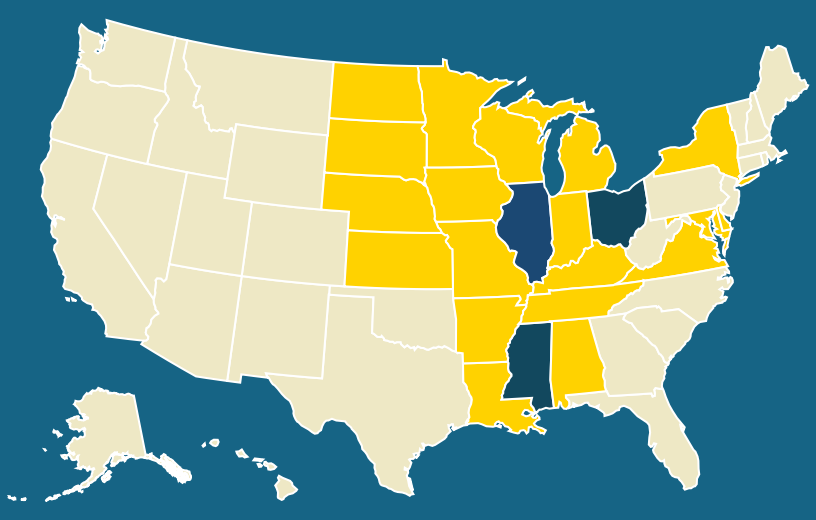
NCERA 137
2022 State Updates

Participating States

States in this update



Participating states, not reflected in state updates

NCERA 137 Program Objectives:

Objective 1: Foster collaborative research and information exchange on new and emerging soybean diseases among scientists in the North Central Region including soybean breeders and entomologists that will lead to improved disease screening protocols, additional sources of disease resistance genes and ultimately, improved host plant resistance.

Objective 2: Compare findings on the impacts of changing production practices such as earlier planting dates, new sources of host plant resistance, increased use of fungicide seed treatments and foliar fungicides, and other new or improved crop production technologies on soybean diseases that could be adopted for other production areas in the region.

Objective 3: Compare data from studies of the ecology and epidemiology of soybean diseases important in the North Central Region.

Objective 4: Improve knowledge transfer about soybean diseases and their management in the North Central Region to researchers, Extension faculty, producers and the agribusiness community through the use of web sites, podcasts, social media (Twitter and Facebook) and other new technologies as they are developed.

Objective 5: Continue to monitor and share information for any new or reemerging pathogens of soybean in the North Central Region and develop appropriate responses to their emergence as they occur.

2021 Disease Pressure

- % Above average disease 50
- % Average disease 6
- % Below average disease 44

Notable Diseases for Discussion

- Cercospora leaf blight and purple seed stain
- SDS
- Aerial Blight (first time in TN)
- Red Crown Rot (first time in KY)
- White Mold
- Diaporthe Diseases
- Brown Stem Rot
- Charcoal Rot
- Target Spot
- Phytophthora root rot
- Soybean Cyst Nematode
- Frogeye Leaf Spot, less frequent

We found red crown rot of soybean for the first time in KY in Graves County (western KY), but some fields were significantly affected.

Excessive moisture during soybean maturation resulted in high incidences of purple seed stain and Phomopsis seed decay. Soybean cyst nematode has now been confirmed in 36 NY counties.

Early wet weather in KS led to several fields with Pythium root rot and other early season root rots. Early wet weather was followed by hot, dry July and August which resulted in higher than avg. levels of charcoal rot. Survey work has shown SCN prevalence is increasing in recent years.

Significant flooding from heavy rains in June and July in MI resulted in drowned soybean plants, but also an increase in Phytophthora stem and root rot. SDS was present in areas. Seed quality was affected by delayed harvest due to late season rainfall.

Pockets of white mold and sudden death syndrome in areas of WI that received timely rains.

SDS was more widespread across VA, MD, DE than recent years.

Excessive spring rains resulted in seedling disease in MO. Cercospora leaf blight in the late season.

Overall good season. Wet season and good harvest conditions in LA

>48
Journal Publications

>90
Extension Publications

>4
Book Chapters

>15
Proceedings

A new pathogen of soybean, Diaporthe novem was detected as a causal agent of Phomopsis stem decay for the first time in SD.

Low levels of foliar diseases, continue to document Qol resistance in Cercospora sojina across IN. SDS issues in pockets.

TRD slowly expanding in TN (each year a few new fields confirmed). Aerial web blight for the first time.

Foliar diseases were light (FLS, TS, brown spot) to none in AR, while main soilborne issues were southern RKN, taproot decline, and SDS.

Soybean rust caused some damage on double-cropped soybeans in the southern half of AL.

Iowa had a dry year with more disease than expected. Many of the XtendFlex oybeans seem extremely susceptible to the major diseases (SDS, white mold, stem canker, BSR)

Most severe drought since 1980's with hottest August on record in ND.

Summer of 2021 was extremely dry over much of MN, and disease was minimal.

Higher than average white mold, lower than average for other disease in NE.

2022 Contacts
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Meeting June 20-21, 2022