2012 MB Alternatives – Your Pick!

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Tifton Campus

Methyl Bromide Critical Use Exemption

NO CUE SUBMITTED FOR 2014 Vegetables!!!!!!!!!

MB Alternatives – You Pick!

1. Fumigants
2. Mulch
3. Herbicides

Potential MB Fumigant Alternatives

1. UGA 3-WAY
2. Paladin Pic
3. WSP
4. Pic Chlor 60

Fumigant + Mulch + Herbicides Cost Comparison

	6 ft center	5 ft center
3-WAY (LDPE)	$820	$984
WSP (350 lb, VIF)	$889	$1059
Paladin Pic (50 G, VIF)	$971	$1156
MB 50:50 (200 lb, VIF)	$990	$1182

*Assume 32 inch bedtop. All systems except MB include Devrinol ($10/lb) and Dual Magnum ($80/gal) costs. Vapam $4.35/G; Pic-Chlor 60 $3.40/lb; Paladin Pic $2.75/lb; WSP $3.25/lb; MB $7/lb.

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7.7%

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Fumigant + Mulch + Herbicides Cost Comparison

	6 ft center		5 ft center
3-WAY (LDPE)	$820		$984
WSP (350 lb, VIF)	$889	15.6%	$1059
Paladin Pic (50 G, VIF)	$971		$1156
MB 50:50 (200 lb, VIF)	$990		$1182

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Comparing Alternatives as Recommended

	PalPic	3-WAY	WSP
1. Cost of system	- -	+	-
2. Ease of application	+	-	+
3. Acres w/o refill	-	-	+
4. Odor	-	+/-	+/-
5. Mulch type	-	+	-
6. Multiple crop system	-	+	-
7. Nutsedge	+	+/-	+
8. Grass & broadlvs	+*	+**	+*

*Herbicide system required. **Herbicide system suggested.

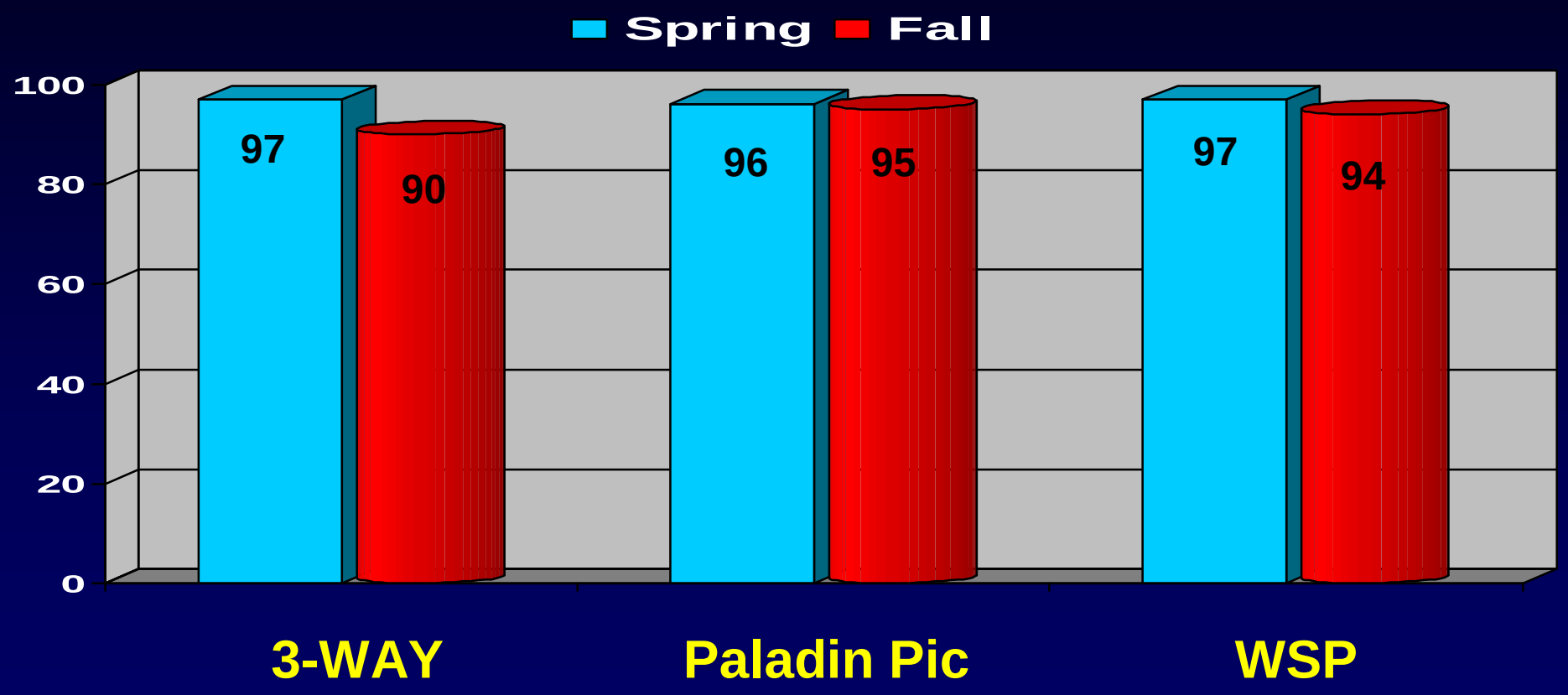
Paldin Pic and WSP

USE EFFECTIVE HERBICIDE SYSTEM OR DON’T APPLY THESE PRODUCTS!

UGA 3-WAY, WSP, Paladin Pic

1. Application methods
2. Mulch used
3. Rates (provided in broadcast)
4. Precautions

Nutsedge Response to the 3-WAY, Paladin Pic, and WSP plus herbicides in PEPPER. TyTy, 2010.



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Plots were 1 bed by 50 feet. Spring soil temp 55 F; Fall soil temp 89.

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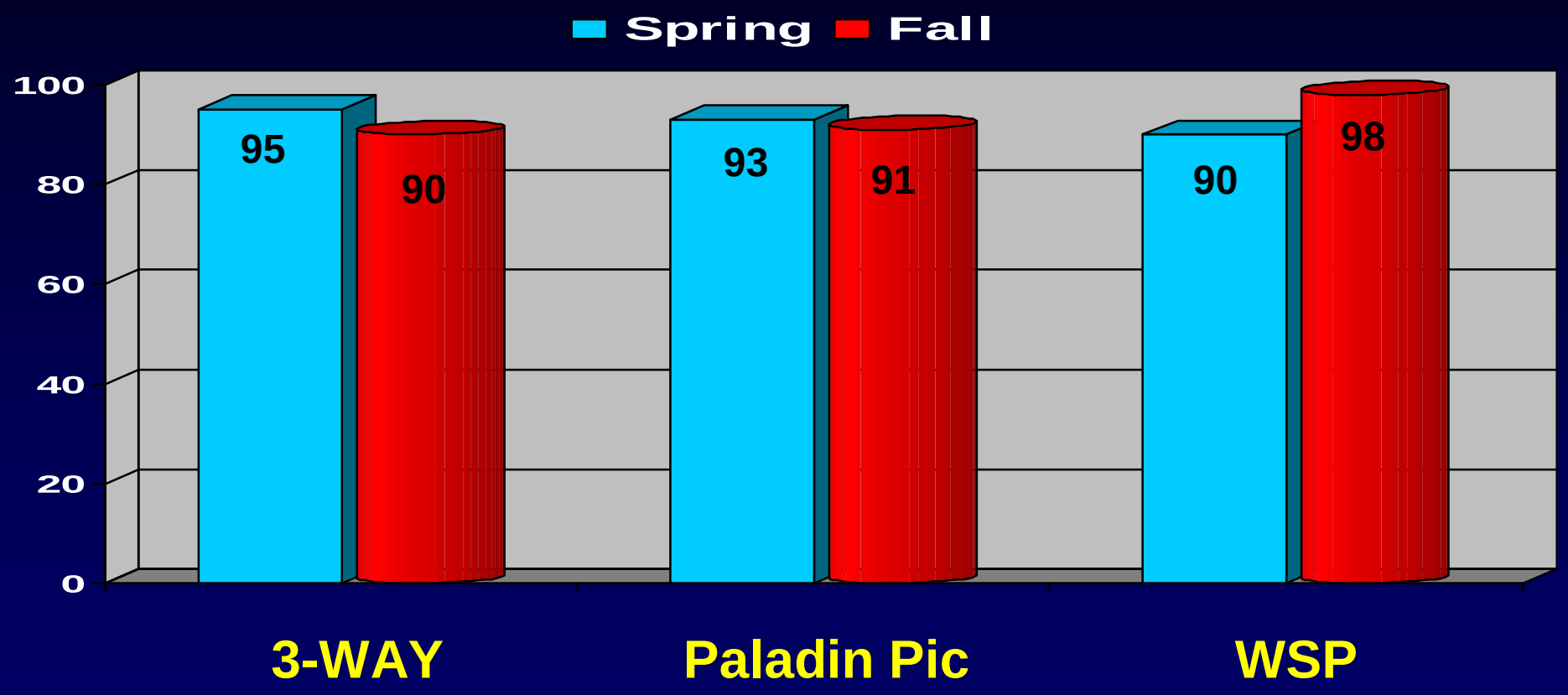


LSD for spring = 8; LSD for fall = 9.

Plots were 1 bed by 50 feet. Spring soil temp 59 F; Fall soil temp 92.

Telone/Pic/Vapam

Spring applications = 21 of 22 experiments over 6 years with greater than 90% nutsedge control (less effective in the fall)

Ideal Placement

Vapam = 4 inches

Chloropicrin = 8 inches

Telone = 12 inches

More Common

Vapam = 4 inches (75 G)

Pic Chlor 60 = 8 inch (21 G)

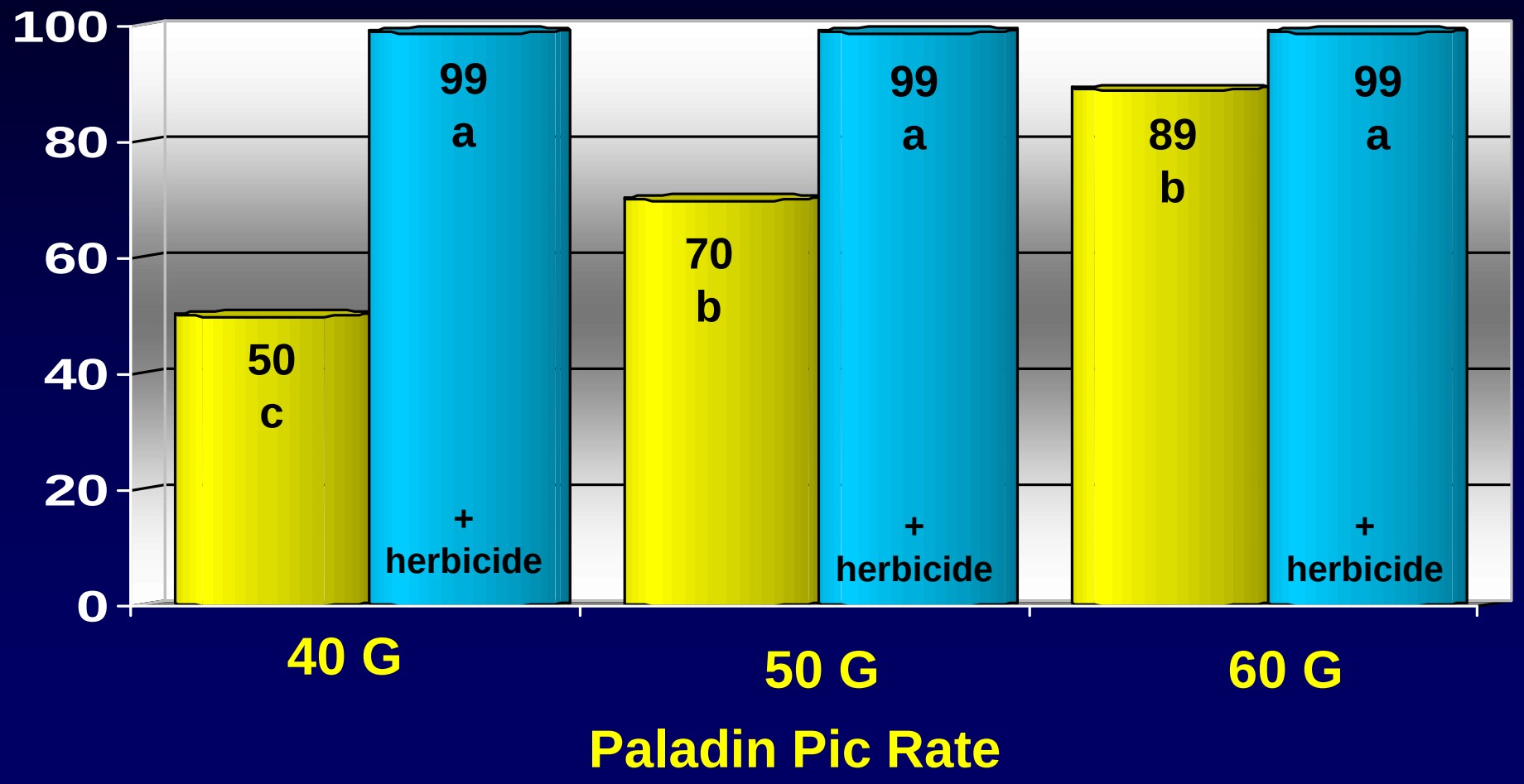
LDPE MULCH


Note moisture
and compaction

Paladin Pic

1. 79:21 mixture of DMDS:chloropicrin.
2. Same application procedures as MB
3. Greater than 50 acres applied during fall of 2011 with excellent results. No issues!
4. MUST USE HERBICIDES!

Percent pigweed control at harvest. TyTy, GA 2010.



Herbicide = Devrinol preplant and Dual Magnum POST

Paladin Pic

1. Will be 79:21 mixture of DMDS:chloropicrin.
2. Same application procedures as MB
3. Greater than 50 acres applied during fall of 2011 with excellent results. No issues!
4. MUST USE HERBICIDES!
5. MUST USE LABELED MULCH

Paladin Pic Labeled Tarps

Olefinas Embossed VIF,
Klerks VIF,
Pliant Blockade (1.25 mil) black or white,
XL Blockade (0.00125),
Pliant Metalized black VIF.
Canslit Metalized (1.25 mil) high barrier black or white,
FilmTec VIF (1.25 mil),
Ginegar VIF Embossed,
Cadillac VIF,
Guardian VIF (1.2 mil),
Mid-South Extrusion VIF,
Bromostop (1.38 mil)

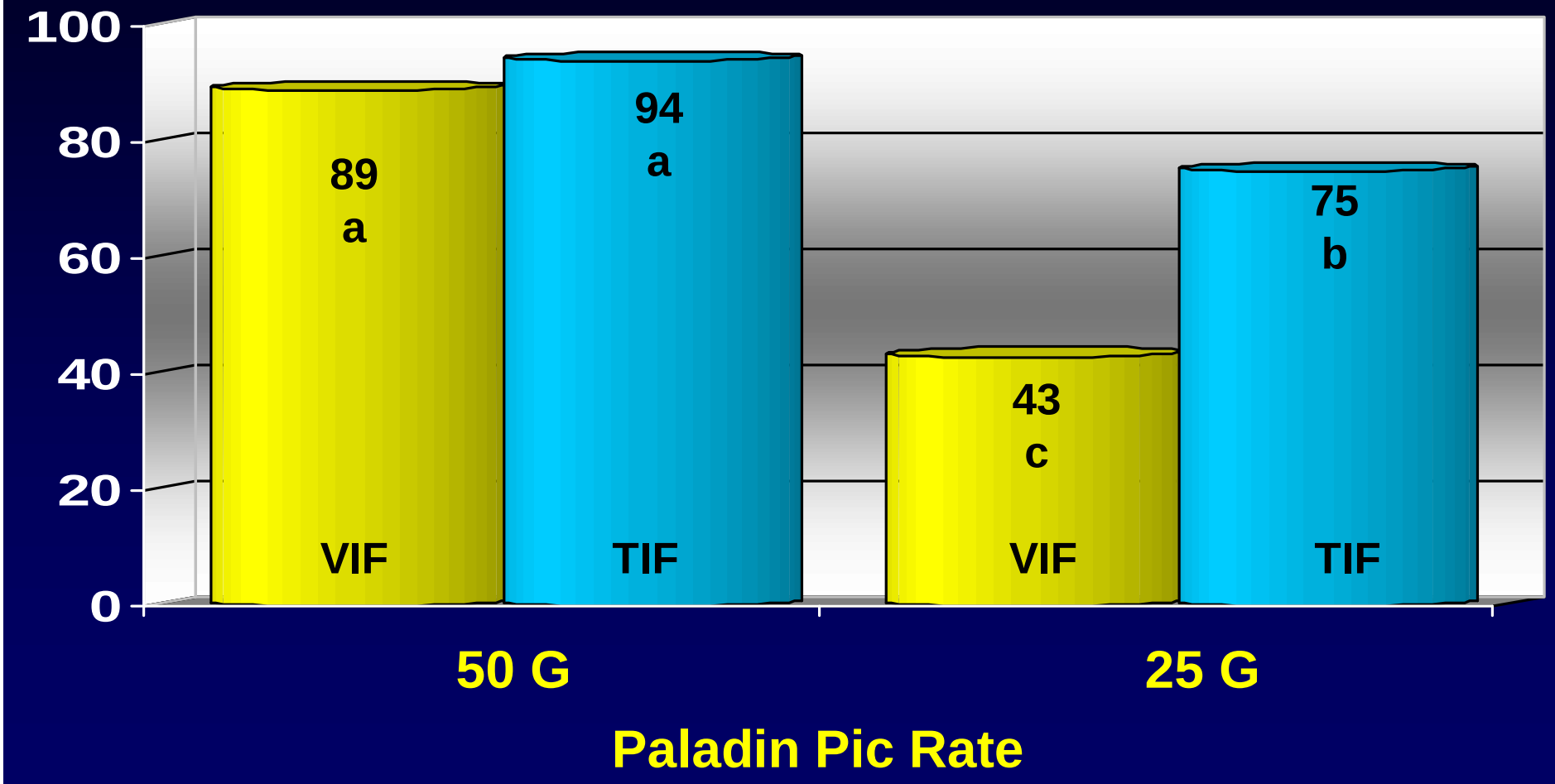
Paladin Pic (DMDS + Pic)

6. Relationship of mulch (VIF vs TIF) and rate of product used!

VIF = $\geq$ 50 GPA

TIF = ????

Percent nutsedge control at pepper harvest. TyTy, GA Spring 2011.



Herbicide included = Devrinol preplant and Dual Magnum POST

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WSP (350 lb, VIF)	$889	$1059
Paladin Pic (50 G, VIF)	$971	$1156
Paladin Pic (40 G, TIF)	$934	$1115

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Mitigating Smell Issues

Moisture must be ideal

Compaction

No previous crop residue

Purge injection lines before lifting shank from soil.

Paladin Pic Plant Back Interval

Based on mean daily low soil temp at 8”

50-54 F: 42 day plant back

55-60 F: 35 day plant back

61-70 F: 28 day plant back

>70 F: 21 day plant back

Paladin Pic Buffer Zone

% Row treated	Paladin Pic 79:21 Rate	5	10	15	20	25	30	35
50%	45 GPA	25	25	35	60	80	95	115
50%	50 GPA	25	30	55	80	100	120	140
50%	55 GPA	25	40	65	95	115	135	155
50%	60 GPA	25	50	80	110	135	155	175

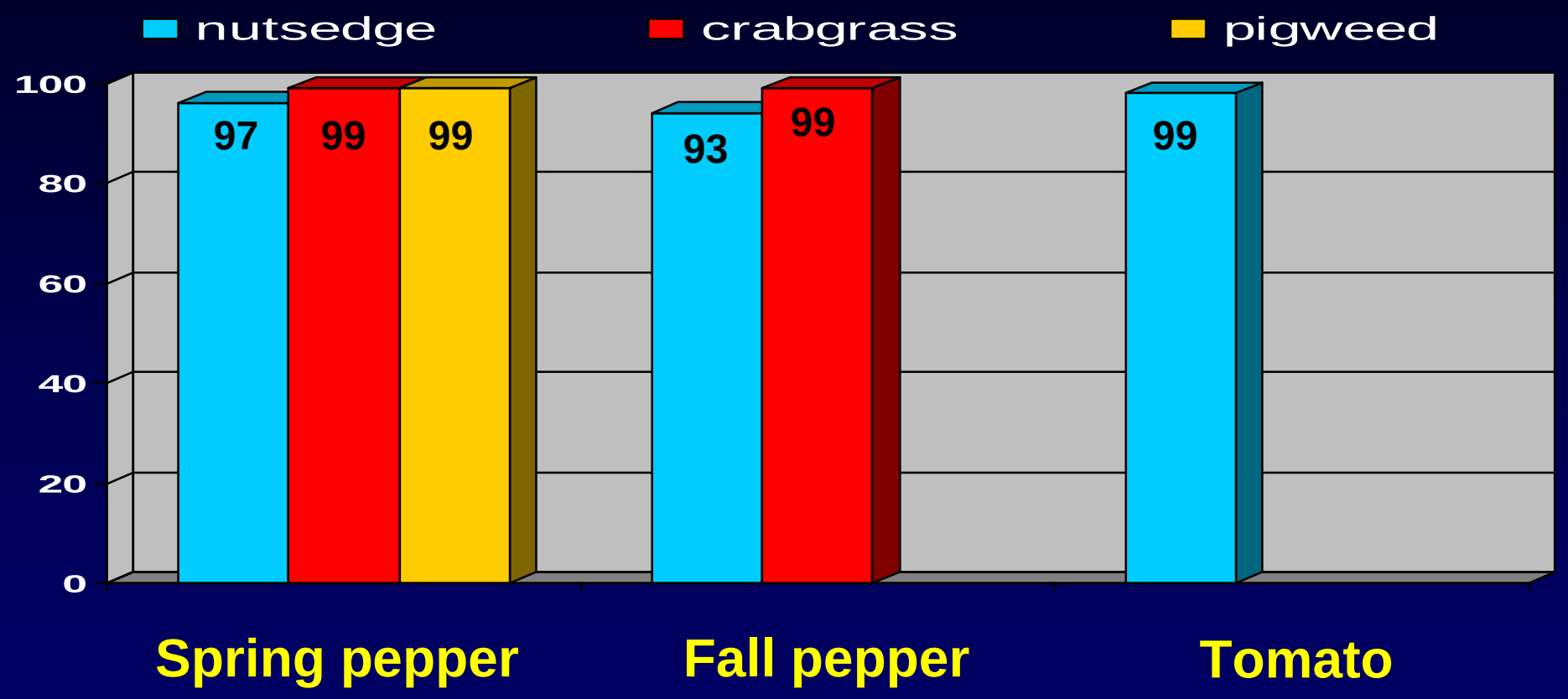
Significant Efforts with WSP in 2011

WSP

1. New fumigant system-minimal release in 2012.
2. Mixture of Paladin, chloropicirn, and Telone II.*
3. Trade name in development.
4. Twenty eight acres in 2011 (4 application times)
5. Data in 2010 and 2011 looks very good.

***Patent pending**

Percent weed control by the WSP + Herbicide Program. 2010



Yields equal to Paladin Pic, MB, and 3-WAY + herbicides.

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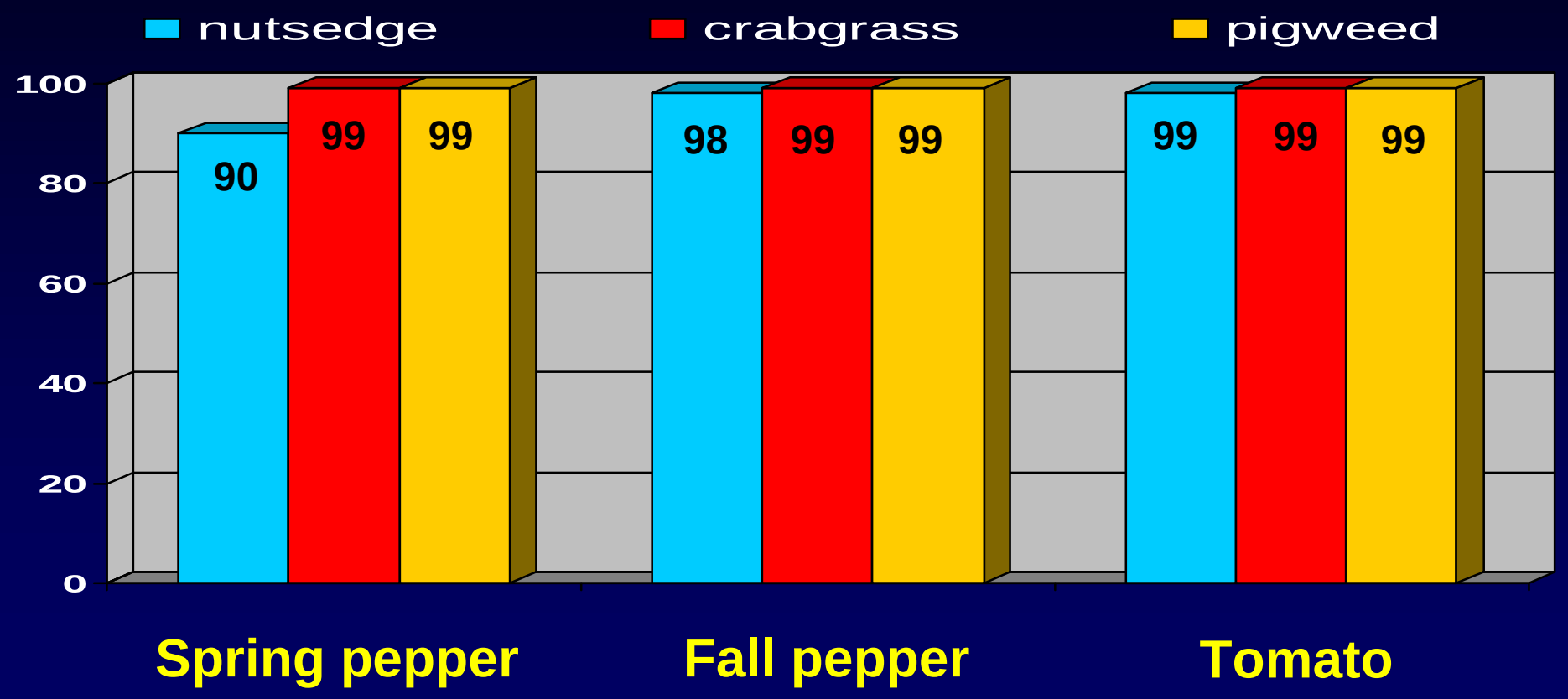

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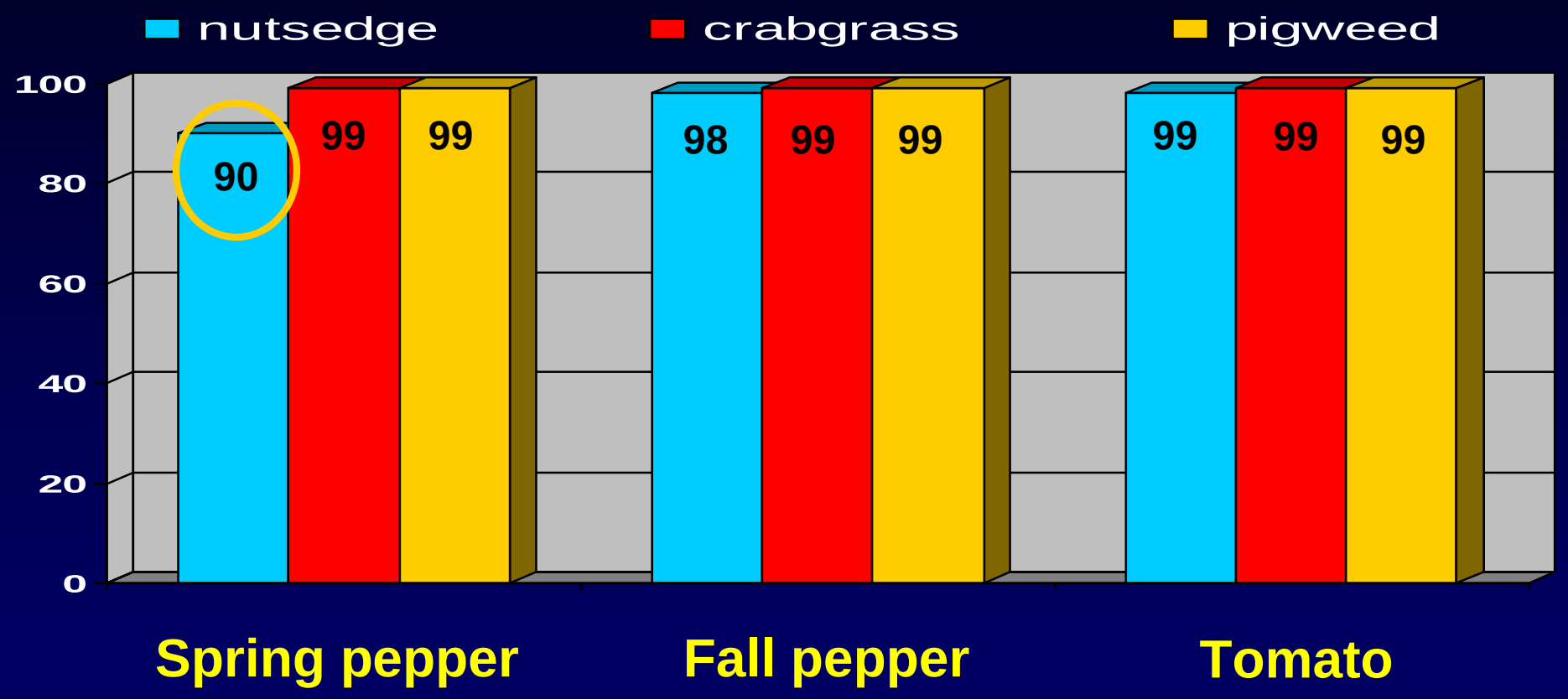

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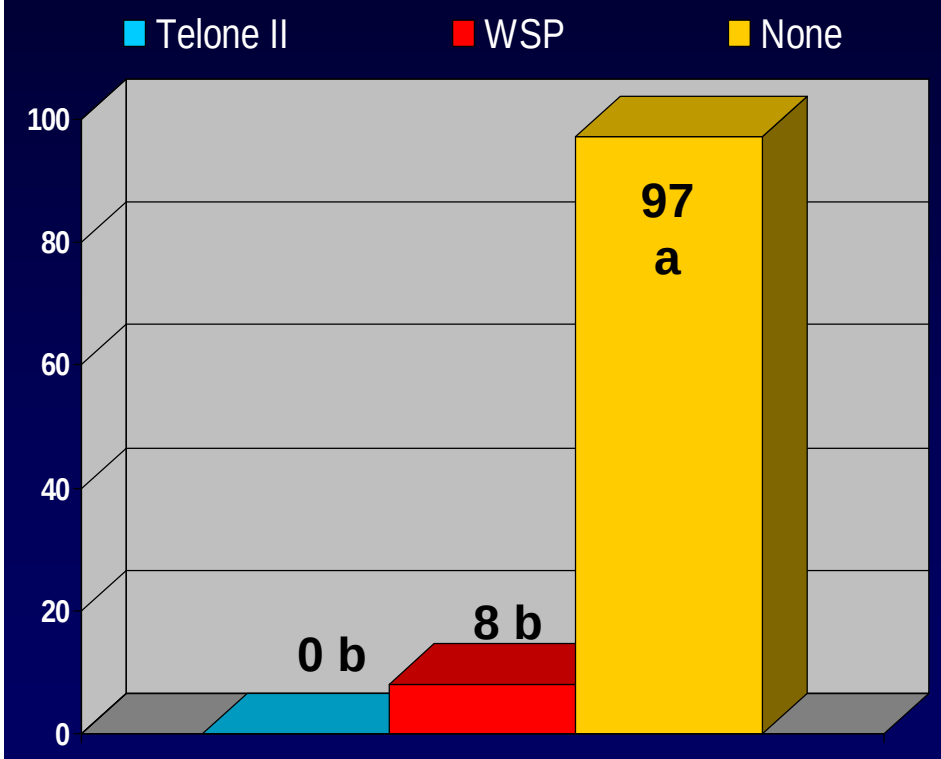
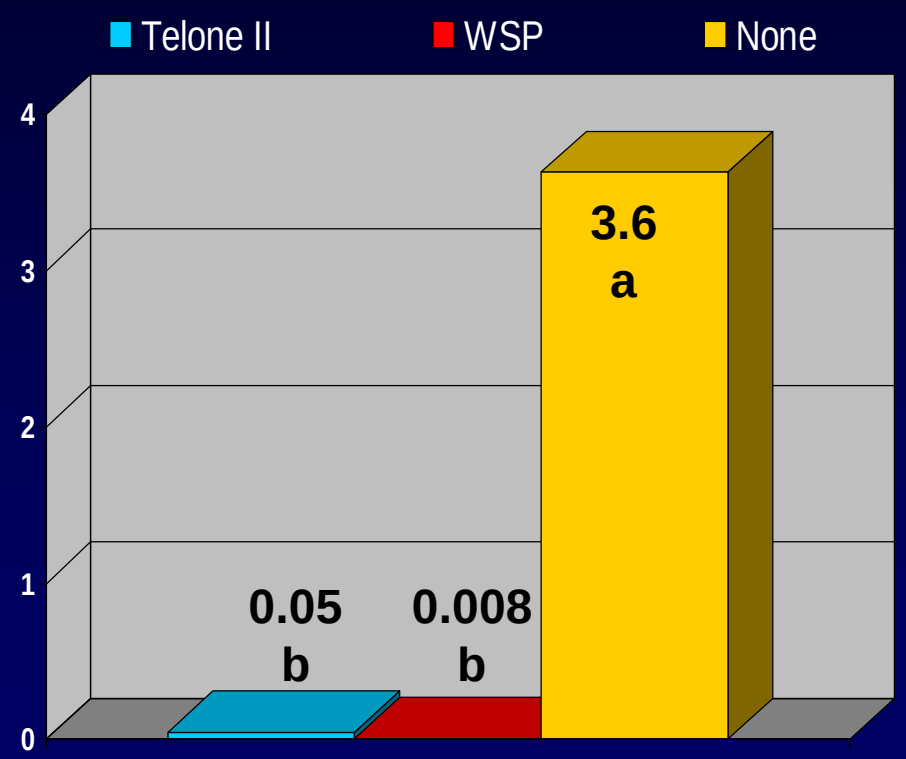
Response of Root Knot nematode to the WSP. Langston, 2010.



Incidence



Severity

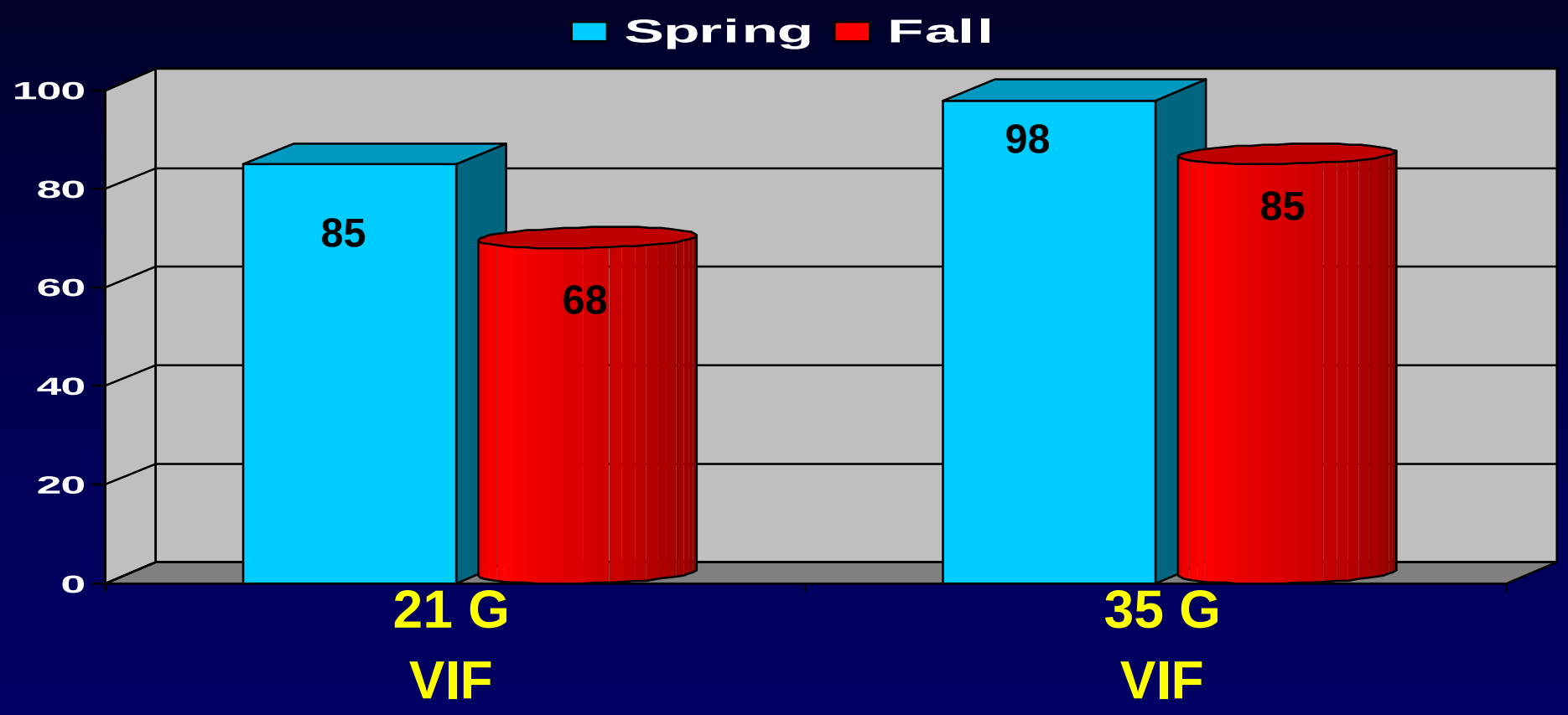
WSP

1. Limit use, but would suggest trying.
2. Use high barrier mulch on Paladin label.
3. Do not cut rate (350 lb/A).
4. An odor does exist, be cautious.
5. Have TriEst-Ag present if at all possible.
6. Your feedback is definitely needed!

Pic Chlor 60

1. Less effective than UGA 3-WAY, WSP, or Paladin Pic.
2. However, with one or two crop only systems it can be effective, especially when Sandea can be used.
3. Limited odor concerns.
4. Easy to apply.
5. Herbicides needed!

Nutsedge Response to Pic Chlor 60 plus herbicides in PEPPER. Ponder, 2010.



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Herbicide Preplant Application Method

Herbicide boom


7830

Herbicide Program for Eggplant and Pepper

Herbicide Program for Eggplant:

1. Devrinol applied preplant under mulch.
2. Select Max without adjuvant as needed (grass <3 inch)

Herbicide Program for Pepper:

1. Devrinol applied preplant under mulch. (Command?)
2. Dual Magnum applied topically 7 to 10 d after transplant
3. Select Max without adjuvant as needed (grass <3 inch)

Several of these labels are for GA growers only. Reflex label for pepper expected early 2012.

Herbicide Program Tomato

Herbicide Program for Tomato CURRENTLY:

1. Devrinol + Dual Magnum preplant under mulch. (Metribuzin?)
2. Sandea POST
3. Select Max without adjuvant as needed (grass <3 inch)

Herbicide Program for Tomato SOON:

1. Devrinol preplant under mulch. (Metribuzin?)
2. Dual Magnum applied topically 7 to 10 d after transplant
3. Sandea POST
4. Select Max without adjuvant as needed (grass <3 inch)

Several of these labels are for GA growers only. Reflex label for pepper expected early 2012.

ISSUES!

1. Mulch stability of high barrier films.
2. Rise in fumigant/mulch system costs.
3. Planting interval after fumigating.

Mulch Stability is a Serious Problem

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6 months after application

Mulch Stability Effort

In cooperation with TriEst Ag, our goal will be to develop WSP and Paladin Pic systems with 2 or 3 mulches with high

*Product quality

*Product stability

*Manufacture stability

*Economical

Fumigant + Mulch + Herbicide Costs to Growers Rise Sharply

	2011	2012	
3-WAY =	$843	$984	+14.3%

Cost per acre land assuming treating 53% of the land area, 5 ft center.

Fumigant + Mulch + Herbicide Costs to Growers Rise Sharply

	2011	2012	
3-WAY =	$843	$984	+14.3%

Something has to give?? Research will begin efforts to reduce the need of fumigant/mulch systems in an effort to remain sustainable.

Cost per acre land assuming treating 53% of the land area, 5 ft center.

Planting Interval For Fumigants

This is the one area it does not currently appear that we will be able to replace methyl bromide.

UGA 3-WAY: 15 to 30 days

Paladin Pic: 21-40 days

WSP: ?????


Questions?