

Herbicides for Pecan Orchards

Preemergence herbicides

Why use a preemergence herbicide?

- Decrease number of postemergence herbicide applications per year
- Decrease the likelihood of building herbicide resistant populations

Weed emergence timing



Emergence of
summer annuals

Morningglories
Pigweed
Spurge
Goosegrass

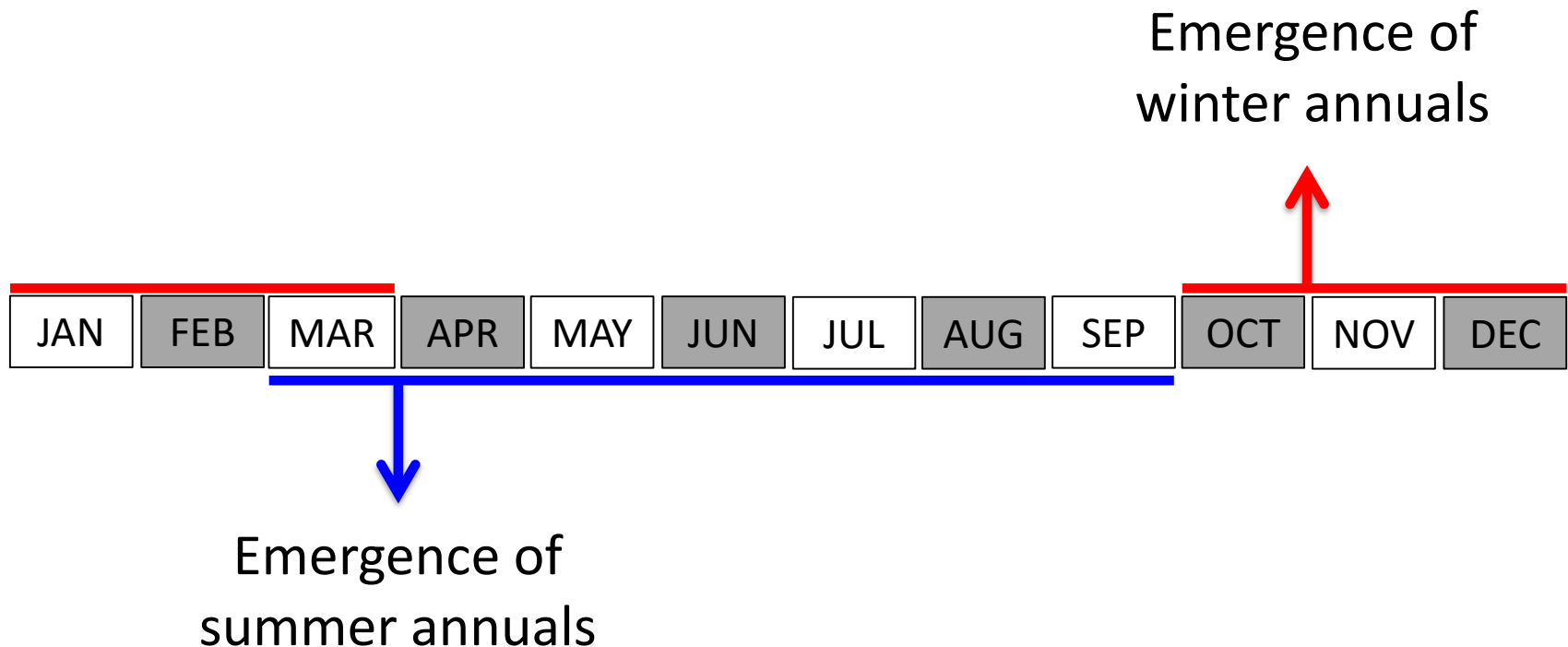
Weed emergence timing

Carolina geranium
Henbit
C. chickweed
Annual bluegrass

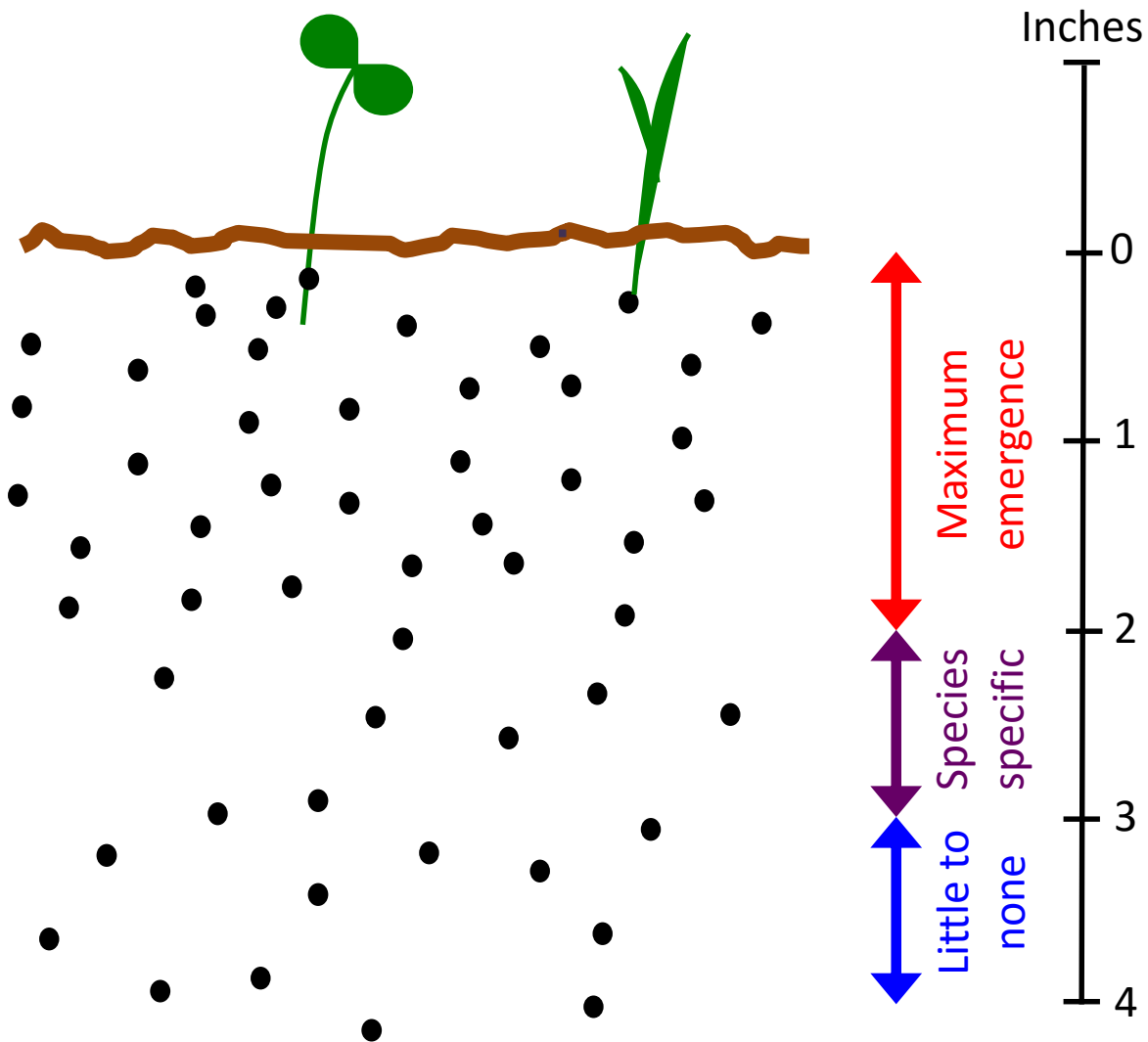
Emergence of
winter annuals



Weed emergence timing

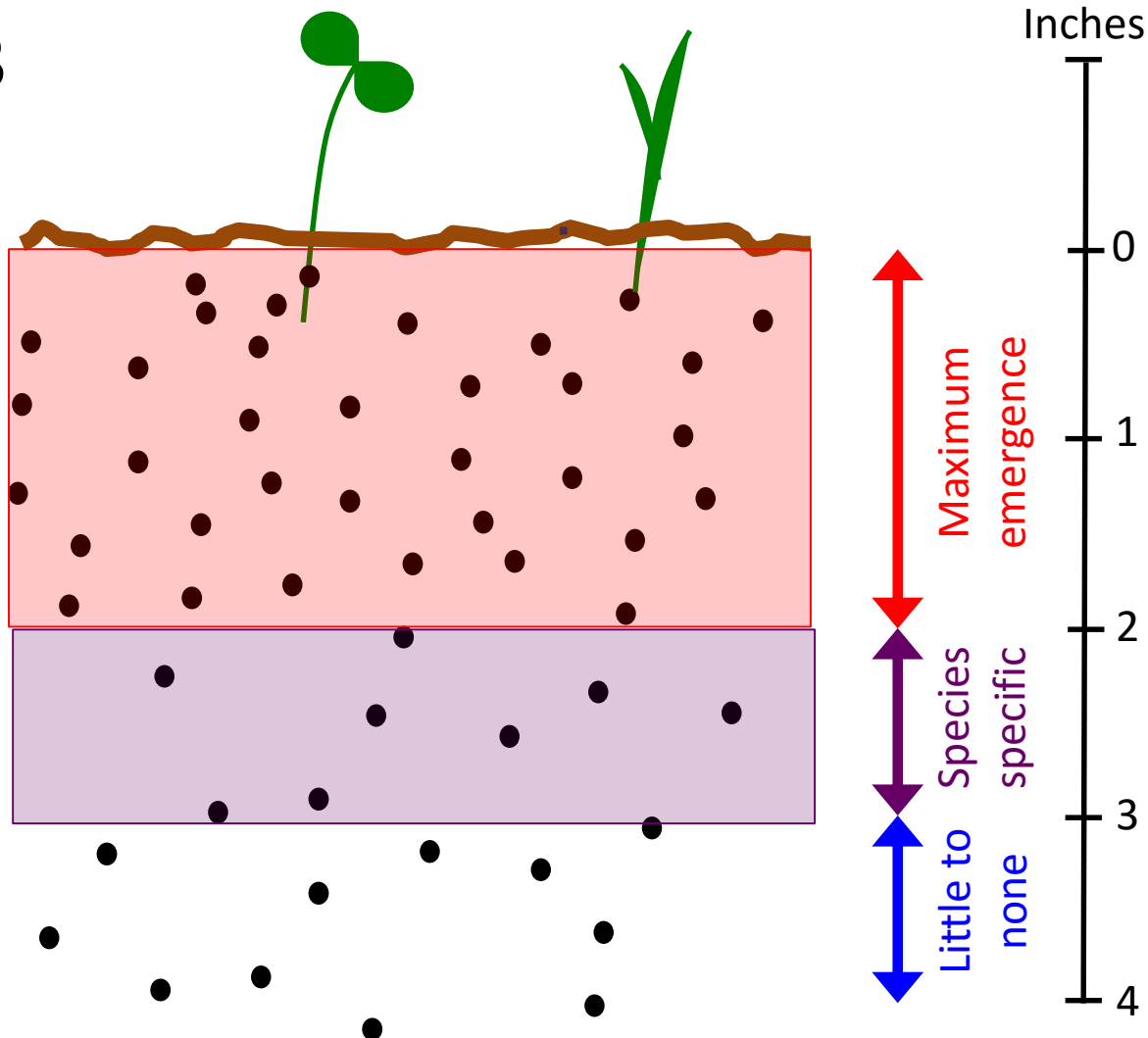


Incorporating preemergence



Incorporating preemergence

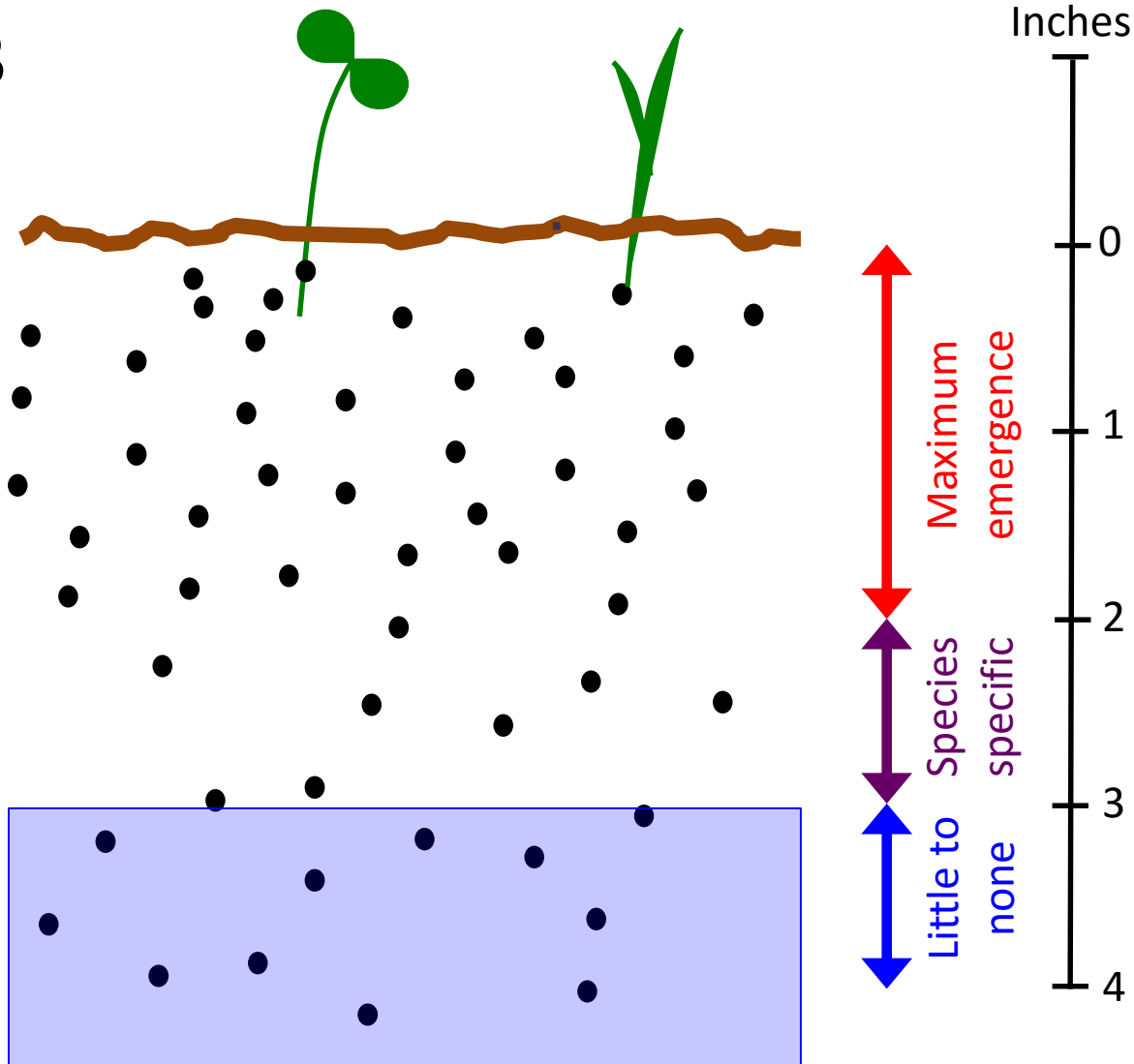
- Incorporate 2 to 3 inches deep
 - Cultivation
 - Irrigation
 - Rainfall
- Within 24 hours



Incorporating preemergence

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 - Cultivation
 - Irrigation
 - Rainfall
- Within 24 hours

TOO
DEEP



Preemergence herbicide options

- Alion
 - 5 fl. oz.
- Chateau
 - 6 to 12 oz.
- Devrinol
 - 8 lbs. of 50DF-XT
 - 40 lbs. of 10G
- Diuron, Karmex, Direx
 - 2 lb. of 80 WDG
 - 2.2 qt. of 4L
- Goal/GoalTender
 - 5-6 pt. of 2EC
 - 2.5-4 pt. of 4E
- Sandea
 - 0.66 – 1 oz.
- Solicam
 - 1.25 – 3.75 lb.
- Oryzalin, Surflan
 - 2 – 6 qt.
- Princep, Simazine
 - 1.4 – 4 qt. of 90WDG
 - 1.6 – 4.4 lb. of 4L

Preemergence herbicide options- Newly Transplanted

- Alion
 - 5 fl. oz.
- Chateau
 - 6 to 12 oz.
- Devrinol
 - 8 lbs. of 50DF-XT
 - 40 lbs. of 10G
- Diuron, Karmex, Direx
 - 2 lb. of 80 WDG
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 - 1.4 – 4 qt. of 90WDG
 - 1.6 – 4.4 lb. of 4L

Chateau

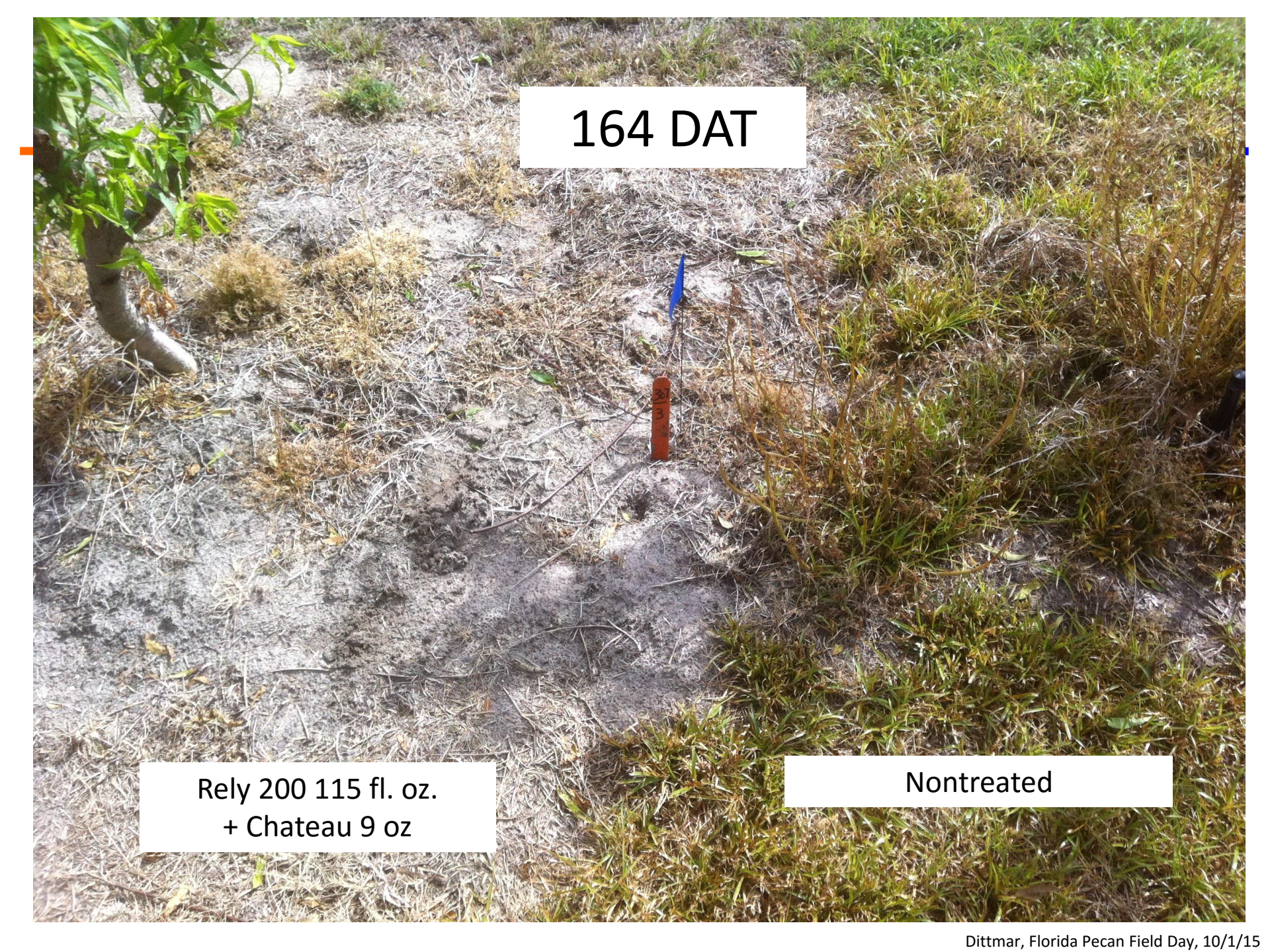
- Flumioxazin
- 6 to 12 oz./A
- 60 days between sequential applications
- Bearing and nonbearing
- If less than one year protect with plastic covers or wraps
- After bud break and before final harvest use a shielded sprayer
 - Application pressure <30 PSI
 - Application speed <5 mph

Rely 115 fl. oz. (34 DAT)



Rely 115 fl. oz. + Chateau 9 oz



A photograph of a field plot. On the left, a tree with green leaves is partially visible. The ground is covered with dry, brown grass and some green weeds. In the center, there is a small orange marker with a blue flag on top. The marker has the number '3' written on it. The plot is labeled '164 DAT' at the top and 'Rely 200 115 fl. oz. + Chateau 9 oz' at the bottom left. The right side of the plot is labeled 'Nontreated' and shows denser green vegetation.

164 DAT

Rely 200 115 fl. oz.
+ Chateau 9 oz

Nontreated

Alion

- Active ingredient: indaziflam (Group 29/L)
- 5 to 6.5 fl. oz./A.
- Do not apply more than 10.3 fl. oz./A./yr.
- Spanish nettle, chickweeds, pigweeds, horseweed, filaree, crabgrass, goosegrass, guineagrass
- Trees must be established for 3 years



Postemergence herbicides

Nonselective POST herbicides

- Glyphosate
 - Read label
- Firestorm/Gramoxone
 - 1.7-2.7 pt./2.5-4.0 pt
- Rely/Cheetah/Forfeit
 - 48 – 82 fl. oz./A
- Scythe
 - 3%-10% v/v

Glyphosate

- Glyphosate translocates through the weeds and the pecan tree
- Be careful apply to young trees with green bark or low hanging branches
- Plastic cover or nonporous wraps

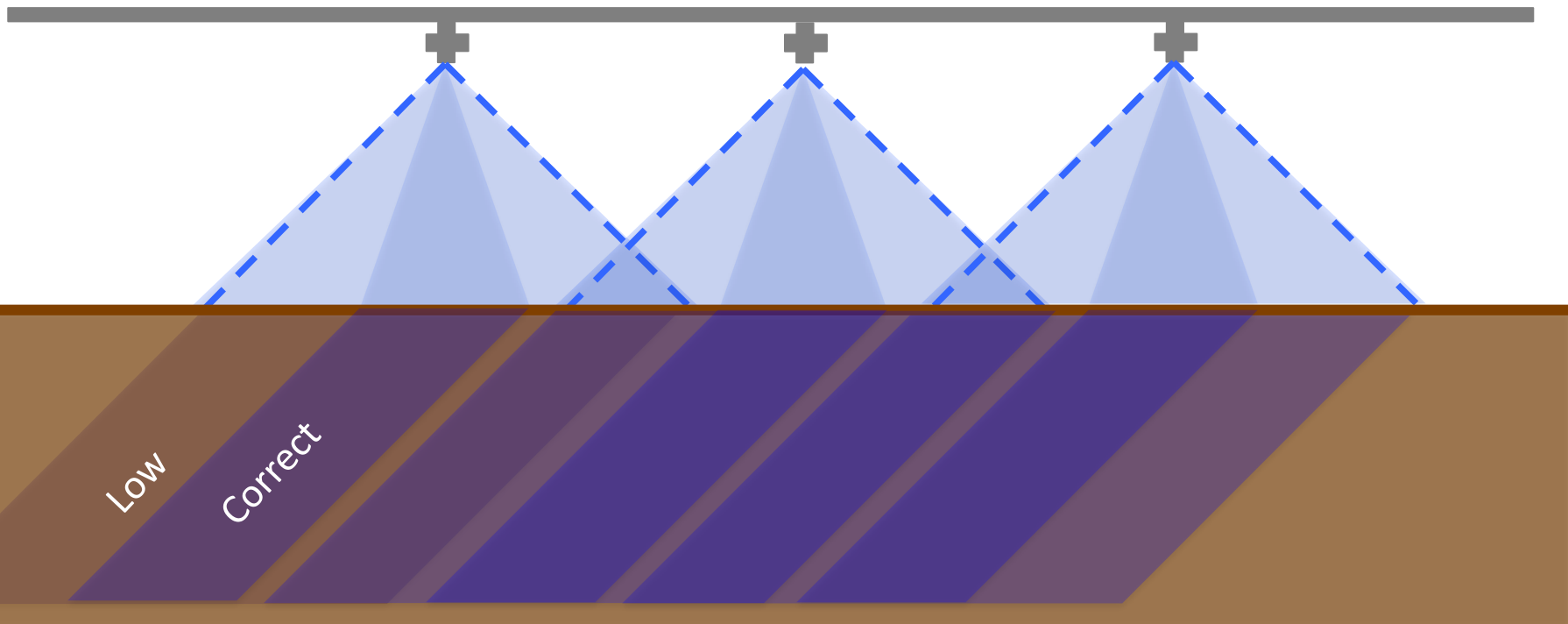
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 - 48 – 82 fl. oz./A
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 - 3%-10% v/v

Rely 280

- Other trade names: Cheetah/Forfeit/Lifeline
- A.I.: glufosinate
- Grass and broadleaf control
- 48 to 82 fl. oz. based on the size of the weeds
- Not more than 82 fl. oz./application
- Not more than 164 fl. oz./12 mo. period
- Contact herbicide, coverage is key
- Tank mix with a PRE herbicide
- 14 day PHI

Boom Too Low





Contact Herbicide
Paraquat (Gramoxone)

- Contact herbicides
 - Coverage is most important

Broadleaf POST herbicides

- 2,4-D
 - Read label
- Aim
 - 0.5 – 2 fl. oz.
- Matrix
 - 2-4 oz./A
- Sandea
 - 0.66-1.0 oz.

Postemergence Grass herbicides

- Fusilade (16 to 24 fl. oz.)
 - Nonbearing¹ and bearing trees
- Select (9 to 16 fl. oz.)
 - Nonbearing trees
- Select Max (9 to 16 fl. oz.)
 - Supplemental label for bearing crops
- Poast (1.5 to 2.5 pt.)
 - Nonbearing and bearing trees

¹ Nonbearing trees are trees that will not produce fruit for 1 year after application

Herbicide resistance

Is the weed resistant?

- Proper calculation
- Correct surfactant
- Proper timing
- The right herbicide for the weed

Herbicide mode of action (MOA)

- Resistance management includes rotation of herbicide's mode of action

GROUP 1 HERBICIDE	
	
Active Ingredient	By Wt.
*Clethodim.....	12.6%
Other Ingredients.....	87.4%
Total.....	100.0%
Contains Petroleum Distillates	
*(E)-2-[1-[[[(3-chloro-2-propenyl)oxy]imino]propyl]5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one	
Contains 0.97 lbs clethodim per gal	
EPA Reg. No. 59639-132 EPA Est. 5905-GA-01	
KEEP OUT OF REACH OF CHILDREN	
CAUTION	
SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.	
PRECAUTIONARY STATEMENTS	

If int...

Have calli... for tr... for e...

Inge... can... which... muc... gast...

PERS

Some produ... follow chem...

Appli... sleeve... glove

GROUP 14 HERBICIDE	
	
FOR CONTROL AND/OR SUPPRESSION OF CERTAIN WEEDS IN ALFALFA, ASPARAGUS, BUSHBERRIES, COTTON, FIELD CORN, GARLIC, GRAPE, HOPS, MINT, NUT TREES (INCLUDING PISTACHIO), ONION (DRY BULB), POME FRUIT, STONE FRUIT, STRAWBERRY, SWEET POTATO, NON-BEARING FRUIT TREES, FALLOW LAND AND TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS, ORCHARDS AND VINEYARDS.	

If in eyes:

If swallowed:

Have the prod... calling a pois... for treatment

PRE herbicide MOA

WSSA/HRA C	MOA	Trade name
3 / K1	Root growth inhibitor	Surflan, Oryzalin
		Prowl H ₂ O
		Treflan
		Kerb
5 / C1	Photosynthesis Inhibitor (PSII)	Princep/Simazine
		Sinbar
7 / C2	Photosynthesis Inhibitor (PSII)	Diuron, Karmex, Direx
12 / F1	Pigment Synthesis Inhibitors	Solicam
14 / E	PPO Inhibitor	Chateau
29 / L	Cellulose Inhibitor	Alion

POST herbicide MOA

WSSA/HRA C	MOA	Trade name
1 / A	Lipid Synthesis Inhibitor	Fusilade
		Select Max, Arrow
		Poast
2 / B	Amino Acid Synthesis (ALS)	Matrix
9 / G	Amino Acid Synthesis (EPSP)	Roundup, glyphosate
10 / H	Nitrogen Metabolism Inhibitor	Rely
14 / E	PPO Inhibitor	Aim
		Treevix
22 / D	Photosynthesis inhibitor (PSI)	Diquat
		Paraquat
-- / --	Unkown	Scythe

Questions.

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