FOR SEED, POPCORN, SWEET CORN, SUGAR BEETS, AND GRAIN SORGHUM

ACTIVE INGREDIENT:

Terbufos: S-[[[(1,1-dimethylethyl)thio]methyl]0,0-diethyl phosphorothioate]

INERT INGREDIENTS:

TOTAL

No statement = NOT
Restricted Use

Restricted Use
statements are
found on page 1
at the top of the
page

SPECIMEN LABEL – SPECIMEN LABEL – SPECIMEN LABEL – SPECIMEN LABEL – SPECIMEN LABEL – SPECIMEN LABEL



Trimec[®] SPEED

LAWN WEED KILLER

READY - TO - USE

1. Product Description

Trimec[®] Speed Lawn Weed Killer Ready-To-Use is a selective herbicide that provides post-emergent control of listed broadleaf weeds in established residential lawns. Trimec Speed Lawn Weed Killer Ready-To-Use may be applied to lawns containing Kentucky bluegrass, perennial ryegrass, fescues, common and hybrid bermudagrass, bahiagrass, bentgrass, buffalograss, centipedegrass, zoysiagrass, and St. Augustinegrass (except Floratam). Trimec Speed Lawn Weed Killer Ready-To-Use will control or suppress more than 250 broadleaf weeds, dandelion, clover, henbit, oxalis, chickweed, knotweed, spurge, plantain, and many others as listed. Results will be visible within hours of application. Symptoms may include leaf reddening, leaf and stem curling and twisting, and chlorosis.

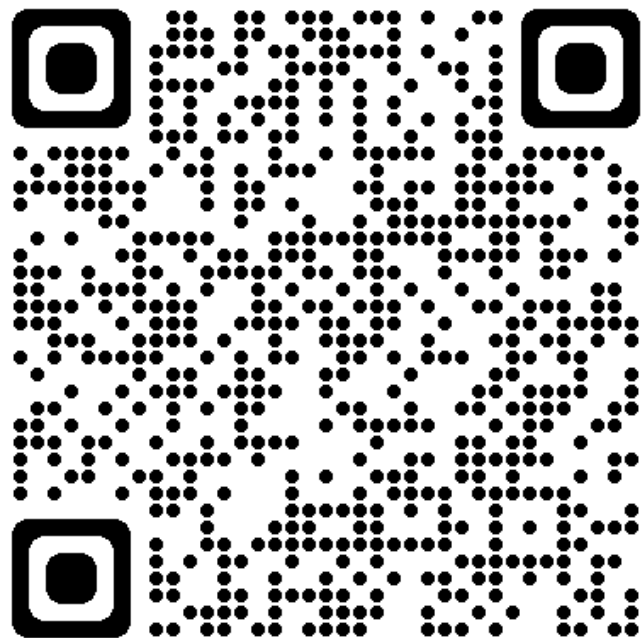
2. Use Restrictions

- For home lawns only.
- Do not apply this product in a way that will contact any person or pet, either directly or through drift. Keep people and pets out of the

The Label



General Tips for Applying Pesticides



General Tips for how NOT to Apply Pesticides

- Do not read label
- Do not measure
- Do not use cooking cups
- Do not use PPE
- Do not splash the mixture
- Do not pour carefully
- Do not use watering can
- Do not calibrate
- Do not use leaking equipment

1970s Pesticide Safety Video from Australia. DO NOT TRY THIS AT HOME



Prepare for an Emergency

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-724

911 registered to your location?

Specimen Label		
3-2-0 CHOKING VINE	GROUP	HERBICIDE
FLUORENCE WEDDING	GROUP	HERBICIDE
MASSACHUSETTS	GROUP	HERBICIDE

CORTEVA
agrimore

[illegible][illegible][illegible]

Shee

too?

CORTEVA
corcience

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/09/2022	800080005583	Date of first issue: 03/09/2022

Corvelva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

Product name : GameOn

Manufacturer or supplier's details

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information : 800-992-5994
Number
E-mail address : customerinformation@corteva.com
Emergency telephone : INFOTRAC (CONTRACT 84224).
800-992-5994 or 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral)	: Category 4
Eye irritation	: Category 2A
Skin sensitization	: Sub-category 1B

GHS label elements

Hazard pictograms :

⚠



Signal Word : Warning

Hygiene and Decontamination



For more information on Laundering Clothes



PS1778

Laundering Pesticide-contaminated Work Clothes

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University of Minnesota

Personal protective equipment (PPE) is the last line of defense to protect the body from pesticide exposure. Often, conventional work clothing is the primary form of PPE. Work clothes also are worn under more extensive garments such as aprons, chaps or chemical-resistant suits.

Ultimately, work clothes will become contaminated with pesticides as part of the handling, loading, mixing and application process. Therefore, you need to handle and wash work clothing carefully.



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SERVICE
January 2016

Some common-sense approaches for cleaning pesticide-soiled clothing include:

- **Reviewing the pesticide label** to determine if the clothing can be washed and if so, how (This is a legal requirement.) (Figure 1)

- If garments are heavily contaminated, laundering them may not be an option.

"Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate."

- If the label allows you to launder clothes that are not heavily contaminated, look for and follow label statements that direct you to use special procedures.

"... use detergents and hot water. Keep and wash PPE separately from other laundry."

- **Handling, segregating, storing and washing clothes** in a manner that will minimize contamination in the home and/or exposure to skin

- **Using optimum wash settings** to remove pesticide contaminants from garments

- **Decontaminating the washing machine** before using it for other household clothing

- **Notifying commercial laundering firms** that they will be handling pesticide-contaminated garments if you send your contaminated clothing to them

- **Checking with the manager or owner** of a laundromat or public washing facility about prohibitions or special handling policies if you plan to wash your contaminated clothing at those facilities

Figure 1.
Consult the pesticide label for washing prohibitions or special laundering instructions.
(NDSU photo)



Minimize Pesticide Residues in the Home and Avoid Human Exposure

Pesticide labels require pesticide applicators, handlers and workers to protect themselves and others from exposure to pesticides. Thus, pesticide-contaminated clothing should be handled as follows:

- While outdoors, shake, sweep or dust off the clothing with compressed air and remove any dry material from the clothing. Pay special attention to cuffs and pockets where residues often collect.

- Remove clothing outside the home or establish a changing place in the home that can be decontaminated easily after each use.

- Launder clothes as soon as possible. Studies indicate that holding clothes for 24 hours or more significantly reduces the washing efficiency.

- If you don't wash clothes immediately:
 - Store them outside the home in a garage, shop or porch if possible. Otherwise, store them in a designated area in the home that can be decontaminated easily after each use.
 - Store separately from other household clothing in a plastic garbage bag or sealed, dedicated container. (Figure 2)



Figure 2. Plastic storage bin with sealable lid available at most home improvement stores.
(NDSU photo)

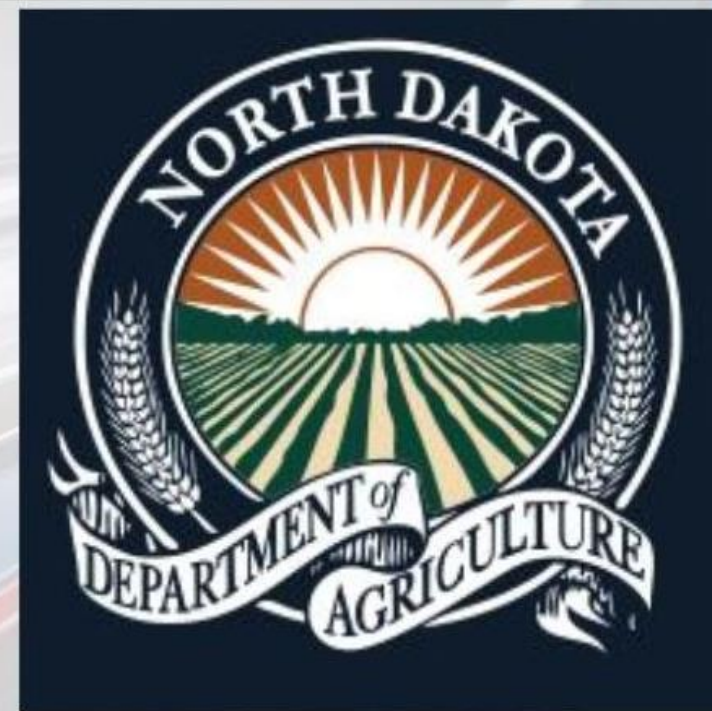
Disposal—July, 2023



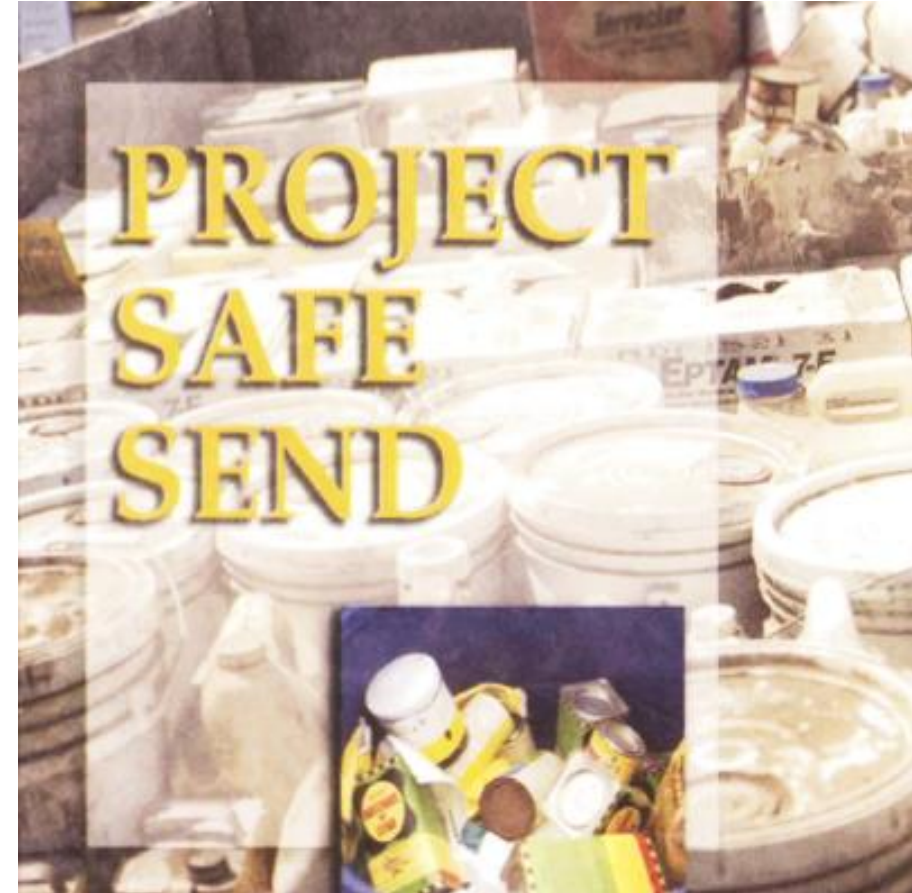
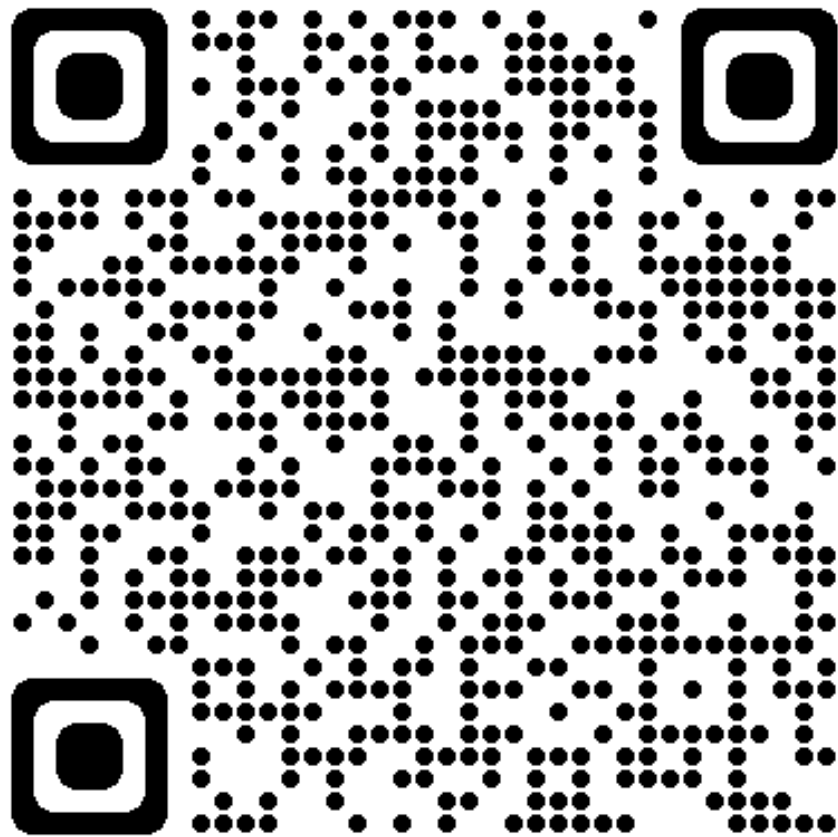
PROJECT SAFE SEND

NORTH DAKOTA DEPARTMENT OF AGRICULTURE

- ACCEPT DIFFERENT PESTICIDES
- PRE-REGISTER FOR MORE THAN 1,000 LBS.
- MAXIMUM OF 5,000 LBS.
- NO PESTICIDE RINSE WATER OR EMPTY CONTAINERS
- PRE-REGISTER AT 701-328-2980



Project Safe Send QR Code



Are Pesticides Safe to Use?

- All pesticide use entails risk, but risk is manageable (PPE, proper site/crop, etc.)
- Pesticide are NOT safe when used outside of the boundaries of the label
- I personally use pesticides, but only when practicable
- My children have both applied pesticides, as adults, as professionals





March 8

What Gardeners Should Know About Pesticides

Andrew Thostenson, Extension pesticide safety specialist, NDSU