



ISSUE #1

ACKNOWLEDGE THE THREAT OF HERBICIDE RESISTANCE

ANNUAL BLUEGRASS RESISTANCE

MECHANISM OF ACTION	EXAMPLE HERBICIDES
ALS INHIBITION	REVOLVER, MONUMENT, KATANA, CERTAINTY, ETC
MITOTIC INHIBITION	BARRICADE, PENDIMETHALIN, DIMENSION
EPSP INHIBITION	GLYPHOSATE
PHOTOSYSTEM II INHIBITION	PRINCEP, XONERATE

*Other cases suspected- Prograss, Kerb, etc.



Jim Brosnan, Ph.D.

@UTTurfWeeds



Poa resistance to pronamide (Kerb) confirmed in GA by Dr. McCullough at UGA. Likely an effect of reduced absorption/translocation [#SWSS2017](#)

RETWEETS

21

LIKES

24



5:14 PM - 24 Jan 2017



21



24



Tweet your reply



HERBICIDE FAILURE

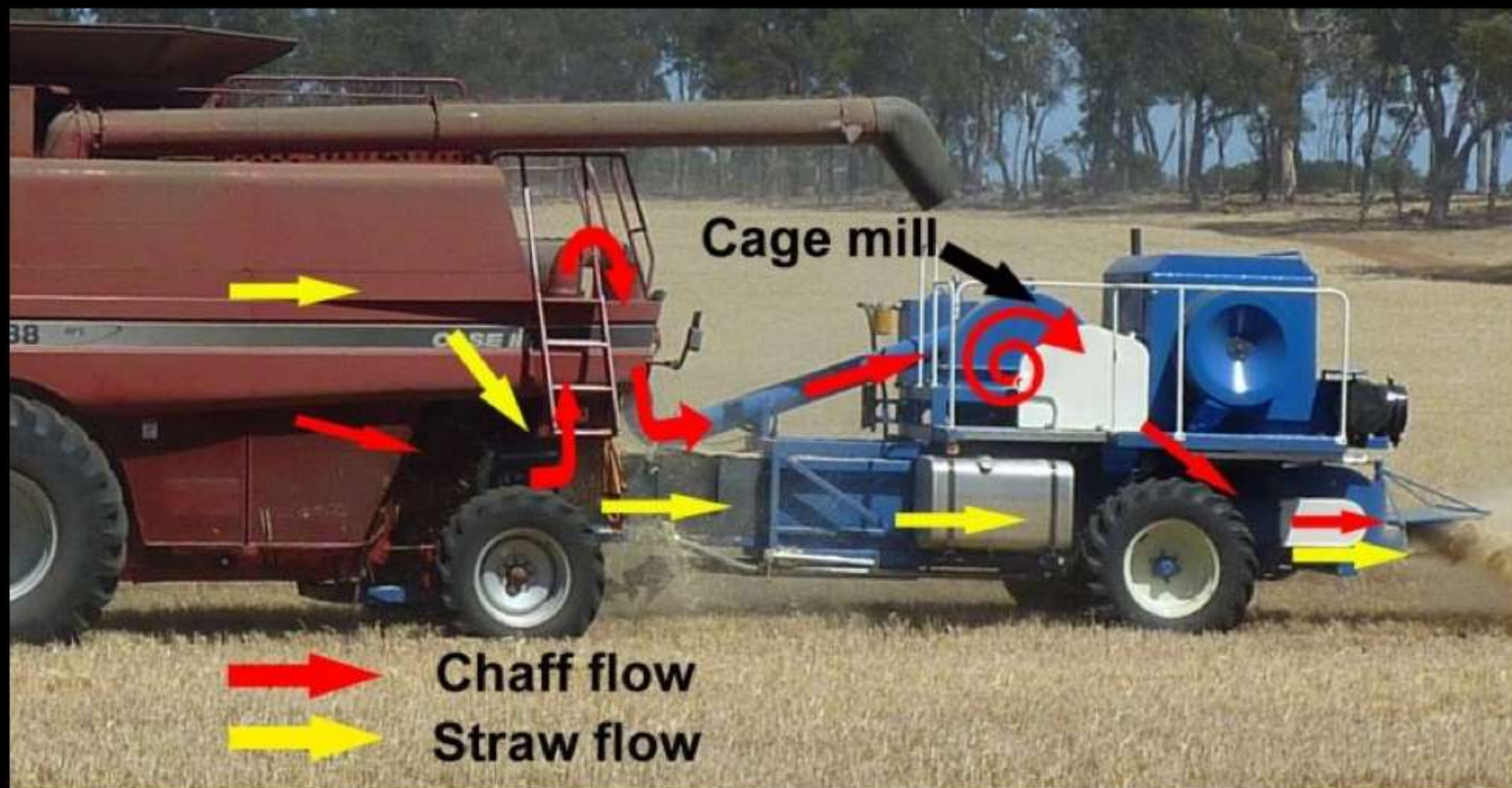
MASSIVE AMOUNTS OF SEED IN SOIL



185,000 viable *Poa* seeds in top inch (Watschke et al. 1979)

RESISTANCE MANAGEMENT

- Best practices for resistance management focus on soil seed bank (Norsworthy et al. 2012)
- Use both chemical and non-chemical techniques
- Harvest weed seed control



Walsh MJ, Harrington RB & Powles SB (2012).

[Harrington Seed Destructor: A New Nonchemical Weed Control Tool for Global Grain Crops.](#) *Crop Science* **52**(3): 1343-1347



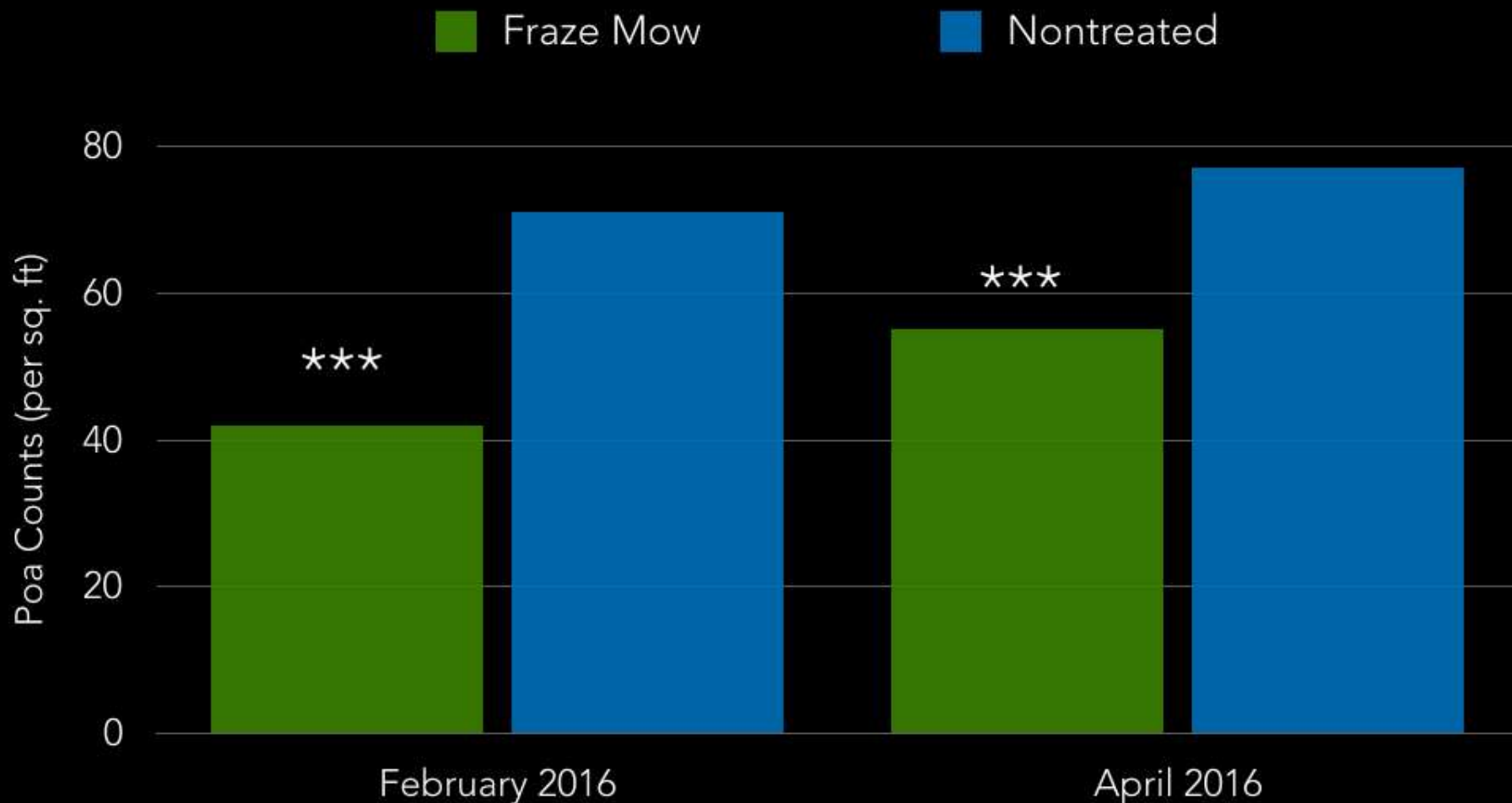






80% of viable *Poa* seed in top 1 cm (Branham et al. 2004)

FRAZE MOWING EFFECTS ON POA



Frazee Mowing 15 June 2015 in Knoxville, TN

*** Significantly different according to Fisher's LSD at 0.0001 level

Non-
Treated



Fraze
Mowed
June 10th
2015

Photo: 1/10/16



Work Repeated in 2016
Poa Control Data Collected This Spring

MORE TO LEARN

- Non-chemical tool
- Mass balance —> Looking at weed seed germination in debris in collaboration with Purdue
- Year effect ?
- Optimal timing for recovery?
- Other weeds

Bermudagrass Sod and Sprig Production

Modern Turf & Bayou Bend Turfgrass





ACKNOWLEDGEMENTS

