



# BEET TOPics

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Mike Metzger - Editor

## Be Ahead of the Game in 2012...

### Layby Herbicides in Roundup Ready Sugarbeets

Did you know that a single glyphosate resistant waterhemp plant can easily produce over 1,000,000 seeds (and have been documented to produce nearly 5,000,000) in only a single season? With this type of offspring potential, it is easy to see why this weed is becoming one of the biggest control failures in our Roundup Ready Cropping Systems. Many growers are taking the correct action by applying a pre- or post-residual herbicide in their corn and beans - but fail to utilize this type of application in their sugarbeet crop. Besides being potentially resistant to our flagship herbicide (glyphosate), one of the biggest control problems with waterhemp is that it generally doesn't emerge until mid/late May and continues to emerge well into the early parts of August - long after most growers have quit spraying herbicides. Layby application with proven products such as Dual, Outlook and Treflan can be a very useful tool to help keep these later emerging weeds in check. As you can see, letting just 1 single plant go to seed can easily turn into hundreds of thousands in the near future.

### Quadris Post-Emerge - Do It Right!!!

Even before the days of Micro-rates, growers have been "reducing" the usage rates of their herbicides to compensate for the utilization of a banded application. For example, a herbicide with a usage rate of 1 pint per acre was adjusted down to 1/2 pt/A in an 11" band - this makes perfect sense and is the correct calculation since you are technically only treating half of the field (11" vs. broadcast). Simple math right? Using this same math, it would only make sense that if the broadcast rate of Quadris is 14.3 ounces, then the rate for a 7" band should be cut by nearly two-thirds down to 4.76 fl oz/A right? **WRONG!!!**

One of the most common mistakes when band-applying a fungicide is getting the rate correct. Unlike herbicides, rates of fungicides and insecticides are not based on the amount of product used per acre, but rather the amount of product used per 1,000 foot of row. Since most every grower is accustomed to (and comfortable with) thinking about and/or calculating rates from a herbicide point of view, these linear-based rates are often "converted" to fit what has become a common train of thought - the use of Quadris (post-emerge) is a perfect example of this conversion. As mentioned above, the recommended broadcast rate is 14.3 fl oz/A, which is derived from the labeled rate of 0.6 fluid ounces per 1,000 foot of 22" rows (10.5 fl oz/A for 30" rows). Now here is where it starts to get a little confusing and a majority of the errors are made - since this calculation is based upon a linear distance (oz/ft) and not a fixed acreage (oz/A), **the rate does not decrease for a banded application, it actually remains the same.**

Consider the following, lets say that you have a 100-acre field that you plan to treat with Quadris. If you were to broadcast the field at the recommended rate, you would need a total of 1,430 fluid ounces of Quadris (14.3 fl oz/A x 100 acres = 1,430 total ounces). Now, if you were to treat that same 100-acre field, but use a 7" banded application, **you would still need 1,430 total ounces of Quadris.** Looking at this from a herbicide standpoint, you are concentrating a broadcast application into a 7" band, and in my mind, putting the product where you need it most - by the root itself. Even though a statistical difference could not be detected, field research conducted in 2011 by Dr. Mohamed Khan (NDSU) showed that banded applications of fungicides gave better control of Rhizoctonia than broadcast applications. If you are making the investment in Quadris - Do it right.



80° F 70° F 60° F 50° F

Why use a 65° soil temperature as the application trigger for Rhizoctonia fungicides? Research conducted by Dr. Khan (NDSU) and Dr. Bolton (USDA) shows the pathogenic effects of Rhizoctonia at varying soil temperatures. Make sure to monitor the soil temps in your area and stay in close contact with your Agriculturist for the correct application method and timing of these products

# Glyphosate Formulations Labeled for RR Sugarbeet in 2012

## 3.0 Pounds of Acid Equivalent per Gallon / 4.0 Pounds of Active Ingredient per Gallon

- |                                |                              |                            |                              |                               |
|--------------------------------|------------------------------|----------------------------|------------------------------|-------------------------------|
| • <u>Abundit Extra</u>         | • <u>Credit 41 Extra</u>     | • Glyphosate Plus          | • <u>Honcho Plus</u>         | • Rascal                      |
| • Alecto 41 HL                 | • <u>CropSmart 41 Plus</u>   | • Glysort                  | • <u>Imitator Plus</u>       | • Rascal Plus                 |
| • <u>Alecto 41 S</u>           | • <u>Crop-Sure Gly. Plus</u> | • <u>Glysort Plus</u>      | • Mad Dog                    | • Rascal Plus EX              |
| • Alecto 41 UL                 | • <u>Four Power Plus</u>     | • <u>GlySupreme Plus**</u> | • <u>Mad Dog Plus</u>        | • <u>Shar-Max Gly. 41% SL</u> |
| • <u>Axss Glyphosate Plus*</u> | • <u>Glycana Plus 41</u>     | • <u>Gly-4 Plus</u>        | • <u>Makaze</u>              | • <u>Showdown</u>             |
| • Buccaneer                    | • <u>Glyfine Plus</u>        | • <u>Gly Star Gold</u>     | • <u>Makaze Yield Pro</u>    | • Strikeout Extra             |
| • <u>Buccaneer Plus</u>        | • <u>Glyfos X-TRA</u>        | • Gly Star Original        | • Meychem 41% Gly.           | • Strikeout Loaded            |
| • Clean Field 41% Plus         | • <u>Glypho 41</u>           | • Gly Star Plus            | • Mirage                     | • <u>Willowood Gly 41%*</u>   |
| • Cornerstone                  | • Glyphogan                  | • <u>Helosate Plus Adv</u> | • <u>Mirage Plus</u>         | • <u>Wise Up Plus</u>         |
| • <u>Cornerstone Plus</u>      | • <u>Glyphogan Plus</u>      | • Honcho                   | • <u>Quali-Pro Gly. Plus</u> | • <u>Z-Gly. 41% Max</u>       |

1.125 lb ae/A = 48 fl oz of product/A; 0.98 lb ae/A = 41 fl oz/A; 0.75 lb ae/A = 32 fl oz/A

## 3.7 Pounds of Acid Equivalent per Gallon / 5.0 Pounds of Active Ingredient per Gallon

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|---------------|------------------|
| • Buccaneer 5 | • Extra Credit 5 |
|---------------|------------------|

1.125 lb ae/A = 38 fl oz of product/A; 0.98 lb ae/A = 33 fl oz/A; 0.75 lb ae/A = 25 fl oz/A

## 4.0 Pounds of Acid Equivalent per Gallon / 5.4 Pounds of Active Ingredient per Gallon

- |                             |                  |                      |                         |
|-----------------------------|------------------|----------------------|-------------------------|
| • <u>Cornerstone 5 Plus</u> | • <u>Duramax</u> | • <u>Durango DMA</u> | • <u>Glyfine 5 Plus</u> |
|-----------------------------|------------------|----------------------|-------------------------|

1.125 lb ae/A = 36 fl oz of product/A; 0.98 lb ae/A = 31 fl oz/A; 0.75 lb ae/A = 24 fl oz/A

## 4.17 Pounds of Acid Equivalent per Gallon / 5.1 Pounds of Active Ingredient per Gallon

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|------------------------|--------------------------|-----------|
| • <u>Touchdown CT2</u> | • <u>Touchdown Total</u> | • Traxion |
|------------------------|--------------------------|-----------|

1.125 lb ae/A = 35 fl oz of product/A; 0.98 lb ae/A = 30 fl oz/A; 0.75 lb ae/A = 24 fl oz/A

## 4.5 Pounds of Acid Equivalent per Gallon / 5.5 Pounds of Active Ingredient per Gallon

- |                         |                              |                           |                             |
|-------------------------|------------------------------|---------------------------|-----------------------------|
| • <u>Credit Extreme</u> | • <u>Roundup OriginalMAX</u> | • <u>Roundup PowerMAX</u> | • <u>Roundup WeatherMAX</u> |
|-------------------------|------------------------------|---------------------------|-----------------------------|

1.125 lb ae/A = 32 fl oz of product/A; 0.98 lb ae/A = 28 fl oz/A; 0.75 lb ae/A = 22 fl oz/A

## 5.0 Pounds of Acid Equivalent per Gallon / 6.1 Pounds of Active Ingredient per Gallon

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|--------------------|
| • Touchdown HiTech |
|--------------------|

1.125 lb ae/A = 30 fl oz of product/A; 0.98 lb ae/A = 25 fl oz/A; 0.75 lb ae/A = 20 fl oz/A

## 95% SG Formulation

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| • Gly-N-Go Glyphosate (No NIS in product, therefore, NIS (0.5-1.0% v/v) is required) |
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1.125 lb ae/A = 1.18 lbs of product/A; 0.98 lb ae/A = 1.03 lbs/A; 0.75 lb ae/A = 0.79 lbs/A

Full Adjuvant Load = Add NIS (0.25% v/v) unless prohibited by label  
 Partial Adjuvant Load = Add NIS (0.25-0.5 %v/v) unless prohibited by label  
 \* = Use in ND Only      \*\* = Use in MN Only

The product label trumps this information at all times - Always read & follow label instructions

All of the Glyphosate Information Listed Above was Compiled by Dr. Jeff Stachler (NDSU Extension)