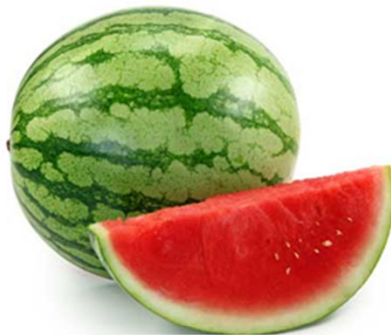


Weed Science Update and a Refresher on Labels



Mark VanGessel and Barb Scott
Extension Weed Science

Georgetown, DE



UNIVERSITY OF DELAWARE
COOPERATIVE
EXTENSION

Topics

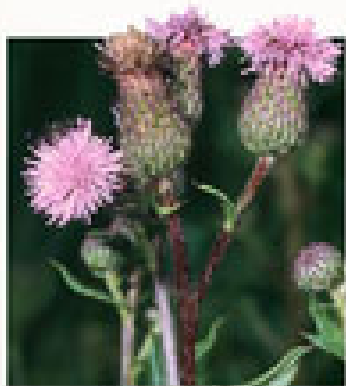
- Label updates / reminders for 2024
- Pea study summary
- Herbicide label content





WEEDS OF THE NORTHEAST

SECOND EDITION • REVISED AND EXPANDED
TO INCLUDE THE MID-ATLANTIC STATES



JOSEPH C. NEAL • RICHARD H. UVA • JOSEPH M. D'TOMASO • ANTONIO D. TOMMASO

- Available online
- ~\$30



**SARE publication
Free pdf's**

www.sare.org



MANAGE WEEDS ON YOUR FARM

A GUIDE TO ECOLOGICAL STRATEGIES



SARE **16**
Sustainable Agriculture
Research & Education **HANDBOOK**



Charles L. Mohler
John R. Teasdale
Antonio DiTommaso

Fall panicum

Harvest Weed
Seed Control

Prevent seeds from
replenishing soil;
Up to 100K seeds

Late-season require
removal



Paraquat Requirements

GROUP 22 HERBICIDE

- Paraquat dichloride
- Restricted Use Pesticide

 **Gramoxone**[®]

 **HELMQUAT 3SL**

PARAZONE[®]
3SL Herbicide

Quik-Quat[™]



Paraquat Requirements

- Additional Certified Applicator Training
 - Training valid for 3 yrs
 - Available on-line
 - Required for all involved with mixing/loading, applying, transporting, disposal



- www.campus.extension.org





- Syngenta, bicyclopyrone (1.67 lb ai/A)
 - One of the active ingredients in Acuron
 - Not sold as a stand alone herbicide (until now)
- Rates are 2.6 to 3.5 fl oz/A
- Allow for a new mode of action for watermelons
 - In corn, performance is better with atrazine
 - How will it perform by itself???
 - Poor on Palmer amaranth and morningglory





Optogen™

- Row-middle or post-directed application
 - broccoli, strawberry, horseradish, hops
- Pre-plant AND row-middle or post-directed application
 - transplanted garlic
 - transplanted sweet potato
 - transplanted watermelon
 - onions (PRE only for muck soils)
 - lemongrass, rosemary, timothy

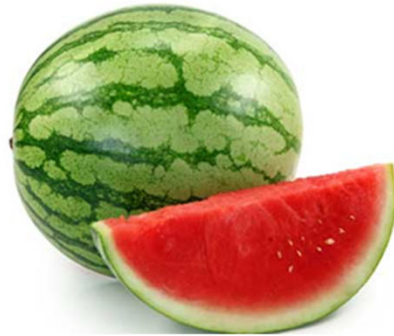




Herbicide

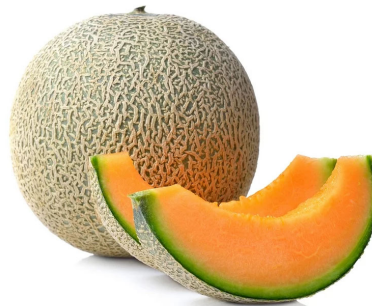
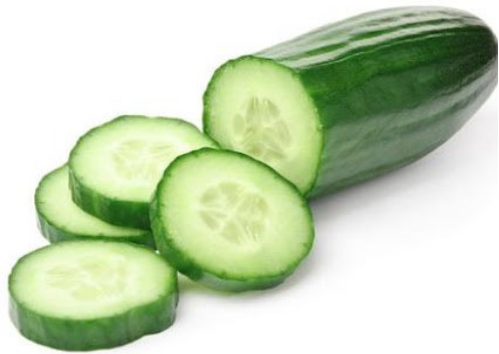
- BASF - glufosinate, 2.34 lb ai, SL
- Cantaloupe, cucumber, summer squash, watermelon
- Tomato, bell and nonbell peppers
- Warm temperatures, high humidity, bright sunlight
- AMS allowed





Rely[®] 280

- Pretransplant, bareground (tomato and pepper)
 - At least **14 days prior** to transplanting
- Over top of plastic, prior to transplanting
 - Beds need to be shaped for water runoff
 - Up to 2 applications, 64 fl oz total
 - Up to 43 fl oz in one application
 - **Requires ½ inch rain or irrigation** before transplanting
 - **At least 3 days** between application and transplanting
 - Do not transplant within 6 inches of holes that exist at time of application



Rely[®] 280

The logo features the word "Rely" in a bold, green, sans-serif font. To its right, the number "280" is displayed in white inside a green rectangular box. The entire logo is set against a decorative background of overlapping horizontal lines in green, blue, red, and yellow.

- Hooded or Directed Row Middle Application
- Up to 62 fl oz; up to 2 applications allowed
 - total for row middle application 62 fl oz
- Do not allow spray to contact crop foliage

- Multiple applications separated by 14 days
- Do not exceed 87 fl oz per crop/yr; no more than 3 applications per year

- PHI: 30 days for melons and fruiting vegetable;
- 14 days for cucumbers and squash





DACTHAL[®] FLOWABLE HERBICIDE
AGRICULTURAL HERBICIDE

- EPA suspended DCPA Aug. 2023
 - lack of required data to support re-registration
- No further production of DCPA
 - existing stocks could be used
- EPA lifted the suspension Dec. 2023
 - AMVAC submitted requested studies
- New product will be manufactured and available for this use season
- EPA will continue the re-registration process



Tillage with Peas

- Fall tillage with cover crop versus spring
 - Chisel plow followed by cereal rye
 - Cereal rye (no-till), spring chisel plow
 - No cover crop, spring chisel plow



Observations

- Planting no-till in spring reduced pea stand by 15%
- No difference in pea vigor at 5 WAP
- Overall yield reduced with fall tillage and rye
- But marketable yields were not significantly different
- No issues with seed corn maggot due to rye



Observations

- No issues with seed corn maggot due to rye
- Need flexibility for terminating rye, including using glyphosate
- Spring tillage required delayed planting due to rain
 - no-till ready to plant days earlier
- Fall tillage improved overall weed control
 - Mostly winter annual weeds





SPECIMEN

PROWL[®]

3.3 EC herbicide

FOR USE IN SELECTED CROPS

Active Ingredient:
 pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine 37.4%
Other Ingredients*:
Total:
 (1 gallon contains 3.3 pounds of pendimethalin)
 *Contains aromatic naphtha.

EPA Reg. No. 241-337

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN
 CAUTION/PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a detalle. (If you do not understand the label, find someone to explain it to you)

See inside for complete **First Aid, Precautionary Statements, Directions F Conditions of Sale and Warranty**, and state-specific crop and/or use site re

In case of an emergency endangering life or property involving this pro call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation
 26 Davis Drive, Research Triangle Park, NC 27709

CLETHODIM GROUP 1 HERBICIDE

NET CONTENTS 2 1/2 GALLONS

VALENT[®]

Active Ingredient	By Wt
*Clethodim	12.8%
Other Ingredients	87.4%
Total	100.0%

¹E: 2-[1-[[[3-chloro-2-propenyl]oxy]imino]propyl]-5-[2-ethylthio]propyl]-3-hydroxy-2-cyclohexen-1-one

Contains Petroleum Distillates

Select Max[®] Herbicide with Inside Technology[™] is an emulsifiable concentrate containing 0.97 lb clethodim active ingredient per gallon.

EPA Reg. No. 5903-132
 EPA Est. 5905-AR-1[®], 5905-GA-1[®], 5905-IA-1[®]
 Superscript is first letter of lot number.

**KEEP OUT OF REACH OF CHILDREN
 CAUTION**
 SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

SELECTMAX[®]
 HERBICIDE
 WITH INSIDE TECHNOLOGY[™]

From 1125-L

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

PULL HERE TO OPEN ▶

S-METOLACHLOR GROUP 15 HERBICIDE

Dual Magnum[®]

Herbicide

syngenta.

For weed control in corn; cotton; grasses grown for seed; horseradish; legume vegetables; peanuts; potatoes; pumpkin; rhubarb; safflowers; sorghum (forage, grain and sweet); soybean; sugar beets; sugarcane; sunflowers; and tomatoes

Active Ingredient:	
S-metolachlor*	83.7%
Other Ingredients:	16.3%
Total:	100.0%

*CAS No. 87392-12-9

Dual Magnum Herbicide is formulated as an Emulsifiable Concentrate (EC) and contains the equivalent of 83.7% or 7.62 lb of active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN
 CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-816

EPA Est. 070989-IA-001^{OMH}, EPA Est. 100-NE-001^{MHA}
 (Superscript is first three letters of batch code on container)

SCP 816A-L1Z 1222
 4175484

2.5 gallons
 Net Contents



Herbicide Labels

- No substitute for reading the label
- It's a legal document
- Group Number (resistance management)
- Restricted Use Pesticide
- First Aid and Precautionary Statements
- Environmental Hazards



Herbicide Labels, cont

- Product Information
 - Crops registered
 - What pests are controlled
 - Application timing
 - Application rate
- Mixing Instructions and Compatibility
- Rotational Restrictions



Labels Tidbits

- Labels are not static, require periodic review by EPA
 - Changes are not often publicized
- Restrictions to avoid spray drift and off-field movement
- Separate restrictions around Endangered Species
 - Bulletins Live Two



Labels Tidbits

- Uses/restrictions can differ for products with the same active ingredients
- Need to pay attention to both **Use Instructions** and **Restrictions**
 - Can vary by crop
 - Can cause confusion
 - Armezon: apply up to V8, **but** do not apply within 45 days of harvest



Labels Tidbits

- There is a general format for labels, but they are not the same from one company to another
- There can be changes from one formulation to another
- Use patterns and restrictions can differ from one company to another
 - Over eight companies market sulfentrazone
 - At least seven market clomazone



24c Labels

- Special Local Needs
- Granted by individual states
- They have expiration dates, so be sure to check
- Be sure the specific label is valid for use and state
- Granted only for specific products
 - If labeled for Gramoxone 3SL, other formulations of paraquat are NOT allowed unless they have received their own registration



Where To Find This Info

- Labels
 - cdms.net
 - agrarian.com
- Syngenta
 - Crop Protection website
 - **Indemnified labels**
- Chateau for watermelons
 - Third-party label through FVGA
- Rely 280
 - Through dealers or BASF rep

There is no substitute for
reading the label



Thank you to:



**Pennsylvania Vegetable
Growers Association**



**Specialty Crop Block
Grant Program**

