



**TALC USA**

A **BRANDT** COMPANY

# Talc USA Trial Results



# Talc 80/20 + MicroSURGE for Soybeans



**Talc 80/20**  
w/graphite



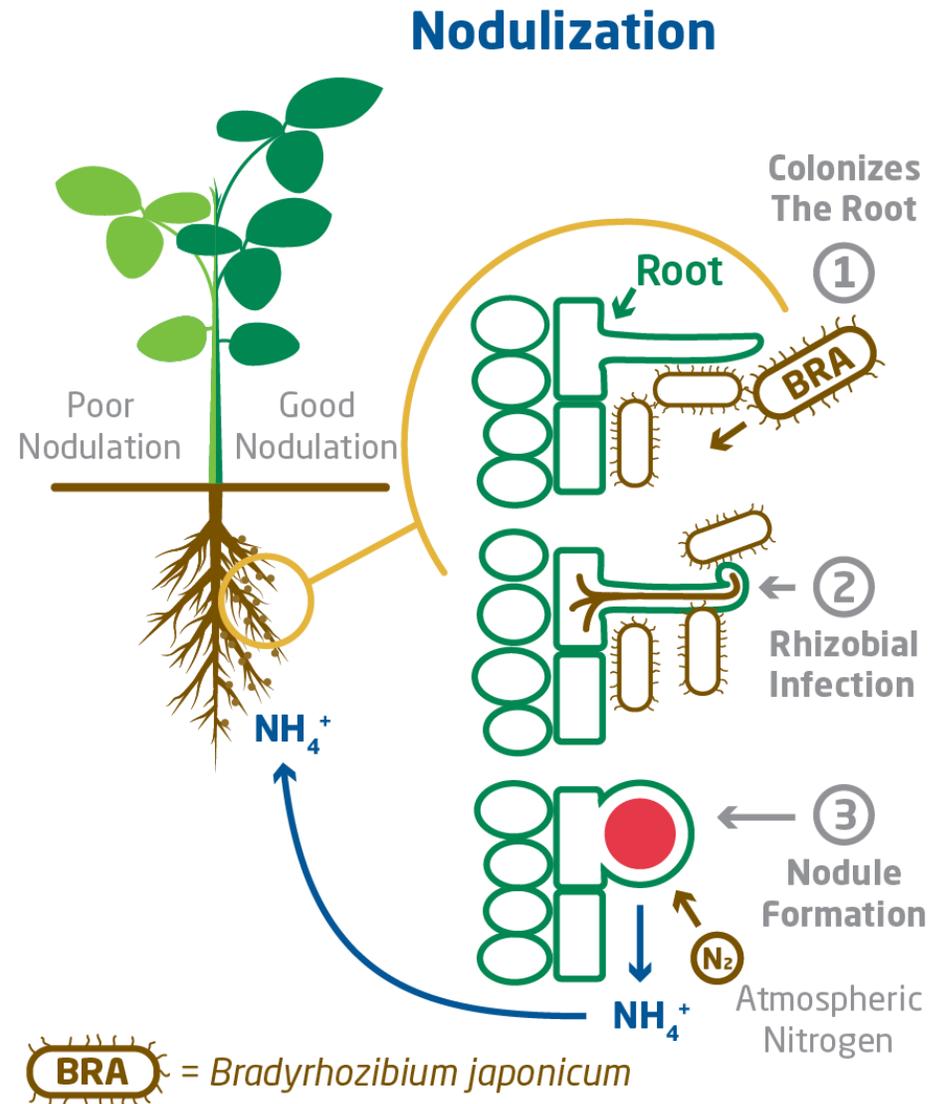
**MicroSURGE**  
**Soybean Inoculant**  
*Contains*  
*Bradyrhizobium japonicum*

# MicroSURGE for Soybeans

**Inoculant:** *Bradyrhizobium japonicum*

Symbiotic nitrogen-fixing soil bacterium

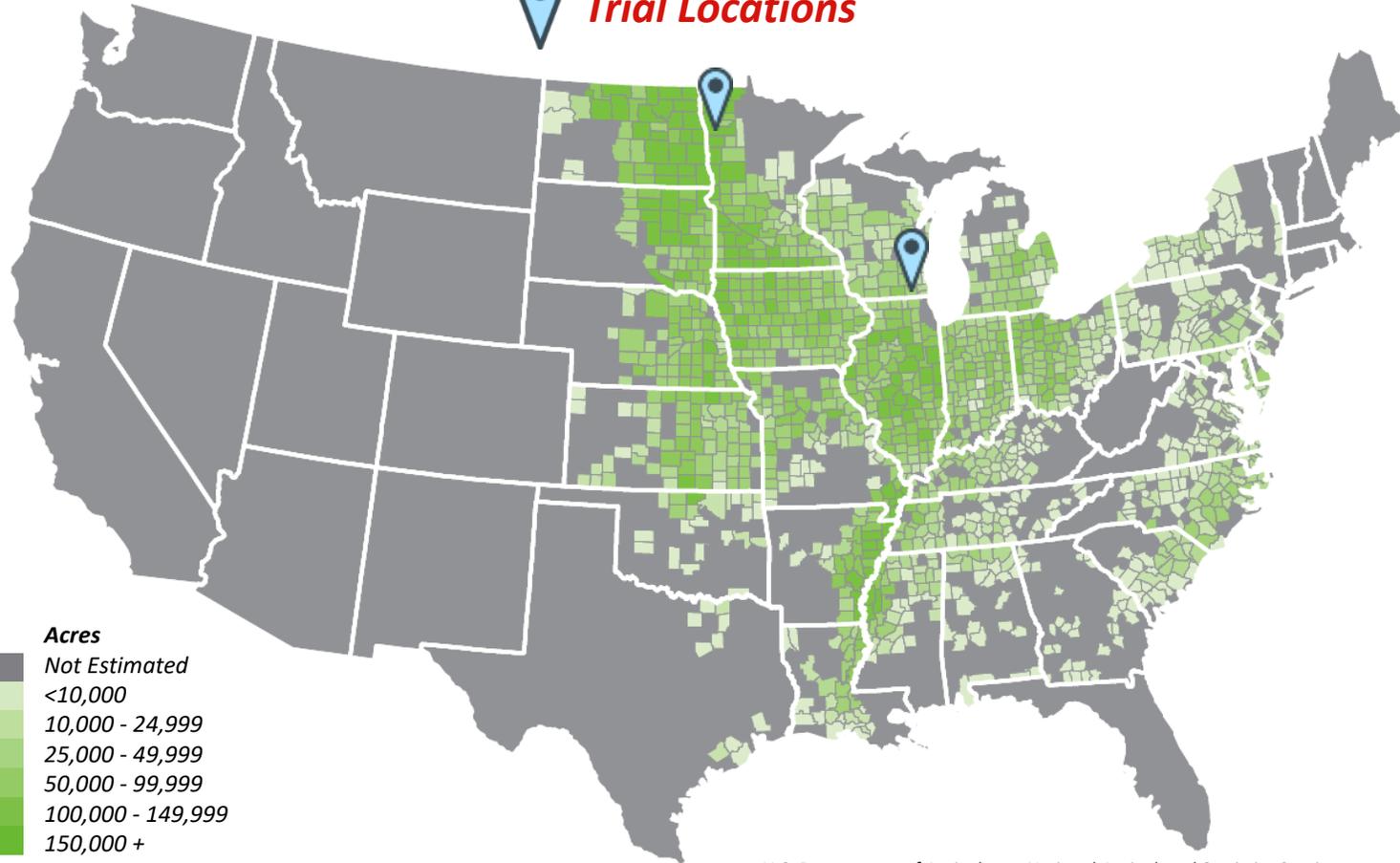
Legume crops are a host for the  $N_2$ -fixing bacteria, *B. japonicum* and they can obtain up to 50% or more of their N needs through biological nitrogen fixation are present in the soil



# Inceptive + MicroSURGE for Soybeans

## 2023 Soybean Trial Locations and Yield Results

 **Trial Locations**



**Acres**

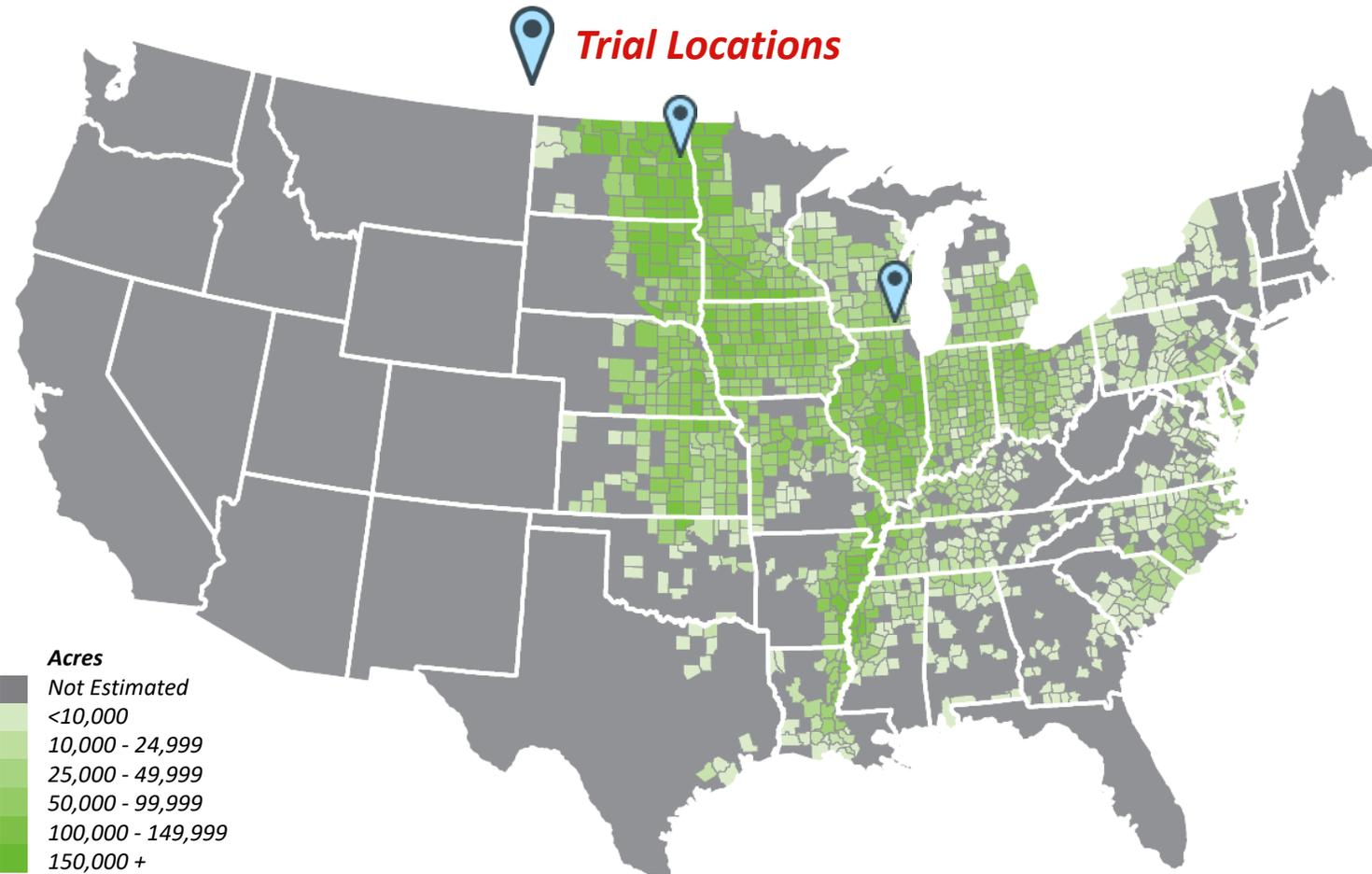
- Not Estimated
- <10,000
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 - 99,999
- 100,000 - 149,999
- 150,000 +

U.S. Department of Agriculture, National Agricultural Statistics Service

Location	Yield Increase
MN	-2.1 bu/ac
WI	1.75 bu/ac
Averaged Results	
Yield Increase	-0.2 bu/ac

# Inceptive + MicroSURGE for Soybeans + Molybdenum

## 2023 Soybean Trial Locations and Yield Results

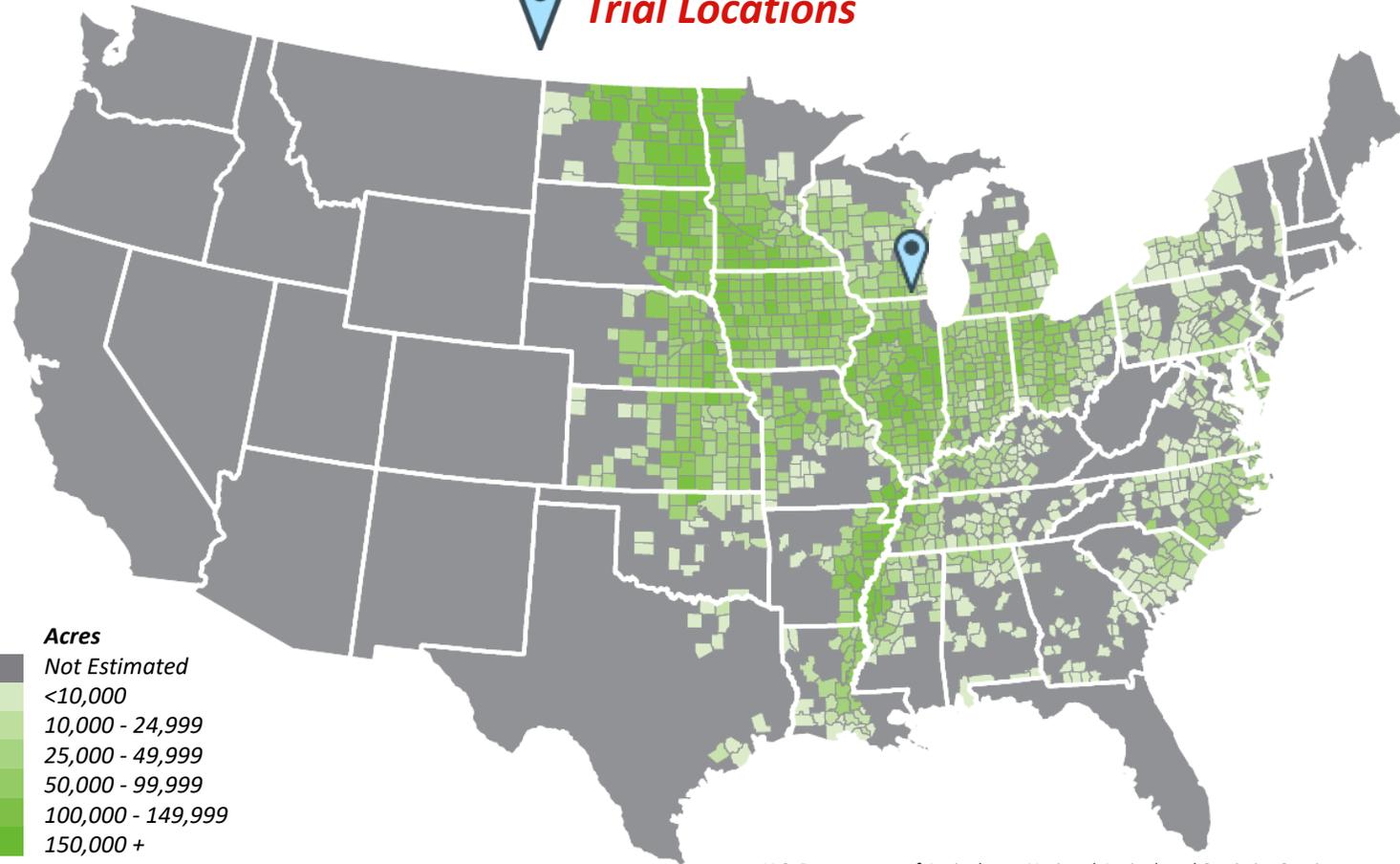


U.S. Department of Agriculture, National Agricultural Statistics Service

Location	Yield Increase
ND	-0.60 bu/ac
WI	3.96 bu/ac
Averaged Results	
Yield Increase	1.68 bu/ac

# BRANDT® EnzUp® SeedFlow™ Zn 2023 Soybean Trial Locations and Yield Results

 **Trial Locations**



U.S. Department of Agriculture, National Agricultural Statistics Service

Location	Yield Increase
BRANDT EnzUp Seed Flow Zn	
WI	4.59 bu/ac

Location	Yield Increase
BRANDT EnzUp Seed Flow Zn + MicroSURGE + Inceptive	
WI	5.57 bu/ac

# Talc 80/20 + MicroSURGE for Soybeans

## 2022 Soybean Trial Locations and Yield Results

### Trial Locations



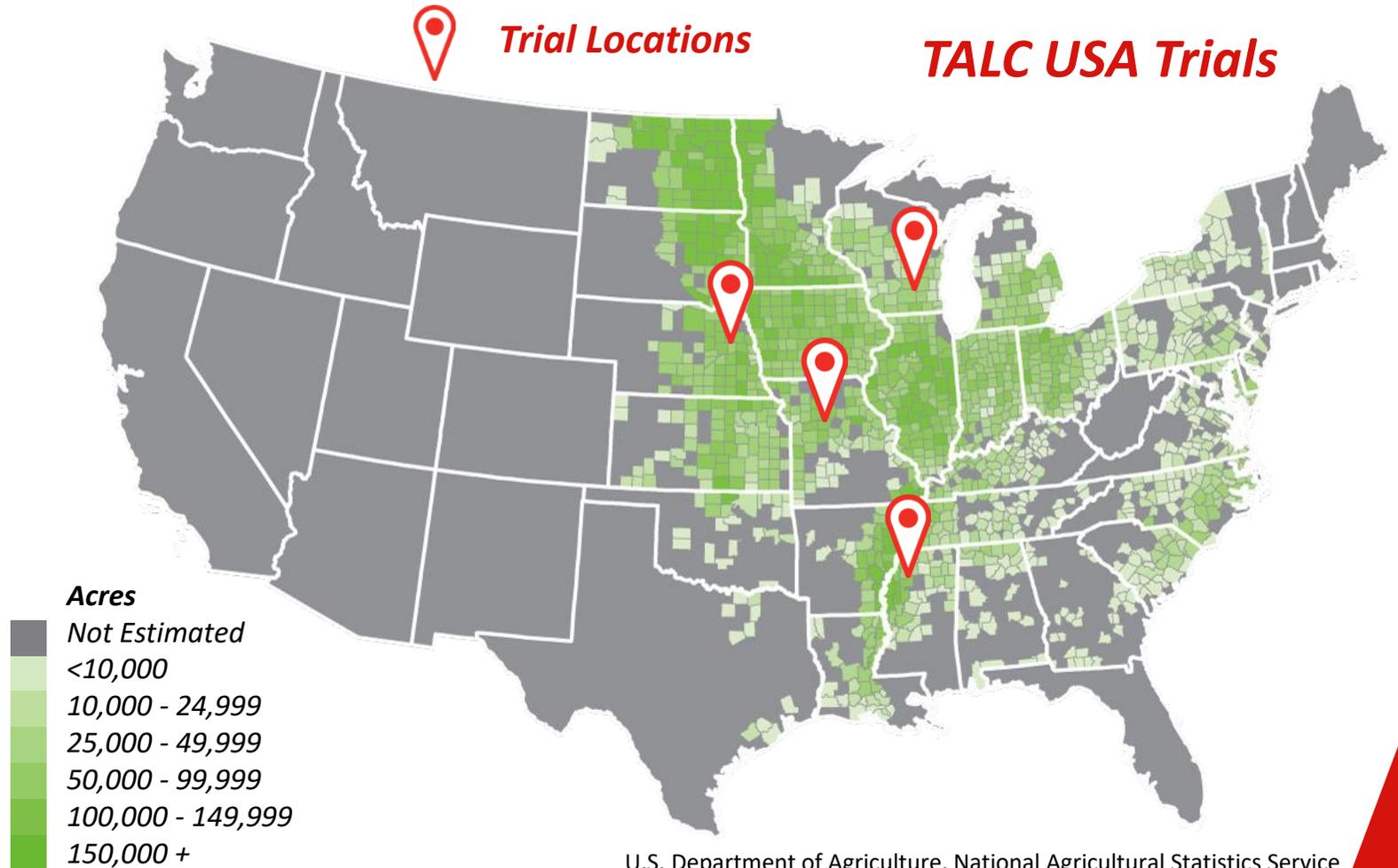
U.S. Department of Agriculture, National Agricultural Statistics Service

Location	Yield Increase
SGS America, Aurora, SD	4.7 bu/ac
Mid-South Ag Research, Proctor, AR	6.2 bu/ac
Delta Crop and Research, Holly Ridge, MS	10.4 bu/ac
Buckeye Ag Testing, Urbana, OH	1.1 bu/ac
North Central Research Station, St. Johns, MI	4.4 bu/ac
Elite Research, Aurora, NE	1.6 bu/ac
BRANDT Research Farm, Pleasant Plains, IL	1.8 bu/ac
University of Illinois, Champaign, IL	2.2 bu/ac
TSM, Catlin, IL	5.4 bu/ac
KS	3.7 bu/ac
MN	-3.8 bu/ac
MO	4.7 bu/ac
ND	1.9 bu/ac
WI	0.3 bu/ac
Averaged Results	
Yield Increase	3.4 bu/ac
Grower ROI @!4/bu	\$45.14/ac

# Talc USA Soybeans Trial Locations and Yield Results

## *MicroSURGE + Inceptive - 2016-2021*

Location	Yield Increase
Mississippi	3.3 bu/ac
Missouri	3.5 bu/ac
Nebraska	3.6 bu/ac
Wisconsin	3.1 bu/ac
Averaged Results	
Yield Increase	3.4 bi/ac
Grower ROI @\$14/bu	\$40.44/ac



U.S. Department of Agriculture, National Agricultural Statistics Service

# Talc 80/20 + Encompass



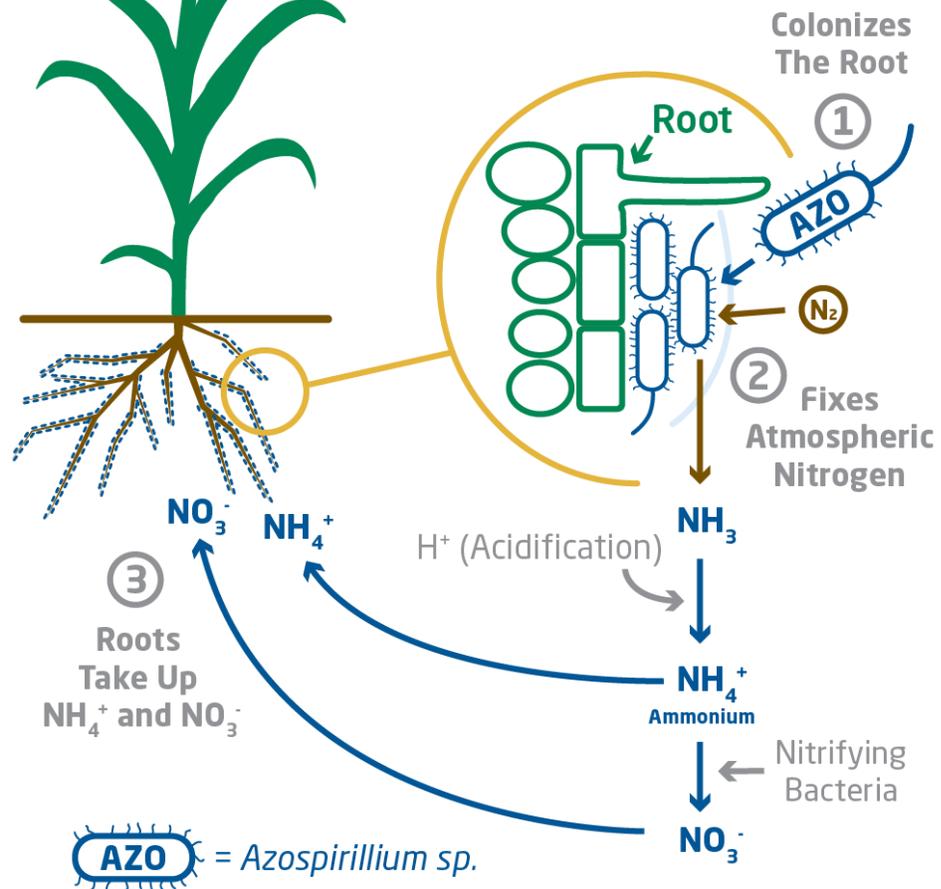
**Talc 80/20**  
w/graphite



**Encompass**  
Contains  
*Azospirillum &*  
*Pseudomonas*

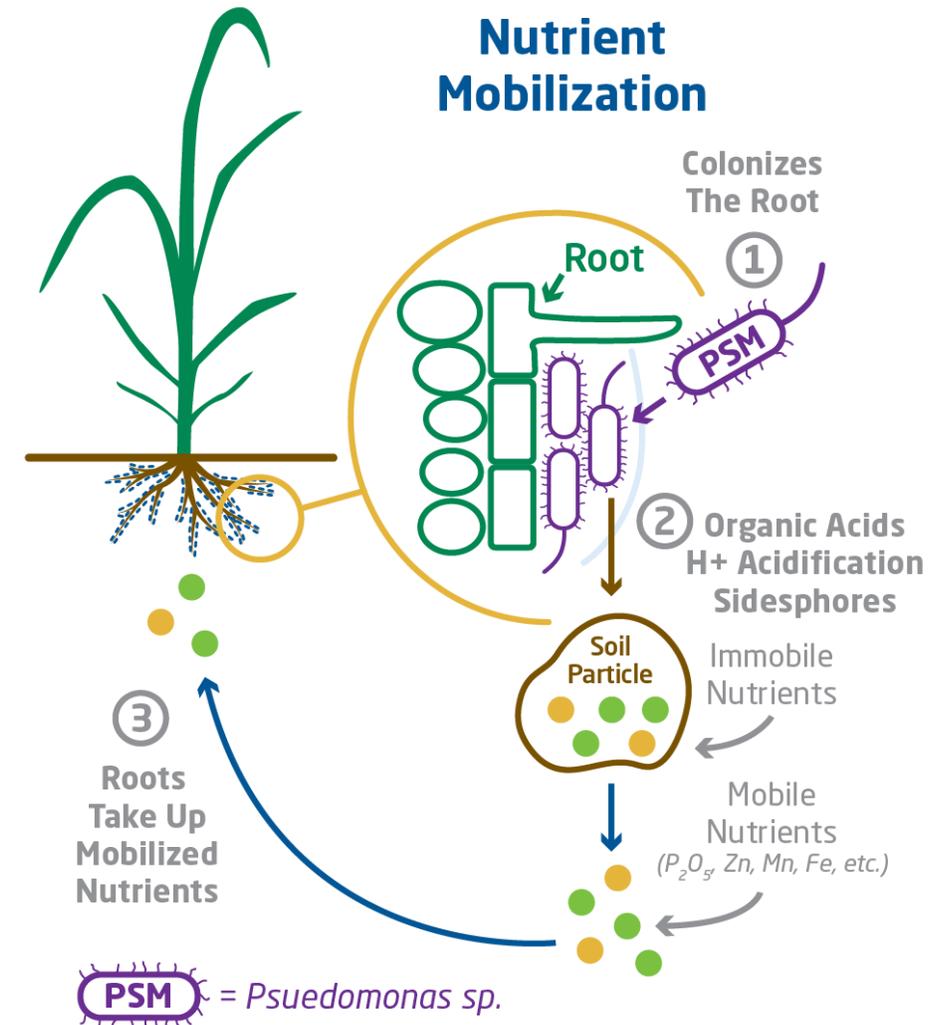
## *Azospirillum sp. (2 species)*

### N Fixation from Atmosphere



## *Pseudomonas sp. (3 species)*

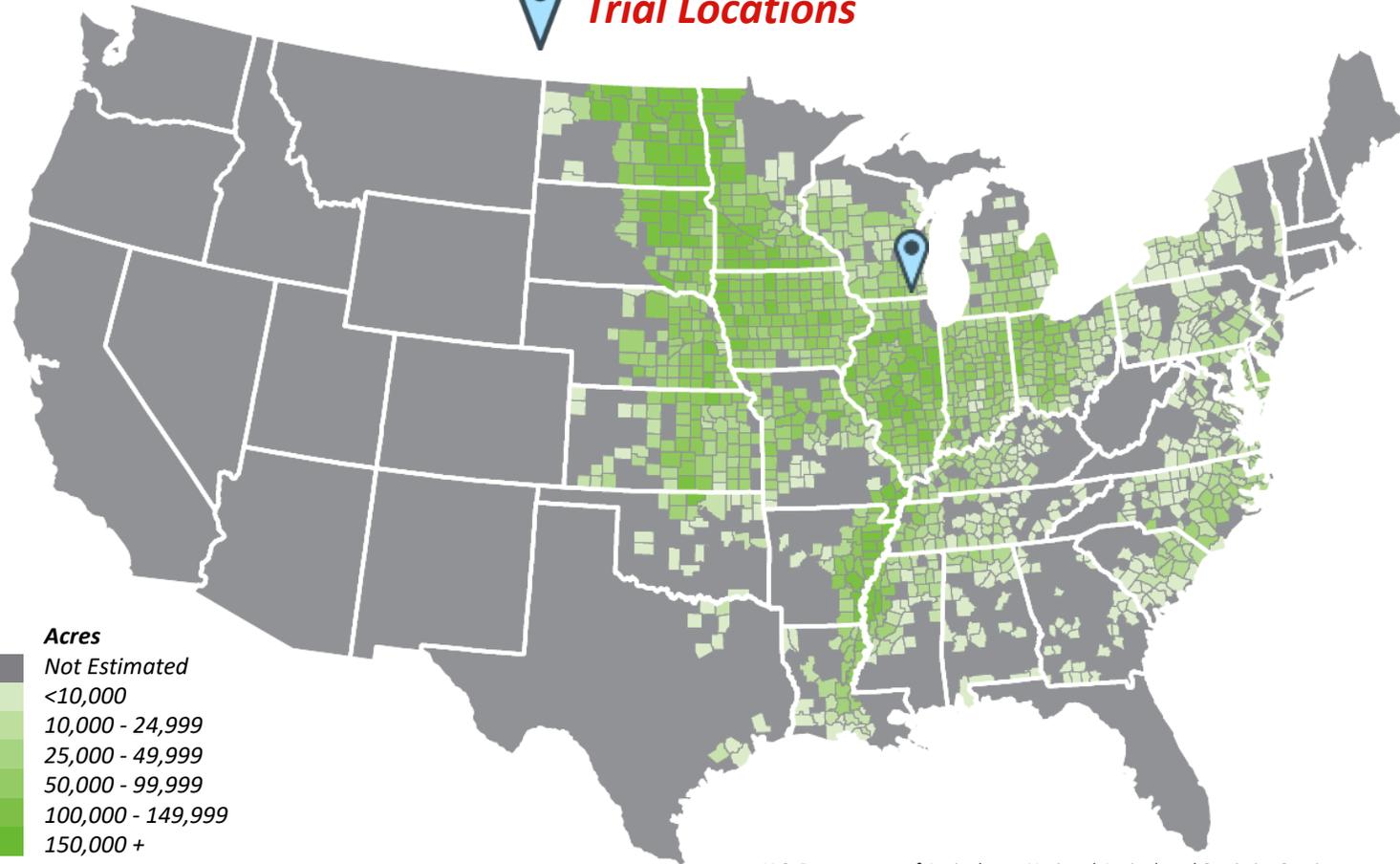
### Nutrient Mobilization



# Encompass - Dry

## 2023 Soybean Trial Locations and Yield Results

 **Trial Locations**



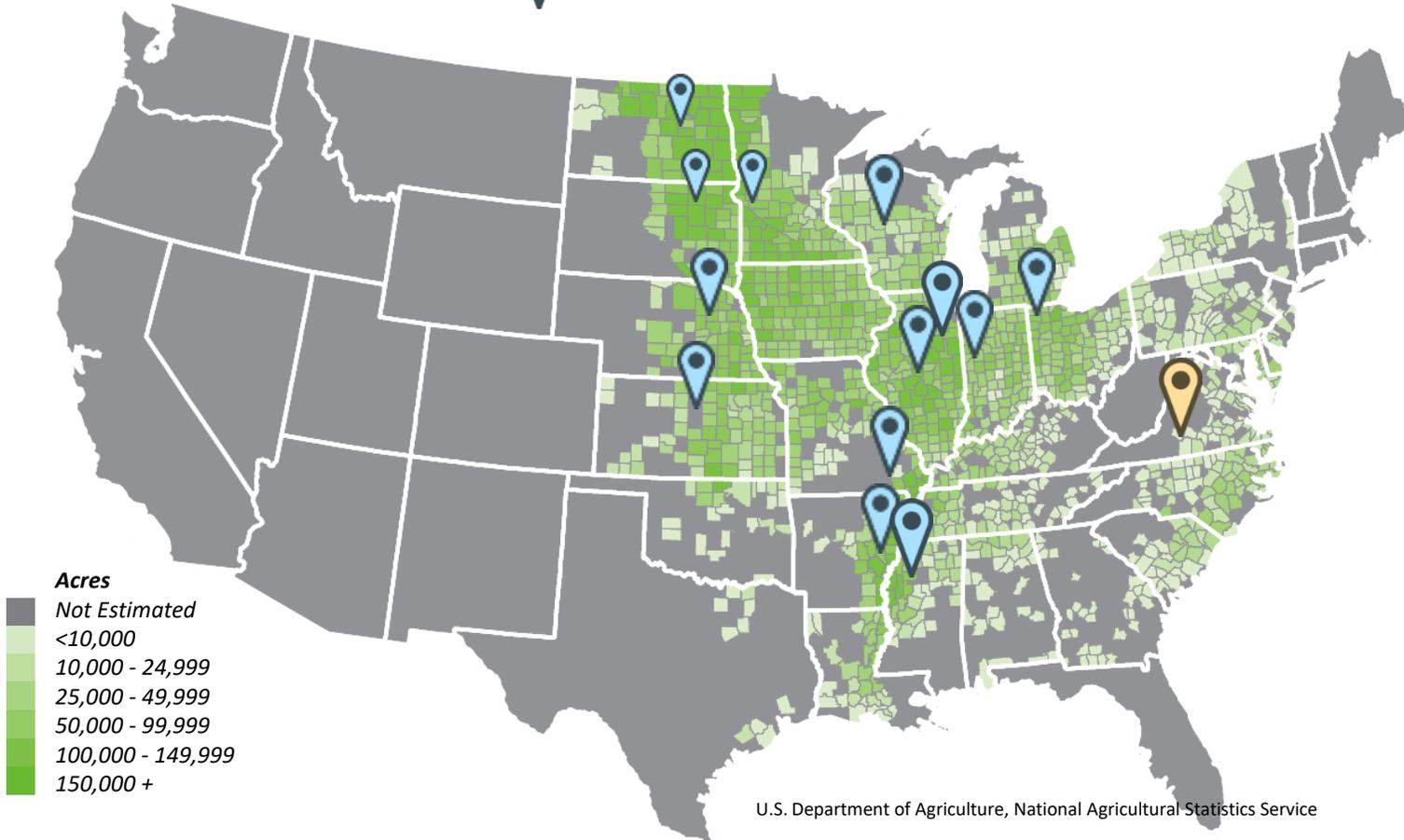
Location	Yield Increase
WI	3.8 bu/ac

U.S. Department of Agriculture, National Agricultural Statistics Service

# Talc 80/20 + Encompass

## 2022 Soybean Trial Locations and Yield Results

 **Trial Locations**



Location	Yield Increase
SGS America, Aurora, SD	0.7 bu/ac
Mid-South Ag Research, Proctor, AR	3.5 bu/ac
Delta Crop and Research, Holly Ridge, MS	9.0 bu/ac
Buckeye Ag Testing, Urbana, OH	-1.0 bu/ac
North Central Research Station, St. Johns, MI	2.4 bu/ac
Elite Research, Aurora, NE	4.0 bu/ac
BRANDT Research Farm, Pleasant Plains, IL	1.2 bu/ac
U of Illinois	2.4 bu/ac
Indiana	4.3 bu/ac
Kansas	1.0 bu/ac
Minnesota	-1.7 BU/AC
North Dakota	2.1 bu/ac
Wisconsin	2.0 bu/ac
<b>Virginia (Encompass + Inceptive)</b>	<b>8.3 bu/ac</b>
<b>Averaged Results</b>	
Yield Increase Encompass	2.5 bu/ac
Grower ROI @\$14/bu	\$26/ac

# Talc 80/20 + MicroSURGE



Talc 80/20  
w/graphite



**MicroSurge**  
*Contains 2 strains of  
Azospirillum*

# MicroSurge

**Inoculant:** *Azospirillum sp.*

*Azospirillum sp.* colonizes root surfaces and establishes symbiotic association with the plant.

*Azospirillum sp.* fixes nitrogen from the atmosphere into ammoniacal nitrogen that plants can utilize

