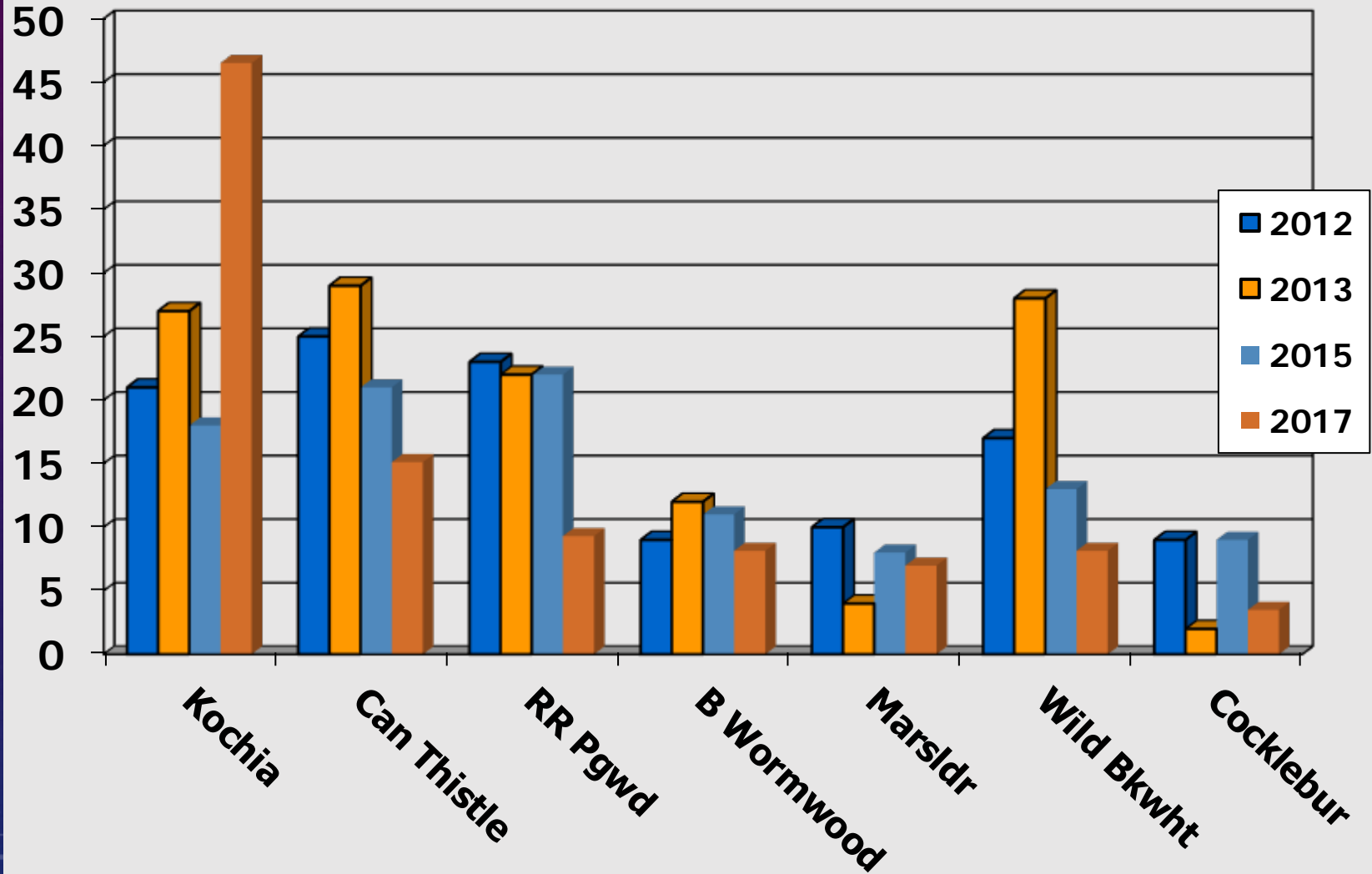


The background features a dark blue gradient with several circular gauges and a scale. The scale is a large arc on the left side, with numerical markings from 150 to 260 in increments of 10. There are also several smaller circular gauges with arrows and dashed lines, suggesting a technical or scientific theme.

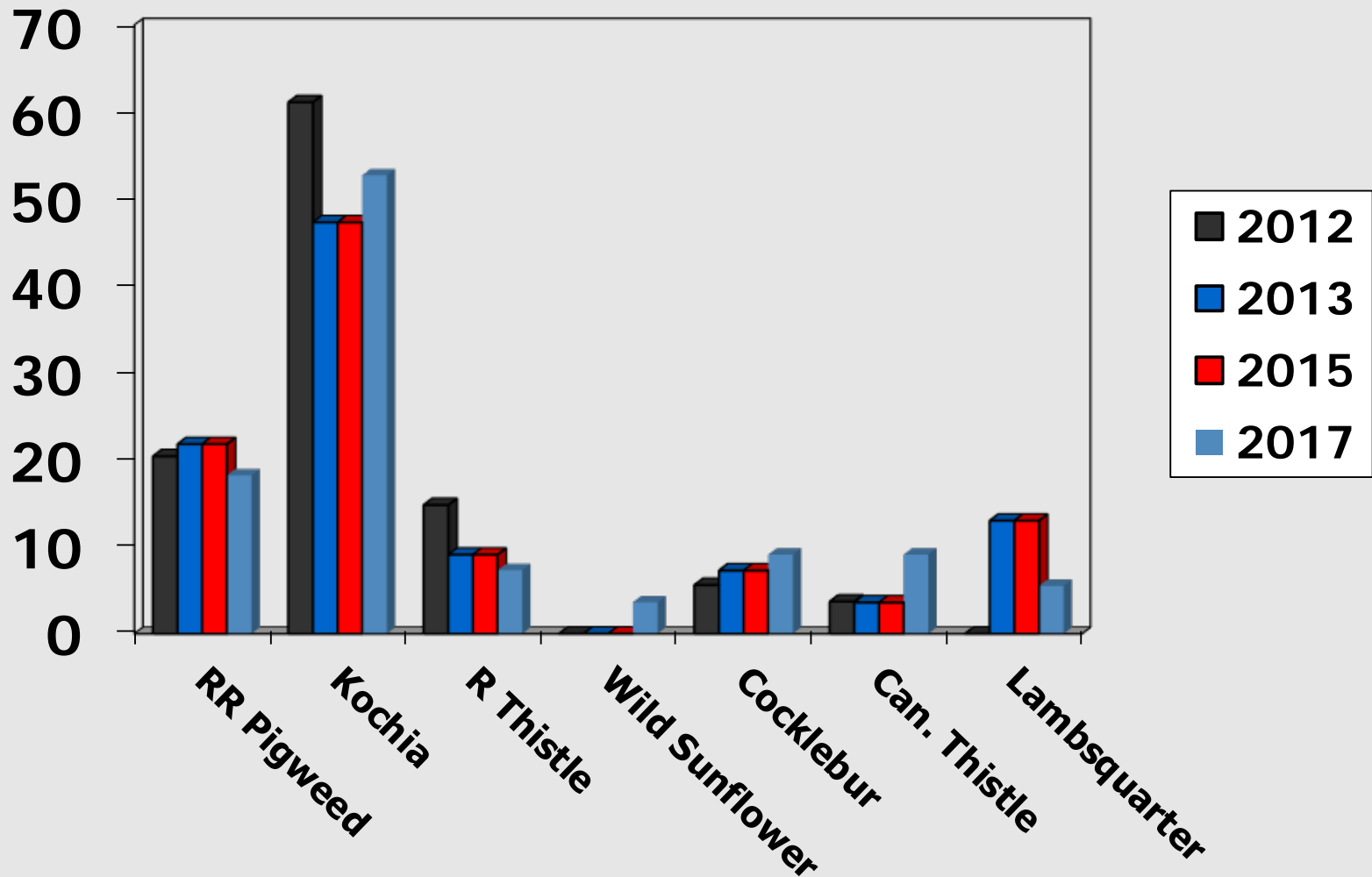
WEED ASSESSMENT

**30 WEEDS TO IDENTIFY AND RATE
INCIDENCE ON 1-3 SCALE**

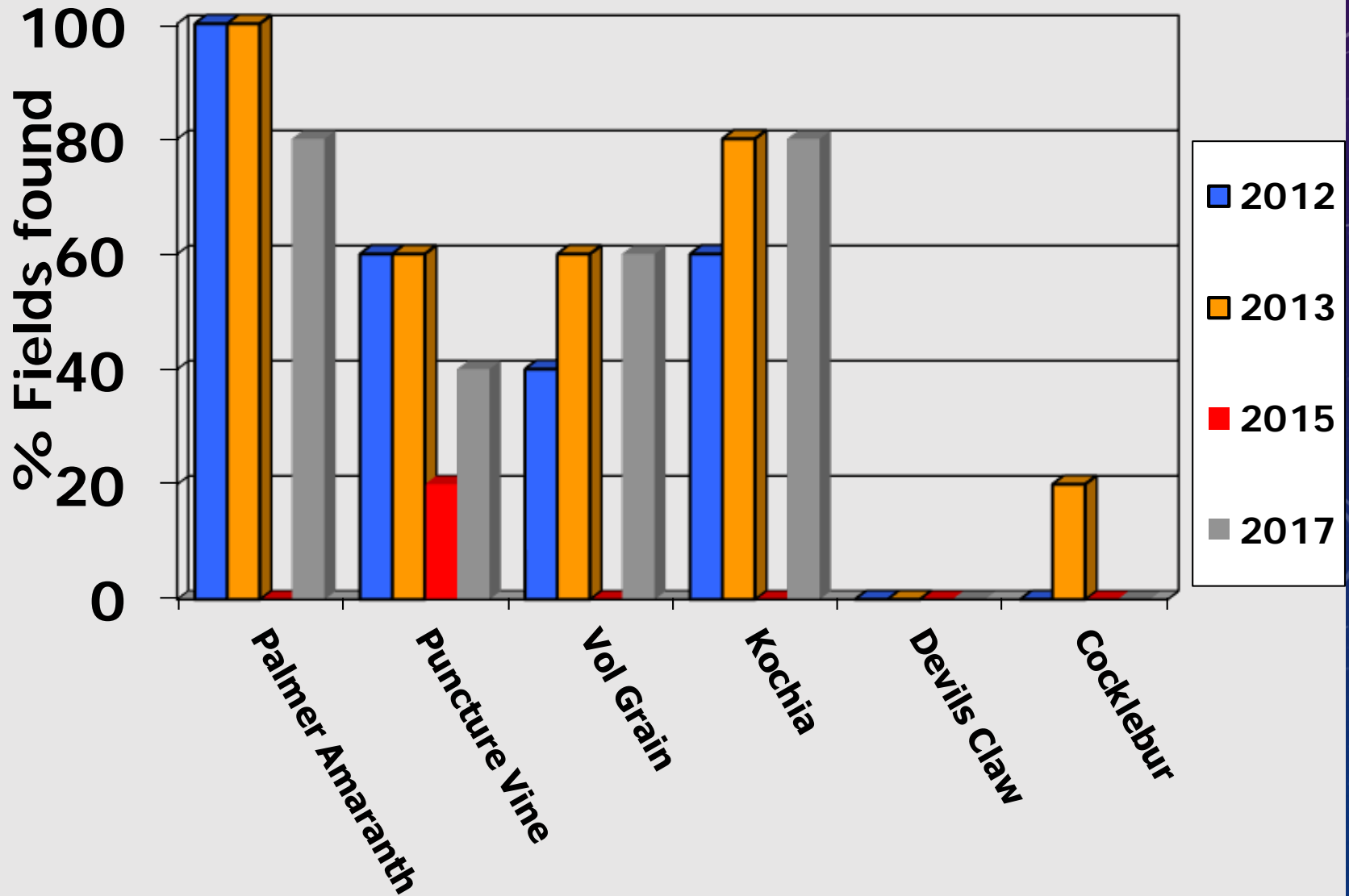
INCIDENCE OF WEEDS ND/MN 2012-2017



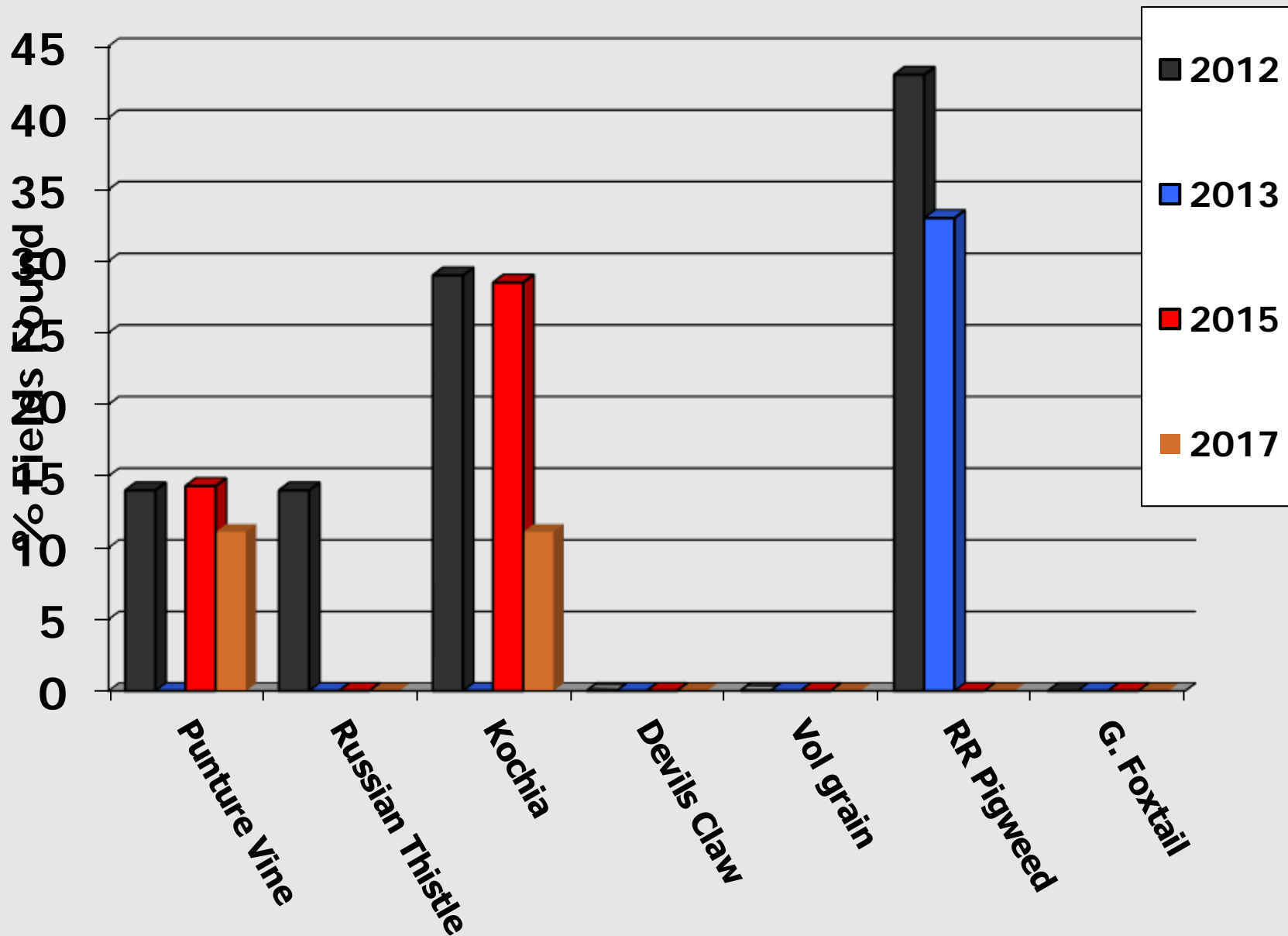
INCIDENCE OF WEEDS SOUTH DAKOTA 2012-2017



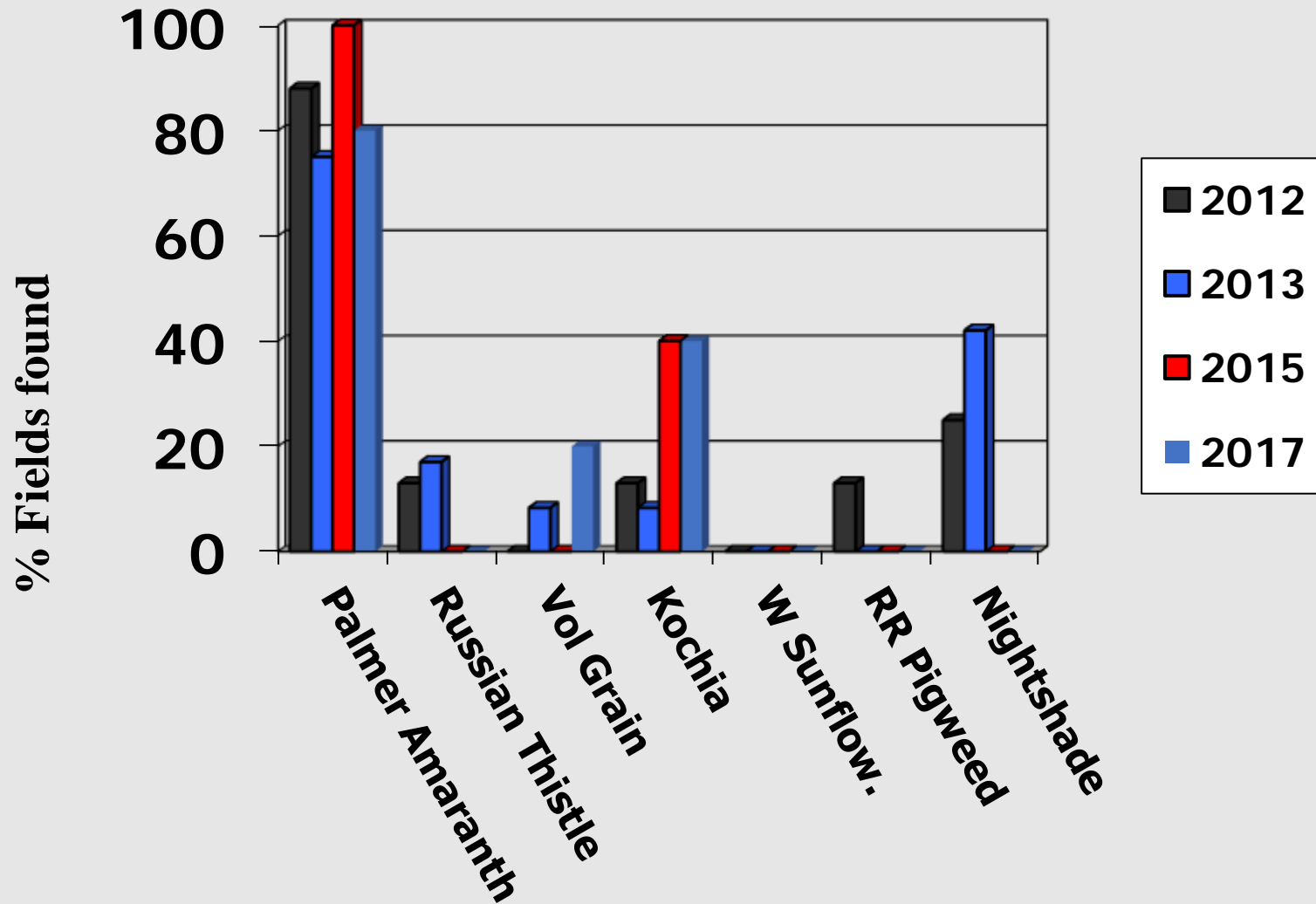
INCIDENCE OF WEEDS IN KANSAS 2012-2017



INCIDENCE OF WEEDS IN COLORADO 2012-2017



INCIDENCE OF WEEDS IN TEXAS 2012-2017



PERVASIVE WEEDS

Northern Area

- kochia
- redroot pigweed
- Canada thistle

Southern Area

- kochia
- Palmer amaranth
- redroot pigweed



USA
Sunflower Survey



Partnership of
University, USDA & Industry

PERVASIVE WEEDS

Northern Area

- kochia
- redroot pigweed
- Canada thistle

Southern Area

- kochia
- Palmer amaranth
- redroot pigweed
- volunteer grain

Options

Spartan ** (sulfentrazone)

Spartan ** (sulfentrazone)



PERVASIVE WEEDS

Northern Area

- kochia
- redroot pigweed
- Canada thistle

Southern Area

- kochia
- Palmer amaranth
- redroot pigweed
- volunteer grain

Options

Spartan ** (sulfentrazone)

Prowl, BroadAxe XC

Spartan ** (sulfentrazone)

Prowl, BroadAxe XC

Prowl, BroadAxe XC



PERVASIVE WEEDS

Northern Area

- kochia
- redroot pigweed
- Canada thistle

Southern Area

- kochia
- Palmer amaranth
- redroot pigweed
- volunteer grain

Options

Spartan ** (sulfentrazone)

Prowl, BroadAxe XC

glyphosate previous fall

Spartan ** (sulfentrazone)

Prowl, BroadAxe XC

Prowl, BroadAxe XC

Group 1, ACCase



POSTEMERGENCE BROADLEAF CONTROL

Northern Area

- kochia
- redroot pigweed
- Canada thistle

Southern Area

- kochia
- Palmer amaranth
- redroot pigweed
- volunteer grain

Options

Broad resistance to group 2

Beyond, Express

Express, Beyond limits size

Broad resistance to group 2

Broad resistance to group 2

Beyond, Express

Group 1, ACCase



Eptam

- Eptam registered in corn, dry edible bean, sunflower, safflower, sugarbeet, potato, and forage legumes

All crops have limited POST herbicide options

- 2 to 4 lb/A = 2.5 to 4.5 pt/A
- PPI and has short soil residue
- poor to fair broadleaf weed control

Lipid Synthesis Inhibition (8) Thiocarbamate	cycloate EPTC triallate	Ro-Neet SB. Eptam = Eptek = Eradicane = Razencane. Far-Go.
Benzofuran	ethofumesate	Nortron = Ethofumesate = Ethotron.

EPTC f/b POST herbicides - 2014

	Rate	Colq	Corw
	(product/A)	--- % control --	
Eptam	3.5 pt	43	33
Basagran	2 pt	60	50
Eptam fb Basa	3.5 pt fb 2 pt	80	90
Permit	0.67 oz	62	78
Eptam fb Permit	3.5 pt fb 0.67 oz	96	97
Reflex	0.75 pt	60	80
Eptam fb Reflex	3.5 pt fb 0.75 pt	93	98
LSD (0.05)		6	7

All Post herbicides + MSO at 1.5 pt/A.

Post treatments applied to 2 to 4 inch colq and corw.

Eptam at 3.5 pt/A



Permit +
MSO

Eptam fb
Permit



Eptam f/b Permit - 2015

	Rate	Ave 3 weeds
	(product/A)	--- % control --
Eptam	3 pt	40
Permit	0.67 oz	50
Eptam fb Permit	1 pt fb 0.67 oz	68
Eptam fb Permit	2 pt fb 0.67 oz	90
Eptam fb Permit	3 pt fb 0.67 oz	95
LSD (0.05)		5

Eptam applied PPI with 2x incorporation

Permit applied POST with MSO at 1.5 pt/A

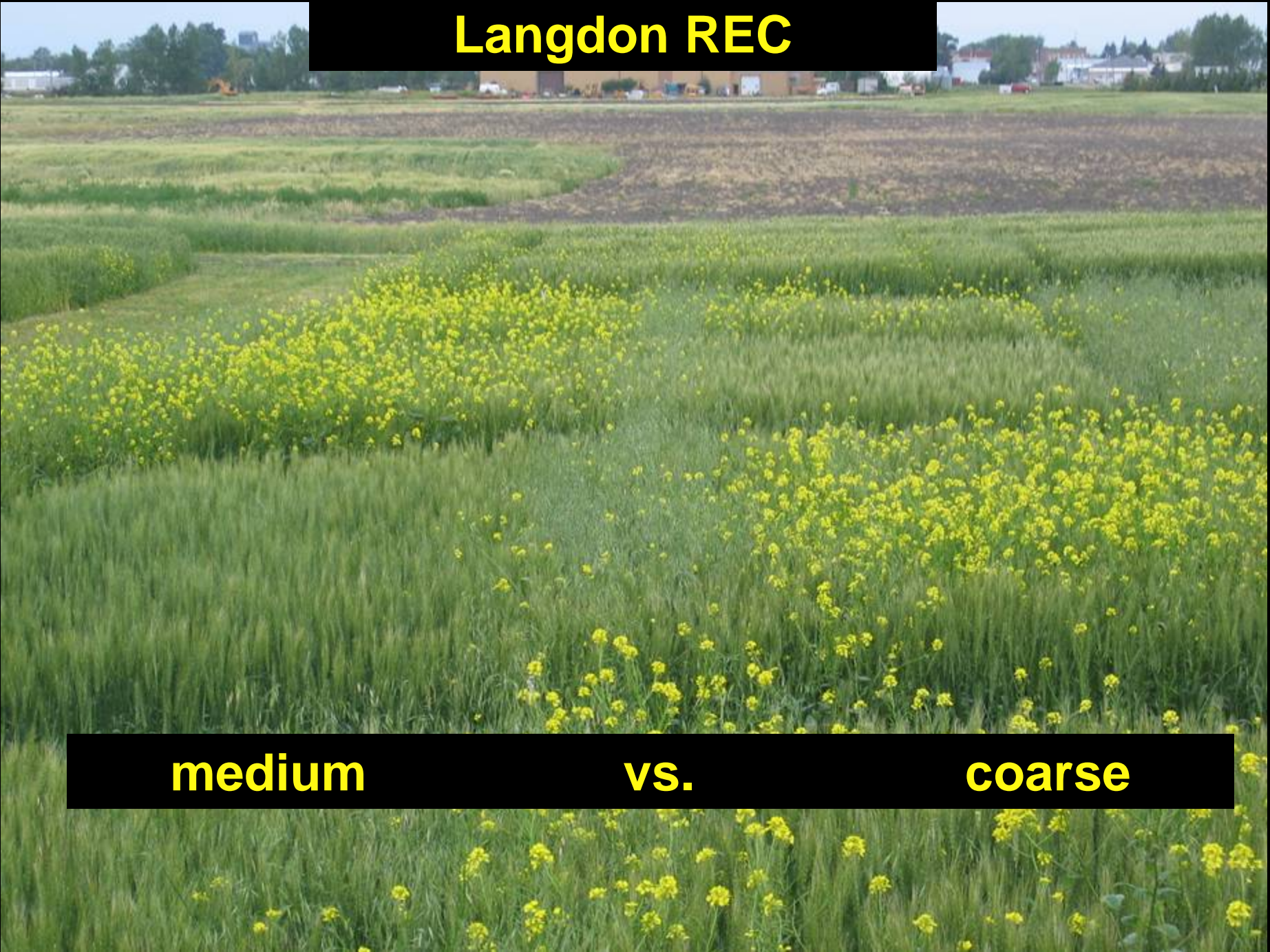
Permit applied to 2 to 4 inch rrpw, colq, and corw

Langdon REC

medium

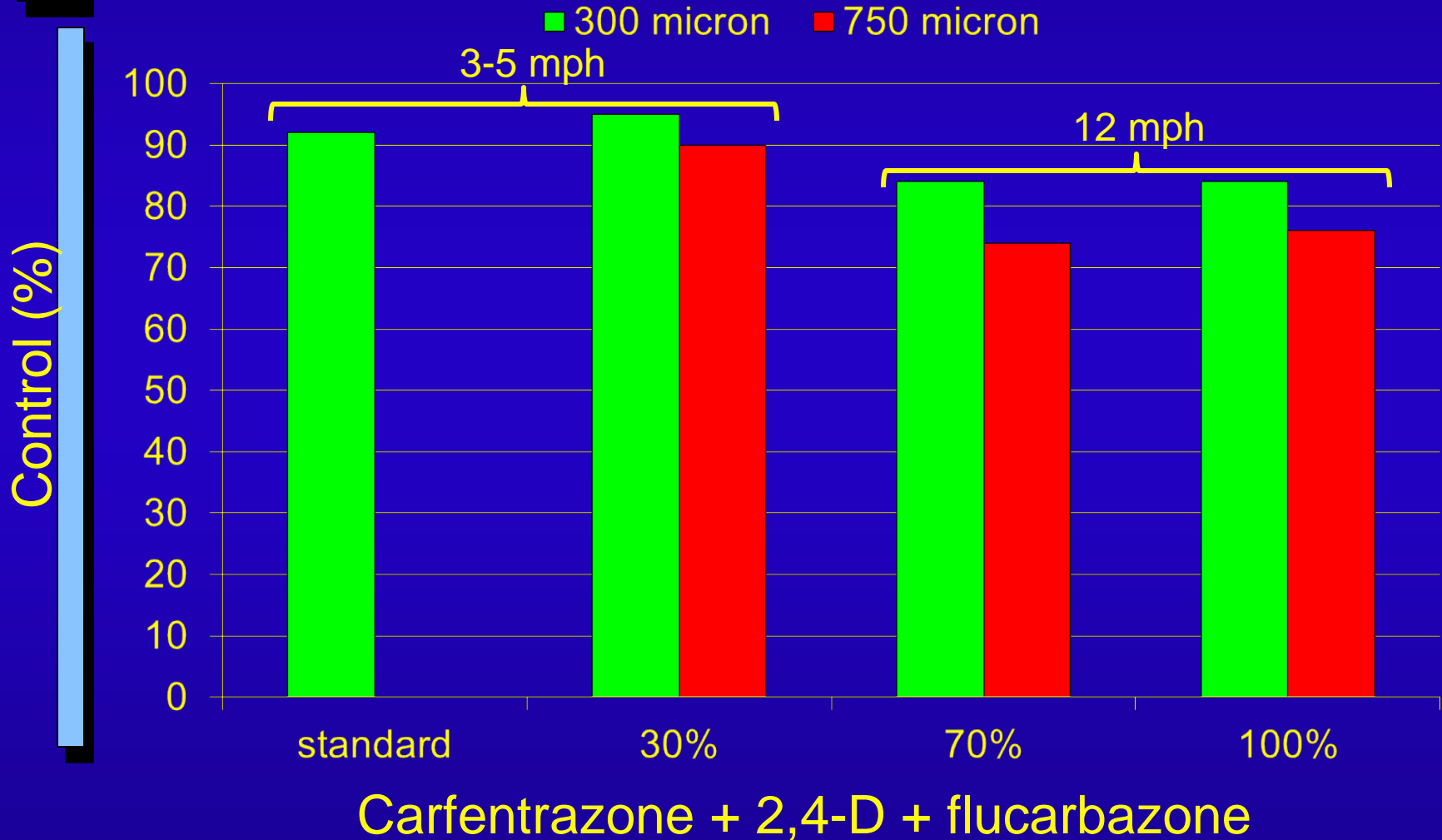
vs.

coarse





Broadleaf Control with PWMS



LSD (0.05) = 4

Travel Speed Affected Control more than Droplet Size (Aim+2,4-D+Everest)



4.5 mph, across size



12 mph, medium



12 mph, ultra coarse

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Thank you

