



Pecan Weed Management

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UGA

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Weeds

- Interfere with harvest
- Affect trees ability to absorb light, water, nutrients
- Harbor pest
 - Diseases
 - insects
- Growers ask
 - Optimum time for best control?
- When to avoid applications
 - drought
 - mowed



2012 Survey (to date)

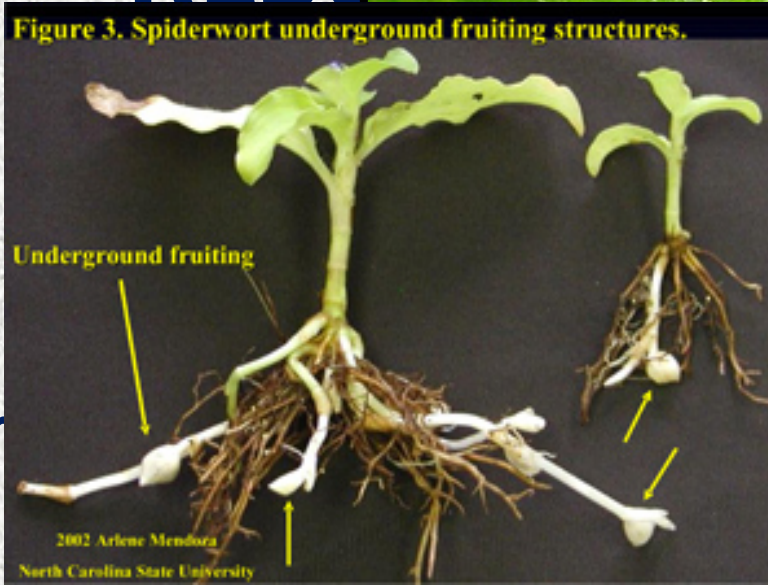
- **Grower meeting survey - questions**
- **Asking which weeds are an issue**
 - In herbicide strip
 - Between tree rows
 - Hardest to control
- **Time of year**
 - Spring
 - Autumn
- **Herbicides used**
 - PRE
 - POST



WEED SURVEY



RESU



Weeds

Herbicide strip

Tree rows

Weeds

Pigweed

B

**Pink
purslane**

Herbicide strip

43

Tree rows

38



17

10

HERBICIDE SURVEY

PREs

POST



Herbicides

- **PRE Herbicides**

- controls germinating & emerging weeds
- rainfall for activation
- residual herbicides
- when to apply



- **POST Herbicides**

- controls actively growing emerged weeds
- Application timing and weed size

Residual PRE Herbicides

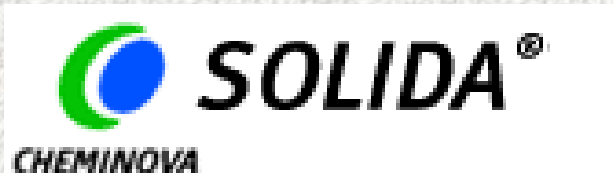


- **Diuron**
 - Direx 4 L, Diuron 4 L, Karmex
- **Simazine**
 - Princep 90 DF, Simazine 90 DF, Princep 4 F, Simazine 4 F
- **Pendimethalin**
 - Prowl H₂O 4 EC
- **Norflurazon**
 - Solicam 80 DF
- **Flumioxazin**
 - Chateau 51 WDG



Residual PRE Herbicides

- **Oryzalin**
 - Surflan 4 AS, Oryzalin 4 AS
- **Rimsulfuron**
 - Solida 25 WG, Matrix 25 WG, Pruvion 25 WG



- **Indaziflam**
 - Alion 1.67 SE



RESULTS (n = 100)

Pre-emergence BD & residual

	Glyphosate	Karmex	Alion	Chateau
PRE – Spring	57	19	3	5
PRE – Fall	50	10	3	4

	Sandea	Princep	Surflan	Prowl
PRE – Spring	5	17	14	23
PRE – Fall	1	19	8	17

POST Herbicides

Annual and Perennial Grass Control

- **Fuazifop**

- Fusilade DX 2 EC



- **Sethoxydim**

- Poast 1.5 EC

- **Clethodim**

- Select 2 EC, Arrow 2 EC, Intensity 2 EC, Select Max, Intensity One



POST Herbicides

Broad Spectrum Control

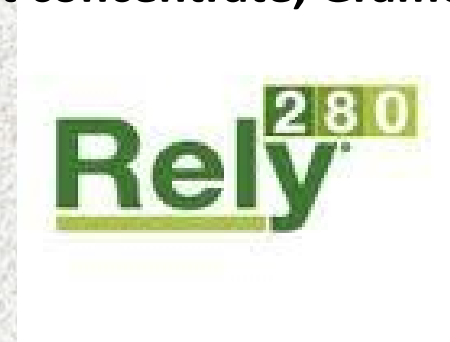
- **Paraquat**

- Firestorm 3 SL, Parazone, Paraquat concentrate, Gramoxone Inteon



- **Glufosinate**

- Rely 280



- **Glyphosate**

- Roundup Weather Max 5.5 SL, numerous brands

- **Glyphosate + carfentrazone**

- Rage



POST Herbicides

Broadleaf and Sedge Control

- **2, 4-D amine**
 - Numerous generic formulation
- **Bentazon**
 - Basagran 4 SL
- **Halosulfuron**
 - Sandea 75 WDG
- **Carfentrazone**



Sandea
Herbicide



RESULTS (n = 100)

Broad spectrum control

	Glyphosate	Firestorm	Rely	Rage
POST – Summer	43	39	5	4
POST – Winter	37	23	2	1

	2,4-D	Poast	Sandea	Select
POST – Summer	24	17	5	7
POST – Winter	26	12	4	6

FOR ALL HERBICIDES CONSIDER THE OPTIONS??

- **What stage of trees?**
 - Newly planted
 - Established orchard
- **Are trees bearing?**
- **Nonbearing?**
- **What weeds do I have?**
- **How do I control them?**



Yearly restrictions in new orchards

- **Herbicides that can be use in orchards that are at least 1 year old or after soil has settled around roots (6 months)**
 - See labels!!
- **Available only after Year 2**
 - simazine
- **Available only after Year 3**
 - Diuron
 - indaziflam



Establish Orchard Management

- Many options available
- Restrictions
 - PHI
 - Non-bearing vs. Bearing
 - No grazing animals
after some applications
- Available in Non-bearing trees only
 - bentazon (Basagran)
 - clethodim (Select)



Resistant Weed Management

- **Causes**
- **How to avoid**
 - rotating MOA's
 - tank mixing PRE herbicides
- **Herbicide resistant Italian ryegrass**
 - ACCase resistant (grass herbicides)
 - Glyphosate resistant
 - ALS resistant
- **Glyphosate resistant pigweed**



Future work

- **Continue survey to determine research focus**
- **Continue to work with industry to develop more answers**
- **Publish information for growers**
- **Make available on websites**

Thank you

- **Financial support**
 - **Georgia Pecan Commission - UGA**
 - **Cheminova**
 - **Bayer Crop Sciences**
- **Ducker/Pine Knoll Plantation**
- **Graham Pecan Farm**
- **Merritt Pecan Co.**
- **Sidney Cromer & Nikki Bowman**
technical assistance
- **Questions**

