



**TALC USA**

A **BRANDT**® COMPANY

# Talc USA Trial Results

# Talc 80/20 + MicroSURGE for Soybeans



**Talc 80/20**  
w/graphite



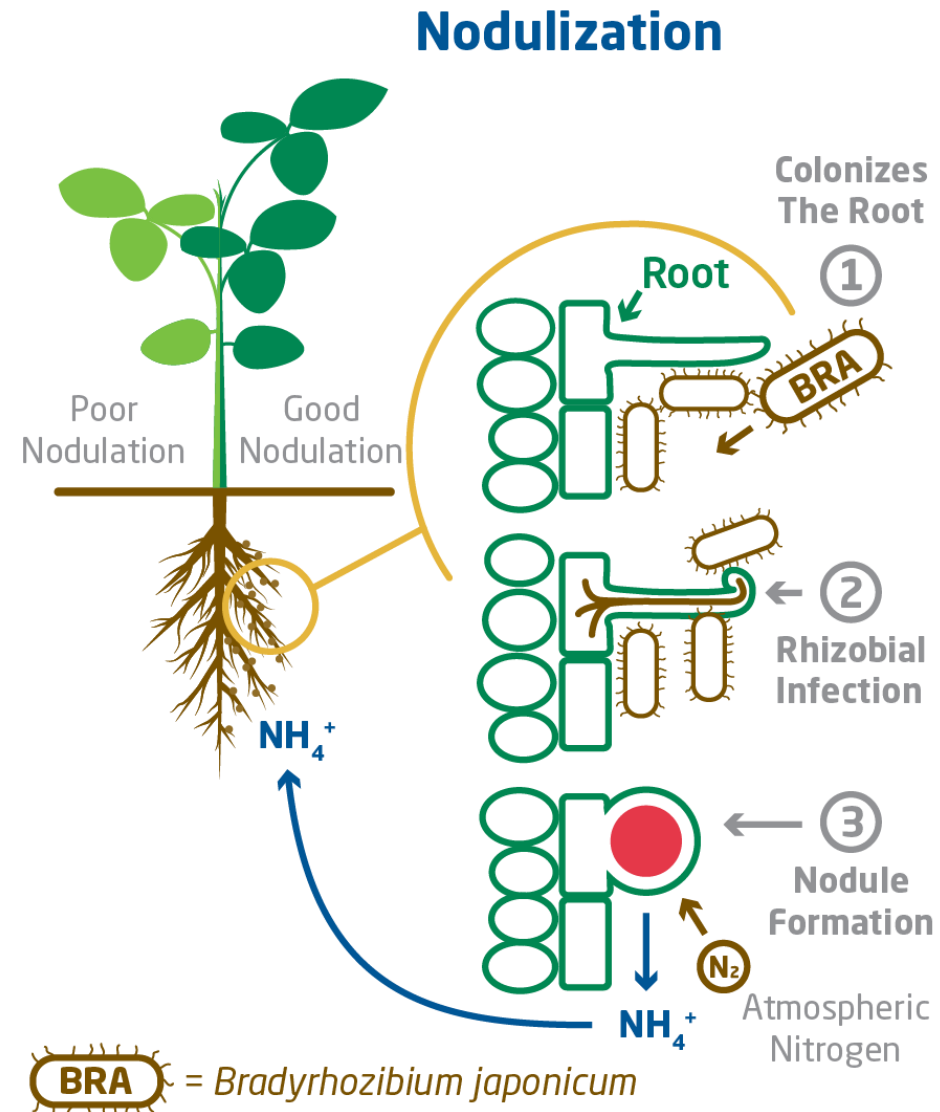
**MicroSURGE**  
**Soybean Inoculant**  
*Contains*  
*Bradyrhizobium japonicum*

# MicroSURGE for Soybeans

**Inoculant:** *Bradyrhizobium japonicum*

Symbiotic nitrogen-fixing soil bacterium

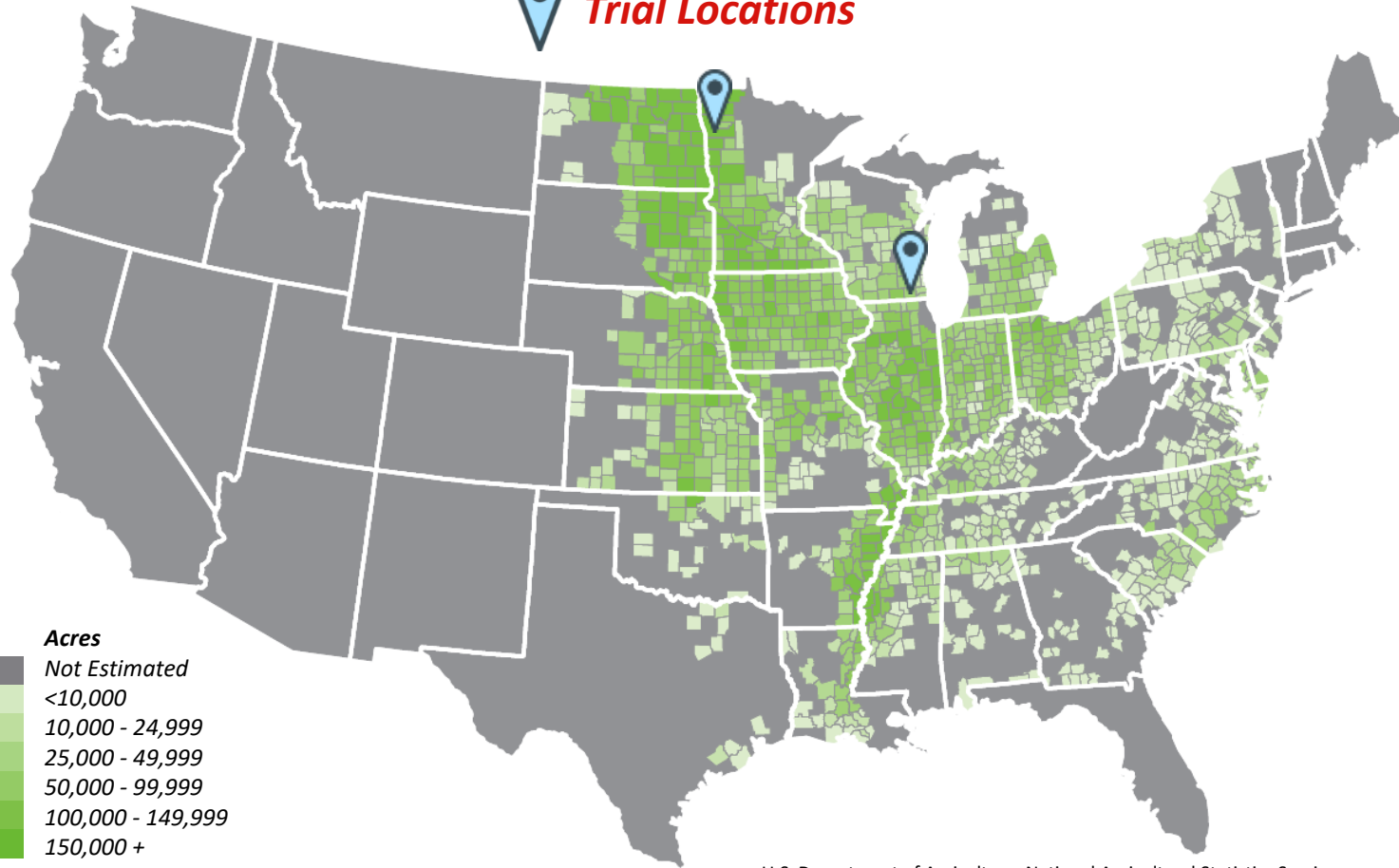
Legume crops are a host for the  $N_2$ -fixing bacteria, *B. japonicum* and they can obtain up to 50% or more of their N needs through biological nitrogen fixation are present in the soil



# Inceptive + MicroSURGE for Soybeans

## 2023 Soybean Trial Locations and Yield Results

 **Trial Locations**

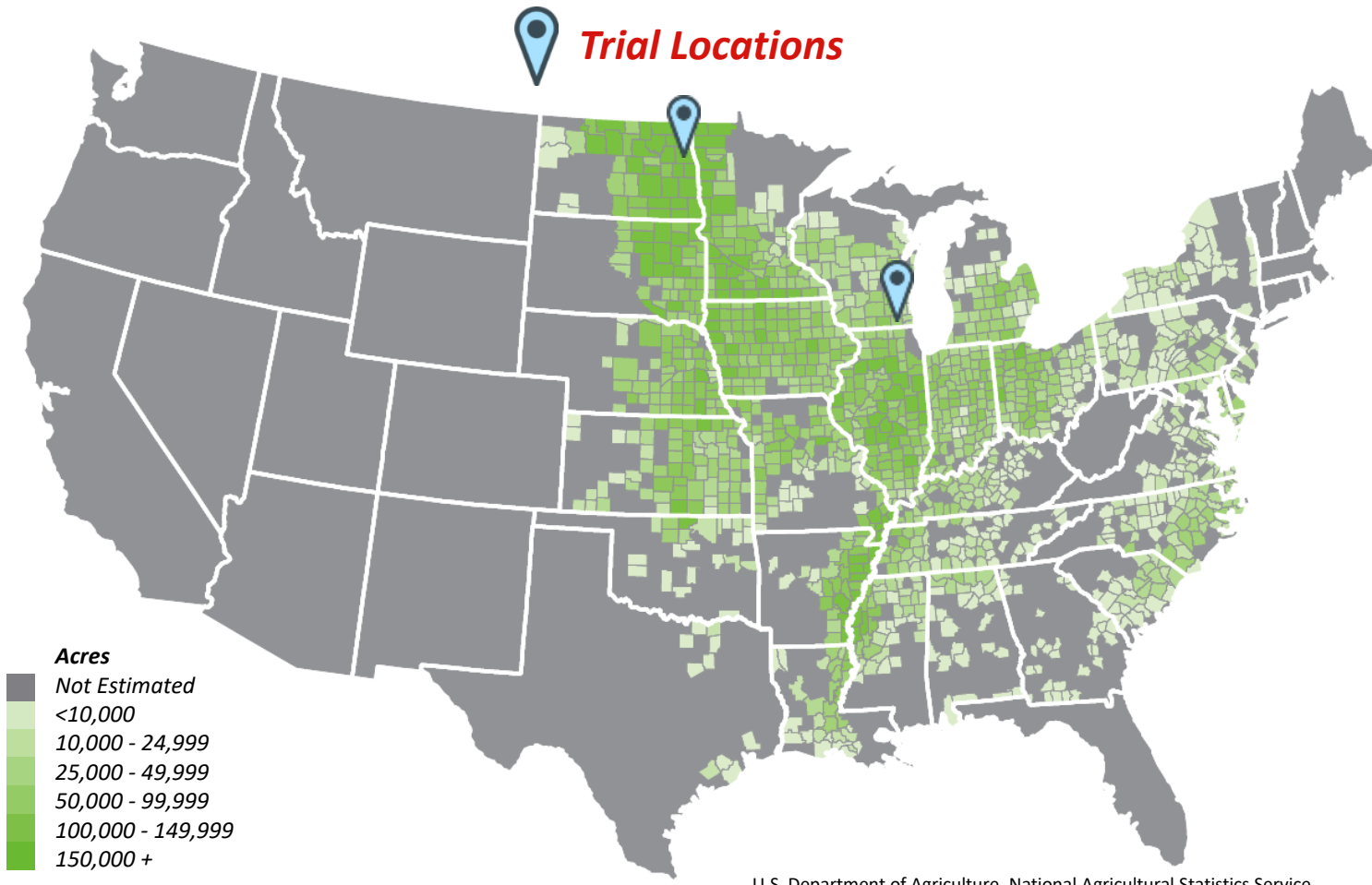


U.S. Department of Agriculture, National Agricultural Statistics Service

| 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



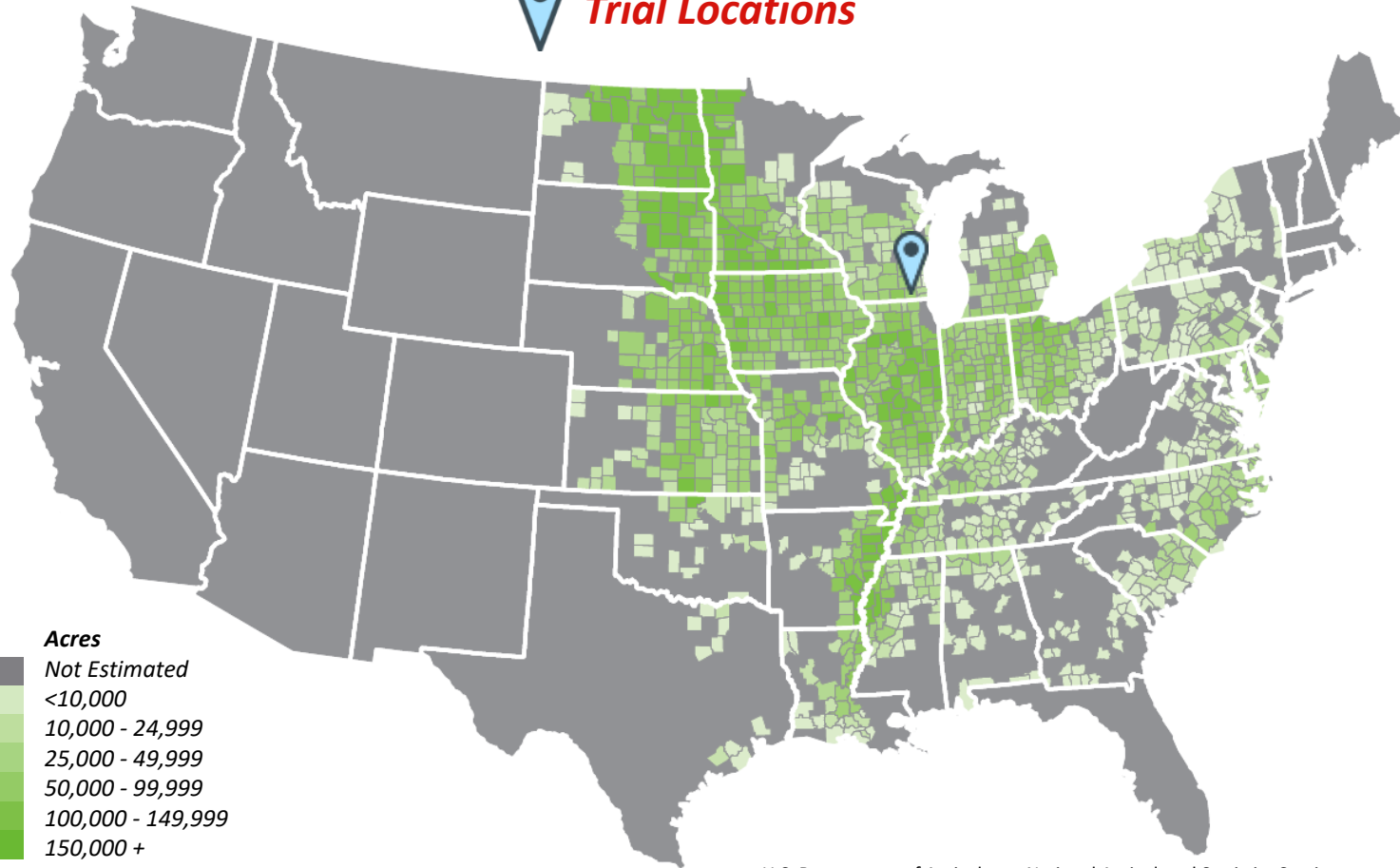
U.S. Department of Agriculture, National Agricultural Statistics Service

| 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**



### Acreage

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 |
|---------------------------|----------------|
| BRANDT EnzUp Seed Flow Zn |                |
| WI                        | 4.59 bu/ac     |

| Location  | Yield Increase |
|---|----------------|
| BRANDT EnzUp Seed Flow Zn<br>+ MicroSURGE + Inceptive |                |
| WI  | 5.57 bu/ac     |

# Talc 80/20 + MicroSURGE for Soybeans

## 2022 Soybean Trial Locations and Yield Results

 **Trial Locations**



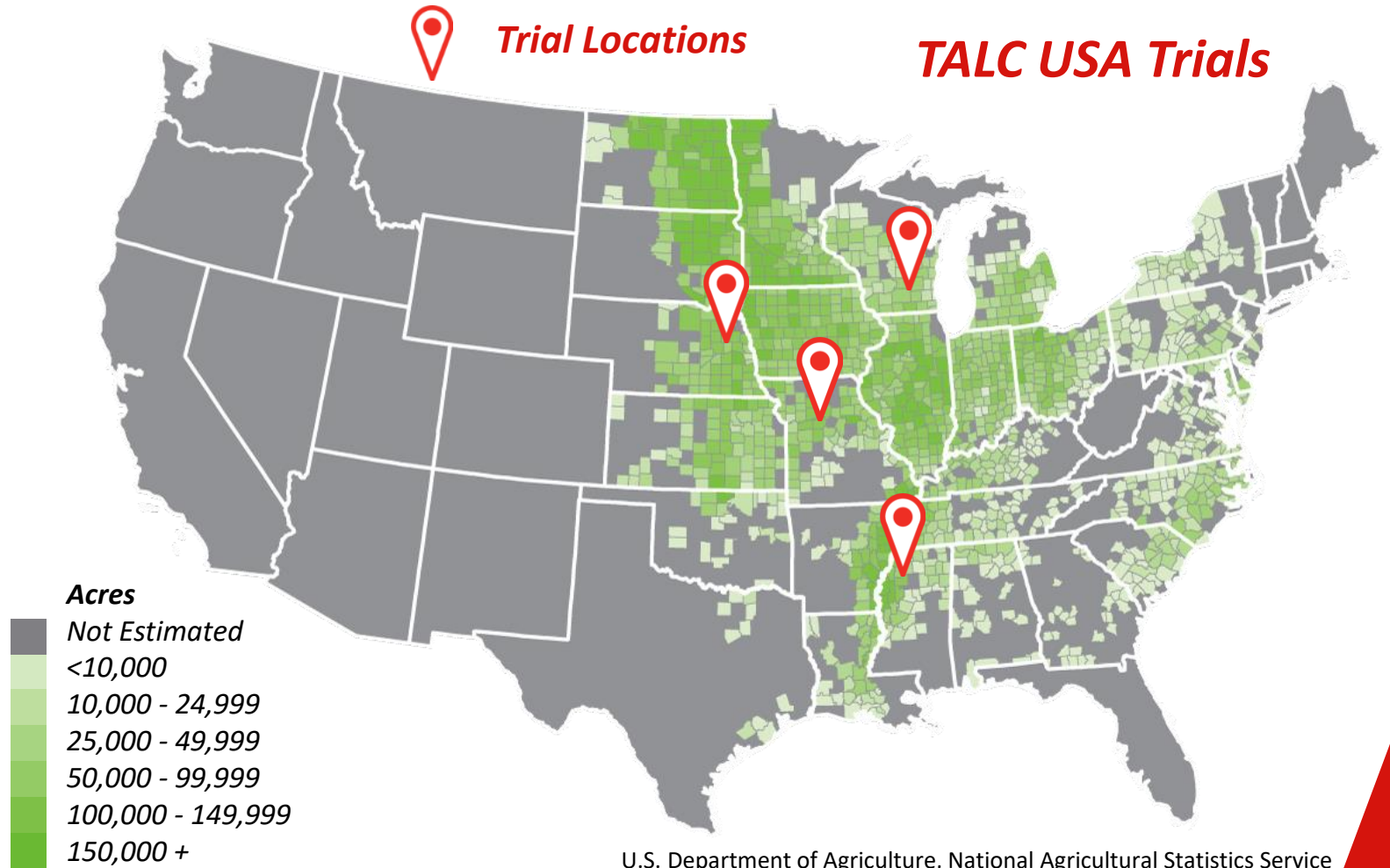
| Location                                      | Yield Increase |
|---|----------------|
| SGS America, Aurora, SD                       | 4.7 bu/ac      |
| Mid-South Ag Research, Proctor, AR            | 6.2 bu/ac      |
| Delta Crop and Research, Holly Ridge, MS      | 10.4 bu/ac     |
| Buckeye 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



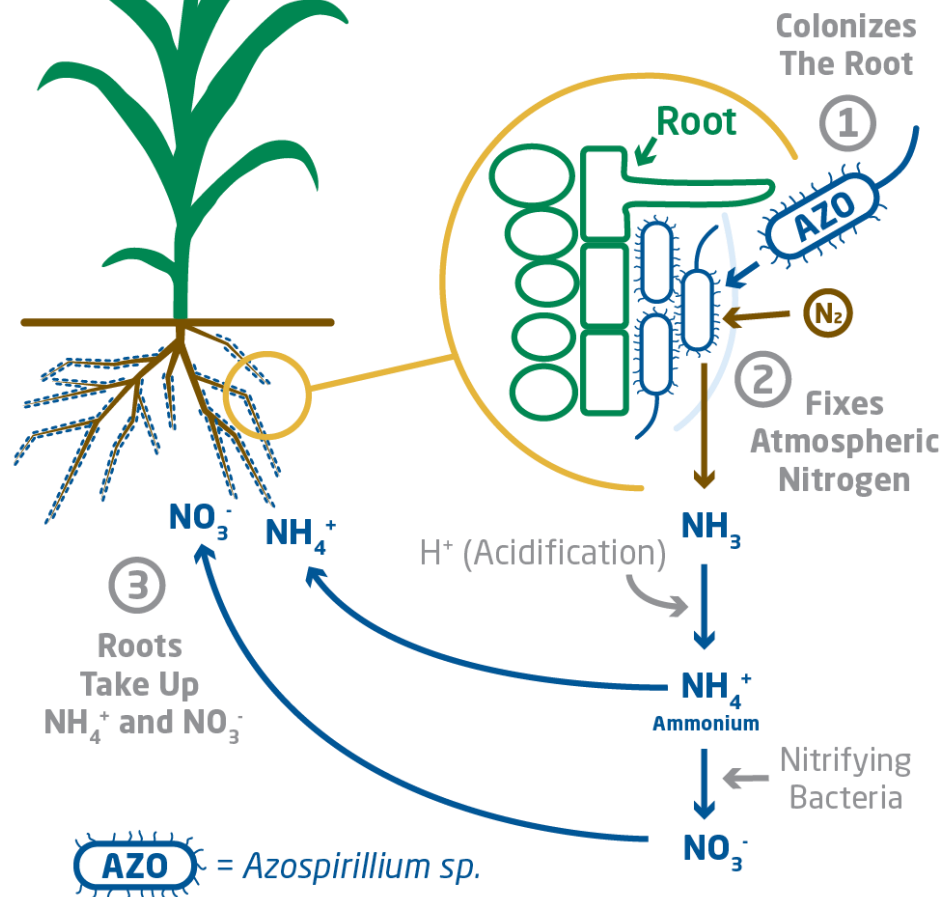
**Talc 80/20  
w/graphite**



**Encompass**  
*Contains  
Azospirillum &  
Pseudomonas*

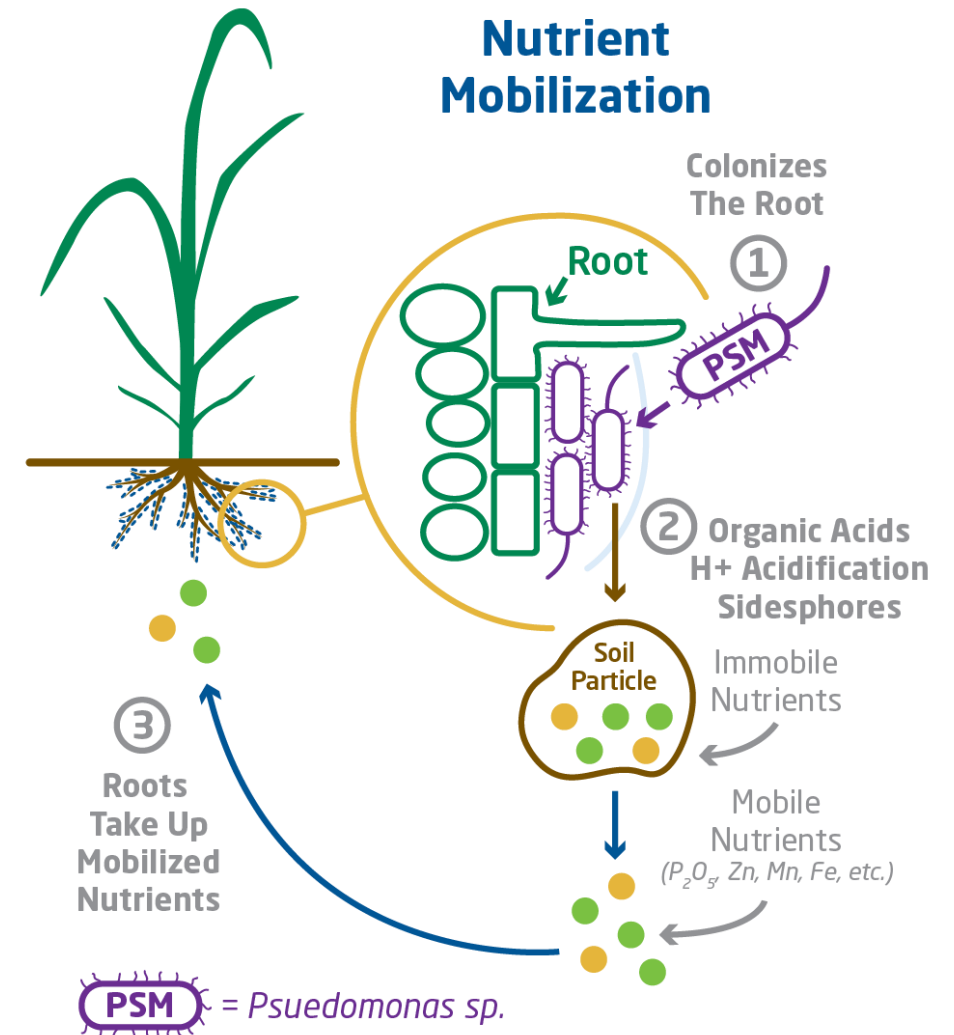
## *Azospirillum sp. (2 species)*

### N Fixation from Atmosphere



## *Pseudomonas sp. (3 species)*

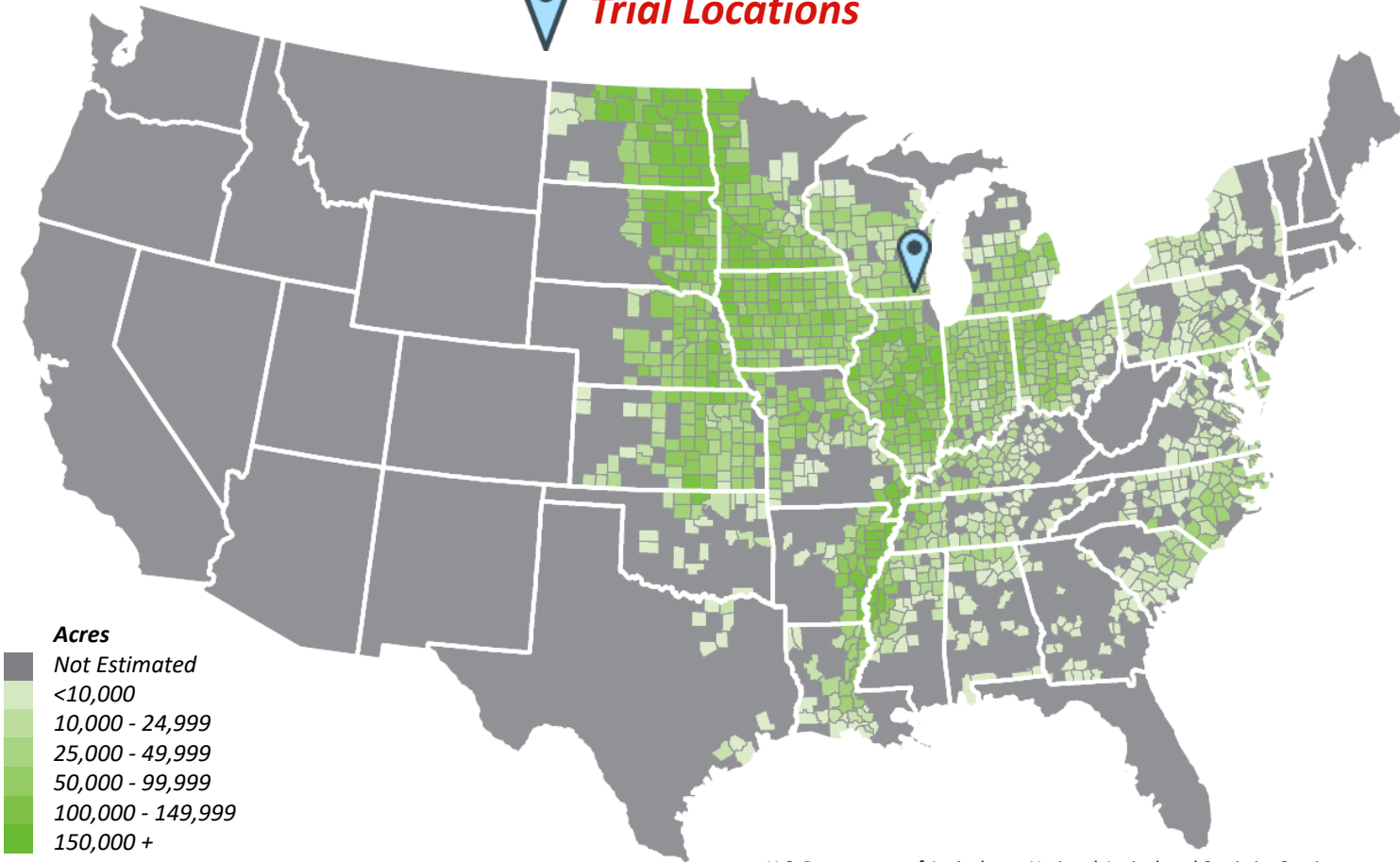
### Nutrient Mobilization



# Encompass - Dry

## 2023 Soybean Trial Locations and Yield Results

 **Trial Locations**



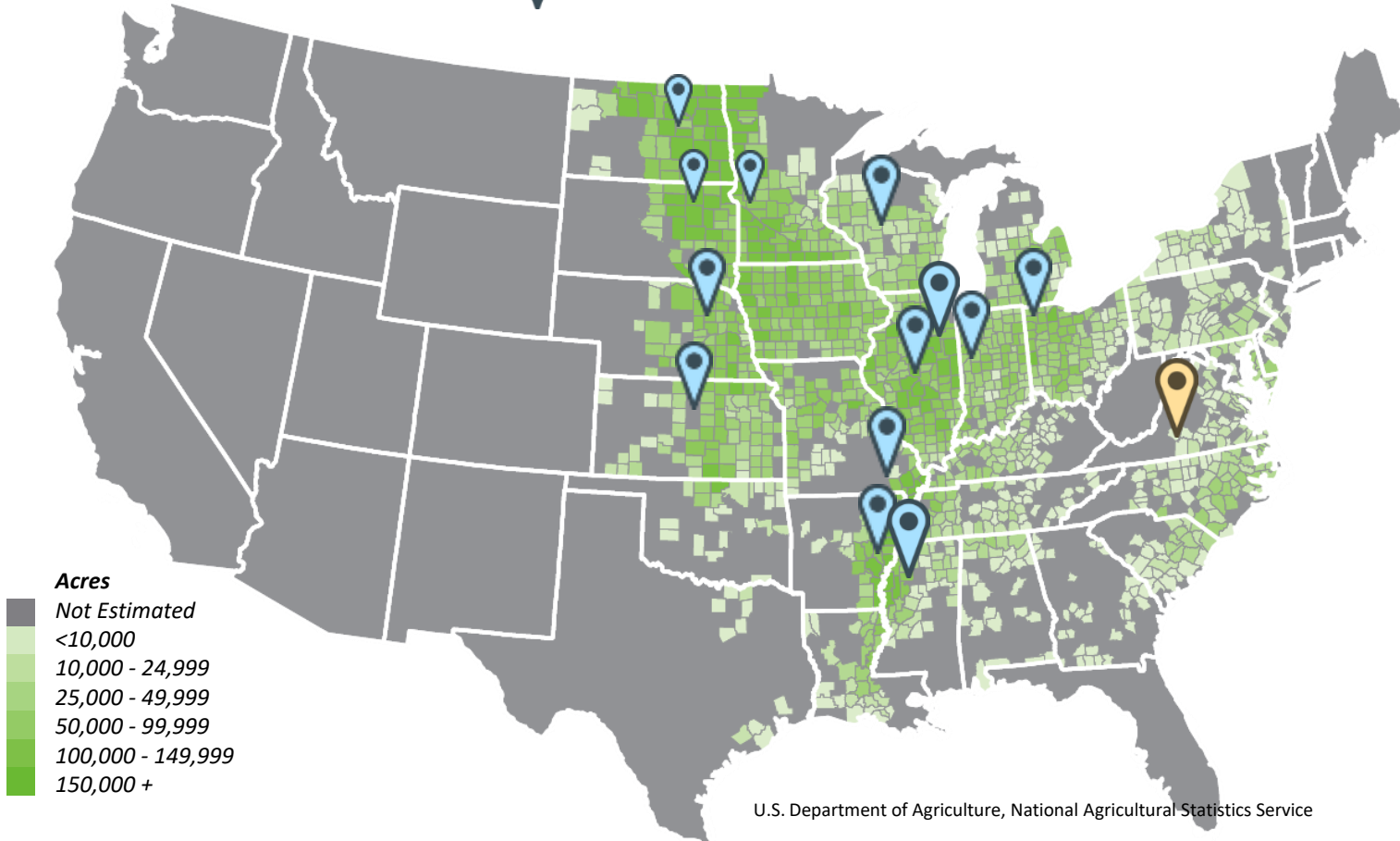
| Location | Yield Increase |
|----------|----------------|
| WI       | 3.8 bu/ac      |

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

