

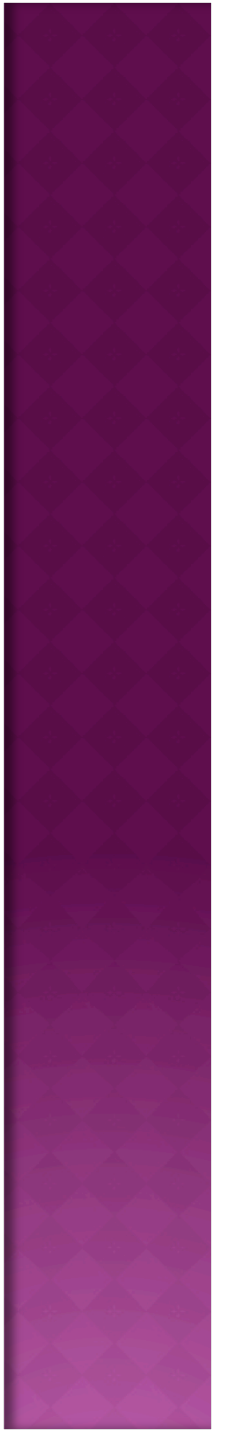
HINDRANCES TO EFFECTIVE
SOYBEAN CYST NEMATODE
EXTENSION PROGRAMMING

Don Hershman
Extension Plant Pathologist
University of Kentucky, Princeton, KY

FOUNDATIONAL ISSUE

- ◉ We can provide growers with great general information, but fall short of being able to provide *SPECIFIC RECOMMENDATIONS* in most cases.
- ◉ Missing essential pieces of the information puzzle.
- ◉ SCN-Soybean interaction is very complex.
- ◉ Farmers often don't follow our advice.

SPECIFIC HINDRANCES



LACK INFORMATION ON SCN EGG DENSITIES



G. Tylka

- Most soybean states offer SCN soil testing services.
 - A small percentage of growers (<5%) monitor known SCN infestations over time.

WHY NOT?



G. Tylka

- ◉ Farmers don't know to sample, or think it is necessary, beyond detection.
- ◉ We have done a poor job “selling” maintenance SCN soil testing.
- ◉ Not sure what the numbers mean.

END RESULT

- Willy-nilly and inadequate knowledge of how cropping decisions impact SCN population densities over time.

LACK OF INFORMATION ON HG-TYPE/RACE



- About 1/3 states offer HG-Type/race testing services.
 - Very low percentage (<1%) of farmers have ever had a race or HG Type test done.

WHY NOT?



- ◉ Dissention in nematology ranks.
- ◉ We have confused farmers.
- ◉ Expensive and results come slow.
- ◉ Seed companies have not embraced HG Types
 - Continue to market cultivars to manage races of diminishing importance.

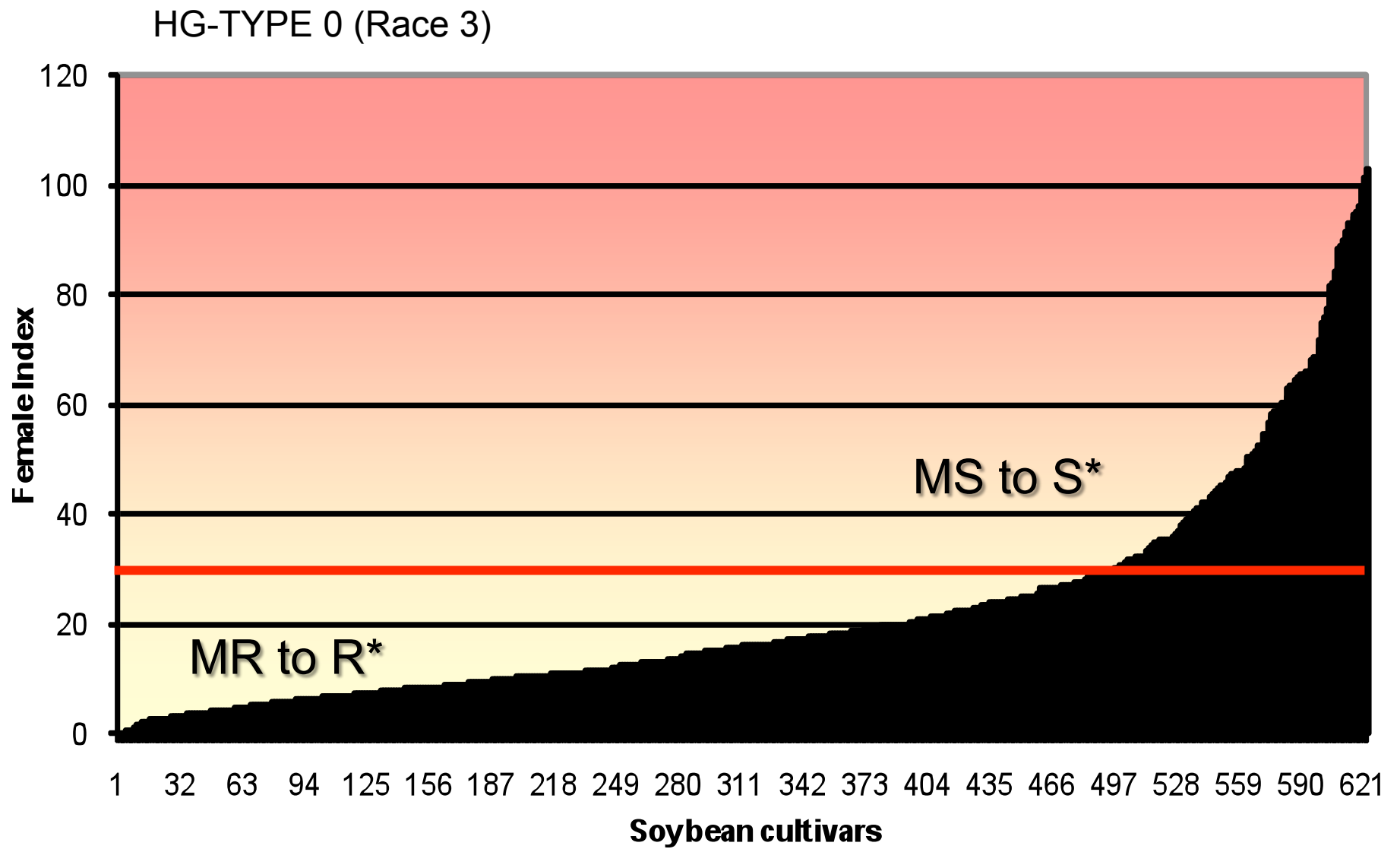
END RESULT

- Cultivar selection decisions are compromised:
 - Farmers have little to no specific information about which source of SCN resistance to deploy.



RESISTANT CULTIVAR LIMITATIONS

- Almost exclusive reliance on PI88788 as the source of SCN resistance has greatly limited cultivar selection options.
- Level of effective resistance is highly variable, but usually not reflected on seed tag or in marketing information.

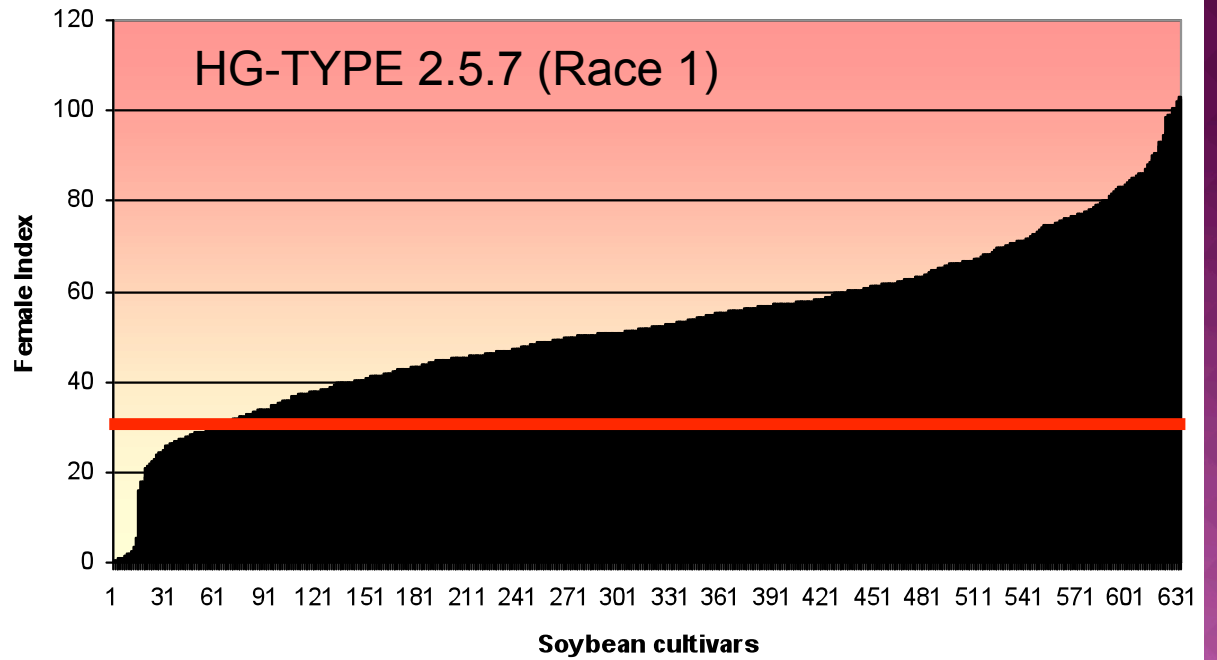
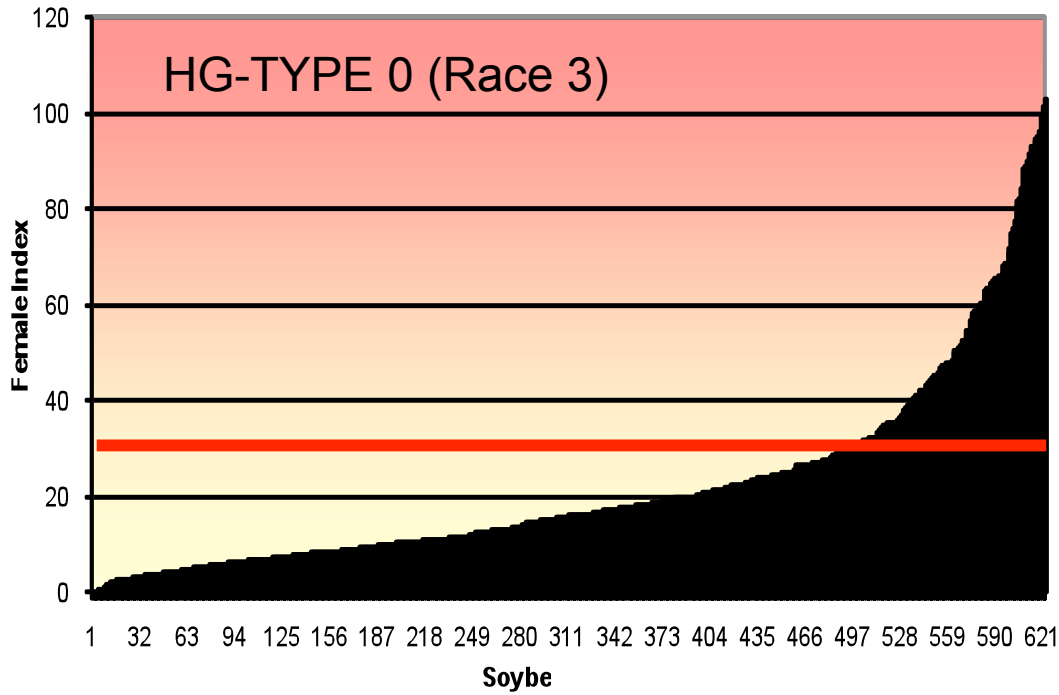


Source: T. Niblack

RESISTANT CULTIVAR LIMITATIONS

- Performance data against emerging HG Types is scarce.





Source: T. Niblack and J. Bond

END RESULT

- ⦿ Rotating sources of resistance easier said than done.
- ⦿ Farmers have no way of knowing if the cultivars they plant will give the desired results.
- ⦿ Many resistant cultivars planted will experience yield loss as a result of poor performance.

RANDOM HINDRANCES

- ◉ Inability of growers to implement crop rotation recommendations.
- ◉ Complications due to presence of other nematode species, fungal disease interactions or unique local conditions/limitations.
- ◉ Declining nematology faculty positions that deal with management aspects for SCN.
- ◉ Need to re-educate the next generation of farmers and cyclical interest in SCN.
- ◉ Inadequate communication among nematologists, plant pathologists, breeders, seed company salesman, consultants, etc.

BOTTOM LINE

- ⦿ There are many things hindering our ability to give producers specific SCN management information.
 - Some are out of our control
 - Some are in our control



RECOMMENDATIONS

- ◉ We should all be telling the same “story” to growers, using the same terminology.
- ◉ Breeders/seed companies should subject cultivars to standardized testing for efficacy prior to release, and the results should be readily available to growers.
- ◉ Push the concept of maintenance soil testing.
- ◉ IS HG Type testing recommended: Yes or No?
- ◉ Brainstorm ways to improve our ability to make field-specific recommendations.

THANK YOU

