



PIVOT BIO

PROVE N40



2023 GROWER HANDBOOK

For more information, contact
Pivot Bio Customer Success Center
515-436-4462 | support@pivotbio.com

PREDICTABILITY NOW COMES WITH OPTIONS

Pivot Bio has you covered in more ways than one. The predictability of **Pivot Bio PROVEN® 40** now comes in both **in-furrow** and **on-seed**. Our microbes adhere directly to your plant's roots to ensure it gets the nutrition it needs. It's also weatherproof, so there is no loss to leaching, denitrification or volatilization. Turn to a more predictable nitrogen.



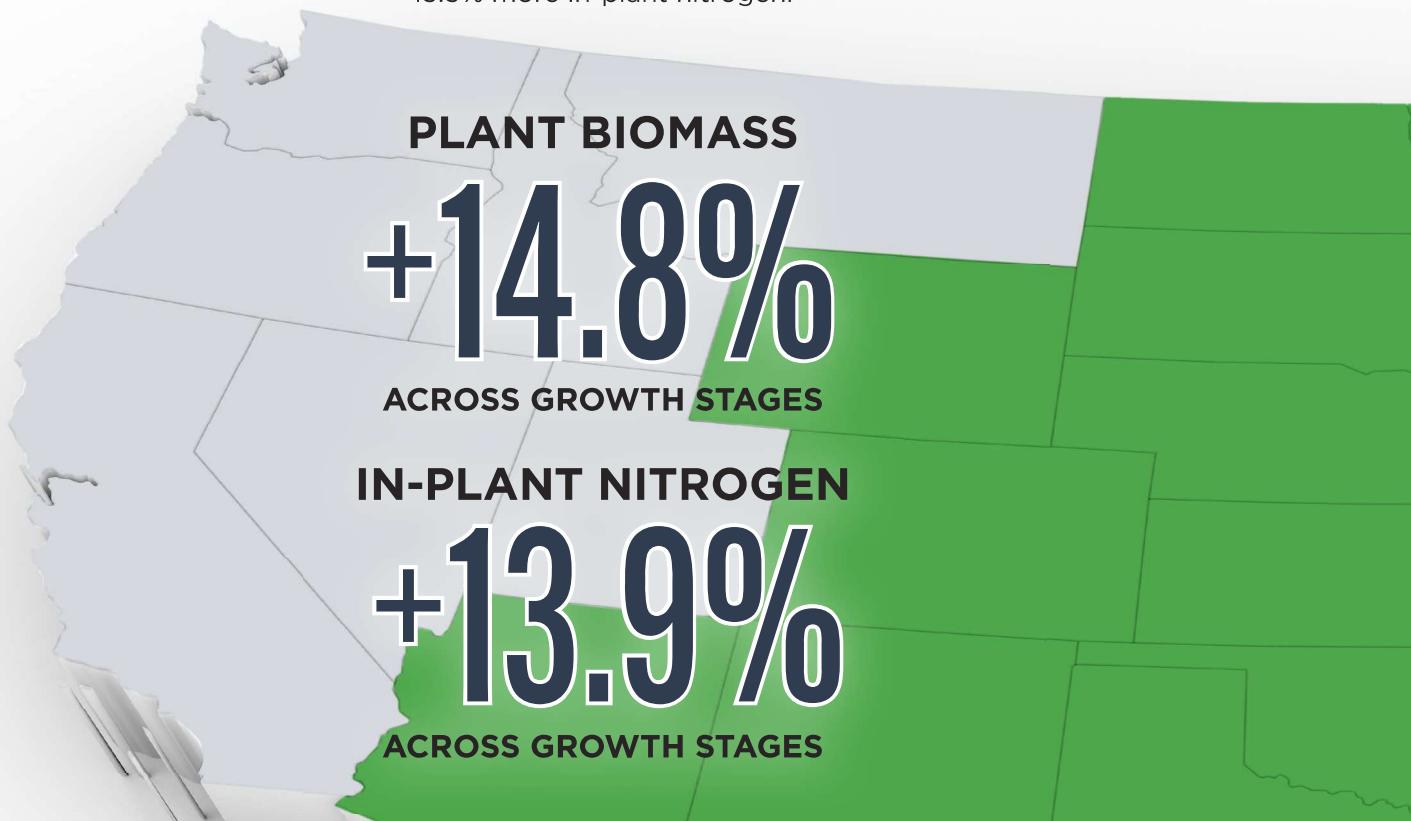
Turn to a *Better* Nitrogen

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ALL-TIME LARGEST SINGLE SEASON IN-PLANT NITROGEN DATA COLLECTION

In more than 2,000 customer fields across the United States, plant biomass and nitrogen were compared between plants with Pivot Bio PROVEN[®] 40 (with up to 40 lbs. of synthetic nitrogen replaced) and an untreated check strip. Corn treated with Pivot Bio PROVEN[®] 40 had 14.8% more biomass, resulting in 13.9% more in-plant nitrogen.



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PROVE N₄₀

IT'S ALL IN THE NAME

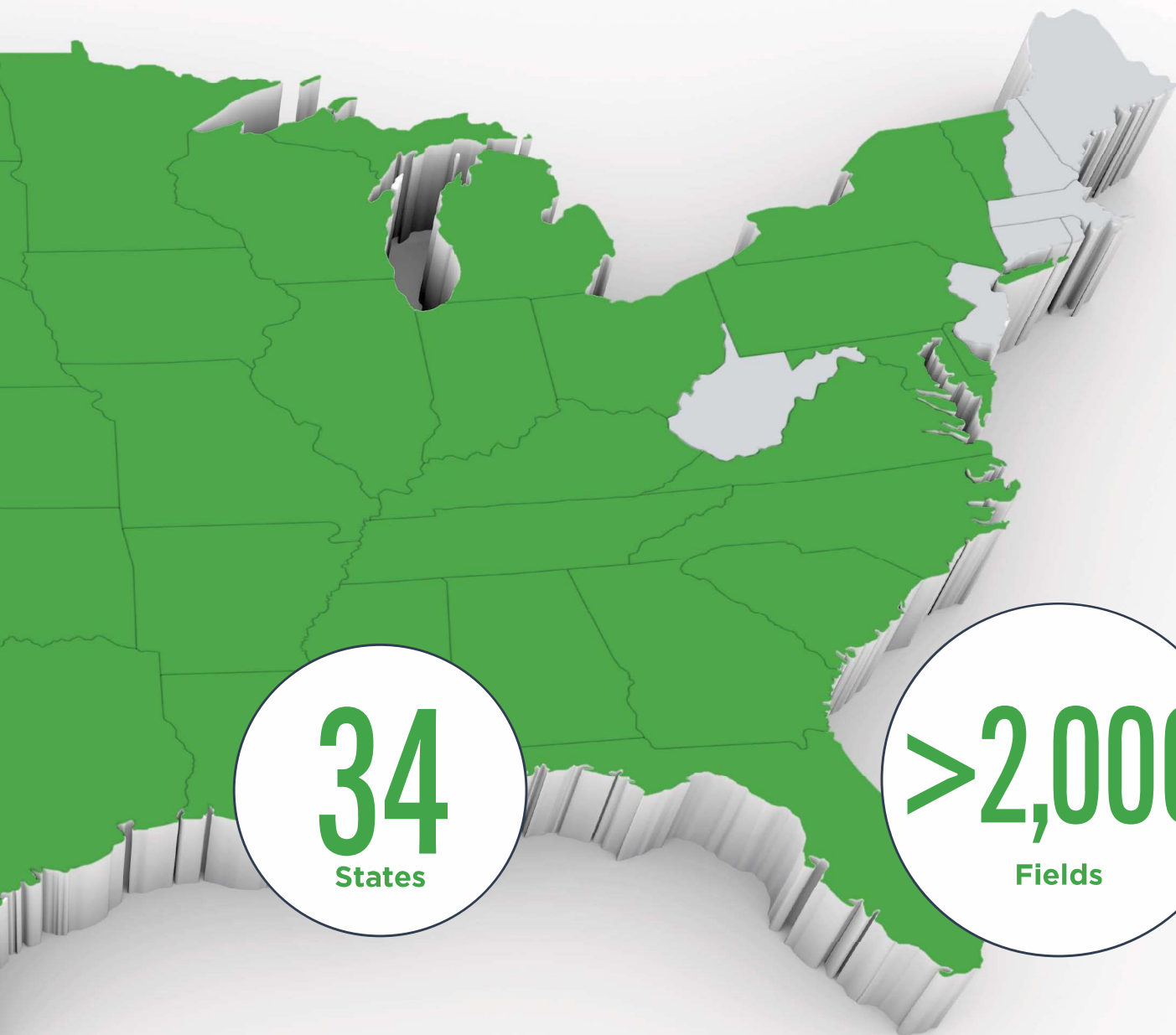
Pivot Bio PROVEN[®] 40 lived up to its name by replacing up to 40 lbs. of synthetic nitrogen.

Data from samples as of August 5, 2022.

1.3 MILLION REPRESENTATIVE ACRES.

TESTS CONDUCTED ON PIVOT BIO CUSTOMER FIELDS

2022 GROWING SEASON



PLANT A LITTLE PREDICTABILITY

In your annual battle against weather and input costs, Pivot Bio is on your side, bringing more certainty to your nitrogen plan.



PREDICTABLE

Adhering directly to the roots, Pivot Bio PROVEN® 40 predictably applies nitrogen daily throughout critical growth stages. It's right in the name—Pivot Bio PROVEN® 40 predictably applies 40 pounds of nitrogen per acre.



PRODUCTIVE

Level out performance across various soil types and topography.



WEATHERPROOF

Pivot Bio PROVEN® 40 stays put—weather or not. It is not susceptible to runoff, leaching or denitrification like synthetic nitrogen products.

THE NITROGEN YOU NEED—NOW ON-SEED

Experience the extraordinary benefits of Pivot Bio PROVEN® 40—delivered on-seed.

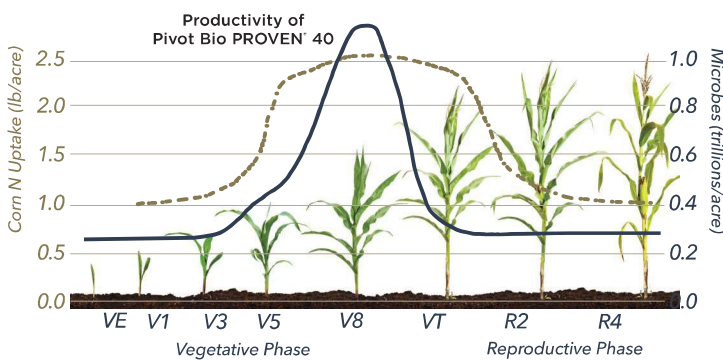
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MAKE PIVOT BIO PROVEN® 40 YOUR FIRST FORTY POUNDS OF NITROGEN.
A SOLID FOUNDATION FOR A STRONG CROP.

NITROGEN IS APPLIED DAILY

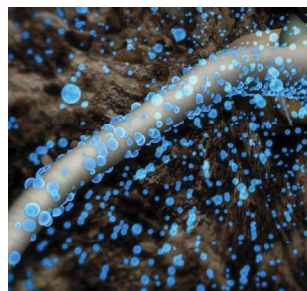
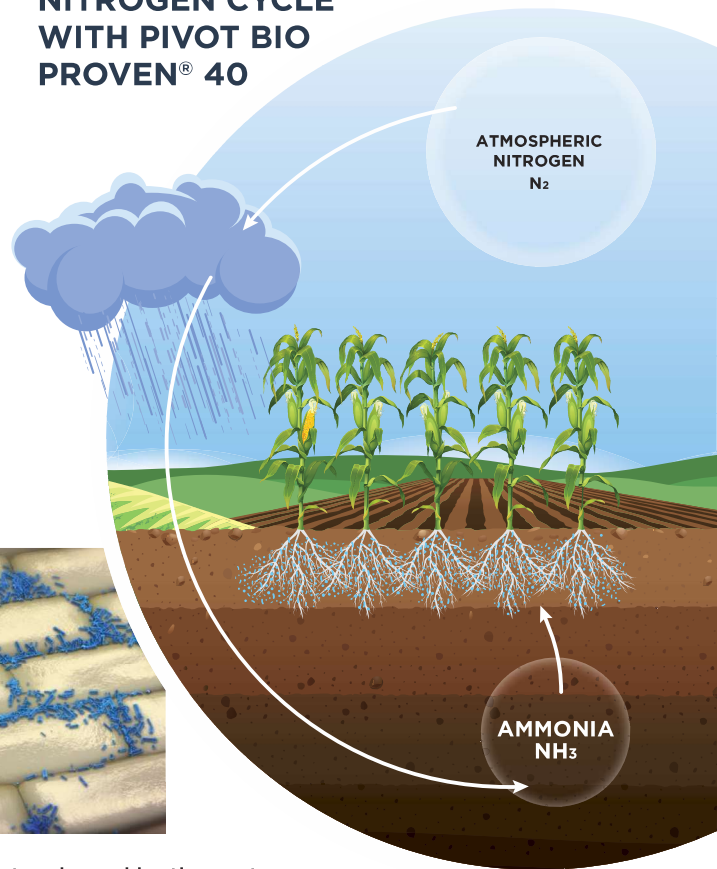
Pivot Bio PROVEN[®] 40 is the only microbial product available to U.S. corn growers that applies nitrogen everyday throughout the growing season, with peak nitrogen production when the crops need it the most. Applied at planting, the microbes adhere to the corn roots so growers can be confident their corn is getting a consistent daily source of nitrogen. Unlike traditional nitrogen, Pivot Bio PROVEN[®] 40 does not leach when it rains.

NITROGEN UTILIZATION



The corn plant's demand for nitrogen over the growth cycle is in correlation to the nitrogen production of Pivot Bio PROVEN[®] 40.

NITROGEN CYCLE WITH PIVOT BIO PROVEN[®] 40



As the seed germinates and the roots reach out into the soil, the microbes adhere to the root structure. The microbes and roots quickly form a mutually beneficial relationship.

The byproducts released by the roots, called exudates, support robust colonization of the microbes along the rhizoplane of the roots and give the microbes the energy they need to fix atmospheric nitrogen.

PIVOT BIO PROVEN[®] 40 PRODUCT INFORMATION



Pivot Bio PROVEN[®] 40 produces ammonia, a readily available nitrogen source for corn.



In-furrow liquid formulation comes ready to use or on-seed formulation applied by a Pivot Bio representative.



Pivot Bio PROVEN[®] 40 contains living microbes that must be stored between 32°F - 70°F and away from direct sunlight.



Applied in-furrow or on-seed.



In-furrow liquid formulation can be tank mixed with pop-up fertilizers and insecticides.

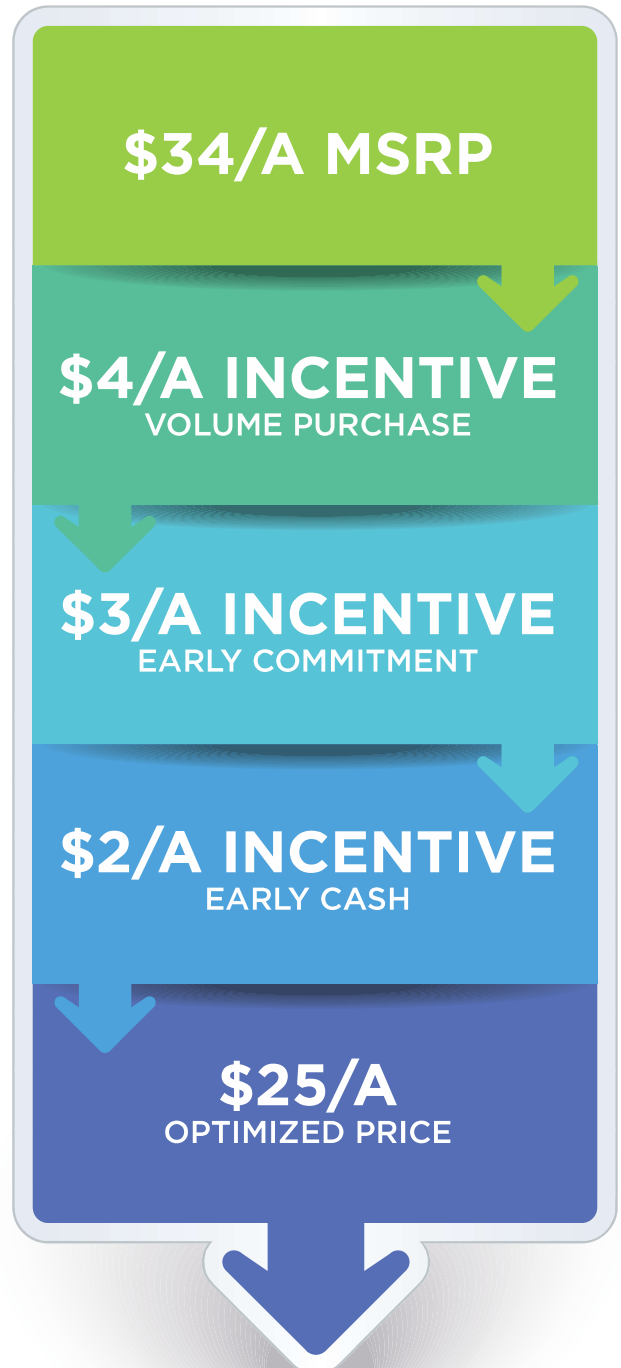
2023 COUNTDOWN TO SAVINGS

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TOTAL POTENTIAL SAVINGS:
\$9/ACRE



TOTAL POTENTIAL SAVINGS:
\$9/ACRE

N-OVATOR PROGRAM PARTICIPATE AND RECEIVE \$2/ACRE DATA COLLECTION INCENTIVE

SYNTHETIC NITROGEN REPLACEMENT PROGRAM

Replace
between
25-40
Lbs./Acre
of synthetic
nitrogen with
**PIVOT BIO
PRODUCTS**

Enroll a
minimum of
520
Acres
or whole farm
in the
**N-OVATOR
PROGRAM***

VALIDATE NITROGEN REPLACEMENT TO GENERATE OFFSET/INSET CREDITS

Requirements are farm-level geospatial, purchase and field management data submitted by Aug. 16, 2023, actual yield by December 15, 2023 and signed affidavit by January 17, 2024.

Ask your local representative for details.

*2023 N-OVATOR Program will include
Pivot Bio RETURN[®], Pivot Bio PROVEN[®] 40
& Pivot Bio PROVEN[®] 40 OS

Pivot Bio Nitrogen Assurance

Pivot Bio, the leader in providing a clean alternative to synthetic nitrogen, offers a 100% Nitrogen Assurance for Pivot Bio PROVEN® 40 licensing agreements.¹ Pivot Bio is so confident in the benefits of Pivot Bio PROVEN® 40 technology, we guarantee synthetic nitrogen will not outperform Pivot Bio PROVEN® 40 when stewardship guidelines are followed.

WHAT IS THE PIVOT BIO NITROGEN ASSURANCE?

Pivot Bio's Nitrogen Assurance provides a promise of Pivot Bio PROVEN® 40 performance on your farm this season. Pivot Bio PROVEN® 40 performance is measured using in-field testing to determine plant nitrogen status. If the performance of Pivot Bio PROVEN® 40 is not parity with untreated check strips, a credit will be applied to your invoice.²

HOW DO I PARTICIPATE IN THE NITROGEN ASSURANCE?

Participation is simple and can be done by following these steps:

- 1. Implement check strips** within your fields at planting. The number of check strips necessary is determined by the total number of acres planted. (See table to the right.)³
- 2. Submit digital data** and identify the location of the untreated control check strip no later than three weeks post-planting.
- 3. Provide management data** by completing the Stewardship Agreement.
- 4. Field visit** from a Pivot Bio representative prior to the R3 growth stage.

Pivot Bio representatives will conduct in-season sampling for efficacy of Pivot Bio PROVEN® 40. Nitrogen replacement will be validated using techniques including assessment of leaf chlorophyll concentration, plant biomass, stalk diameter, number of firing leaves, and tissue nutrient testing.

Acres Planted	Number of Checks
Under 999	1
1,000 - 1,999	2
2,000 - 2,999	3
3,000 - 3,999	4
4,000 - 4,999	5
5,000 or greater	6

PROGRAM PROTOCOLS AND TERMS

Pivot Bio guarantees the performance of Pivot Bio PROVEN® 40 by measuring its performance based on in-field testing for plant nitrogen status. Your digital data is used by the representative to locate the Pivot Bio PROVEN® 40 and untreated check areas in the field.

- Fields must be representative of the grower's operation and structured as a side-by-side trial comparing standard fertility practice to acres with Pivot Bio PROVEN® 40 that have replaced synthetic nitrogen by up to 40 lbs/acre.
- Treated and untreated locations must have consistent chemistry, germplasm, seed treatment, tillage, irrigation, and soil conditions. Note: Planting files will be requested for proper analysis.
- The same nutrient management practices (except for up to a 40 lbs/acre N replacement) must be used on the untreated check and the treated areas.⁴
- At the time of planting, the untreated check area must be labeled by putting "UTC" after the seed hybrid in the monitor (e.g., DKC64-35UTC).
- The same hybrid must be planted in both the untreated check and in the surrounding Pivot Bio PROVEN® 40 treated area next to the check.



To assess plant nitrogen status, it is required that digital data files be uploaded to the Pivot Bio Farmer Portal no later than three weeks following planting.

This data must indicate the location of the untreated check and any application data demonstrating the nitrogen application level and practices for 1) the area of the field treated with Pivot Bio PROVEN® 40 and 2) the check strip(s). If digital files cannot be provided, a Pivot Bio Sales Representative should be contacted to determine an alternative approach.

¹ To qualify for the Nitrogen Assurance the agreement must be for a minimum of 520 acres.

² The amount of the credit will be determined by the number of checks that do not reach N status parity (within 3%) with the treated areas. This is determined with pairwise comparison between checks and the proximate treated area.

³ In the case that the check strip requirements are not met, the Nitrogen Assurance will be reduced to the ratio of completed checks. For instance, if a 5,000 acre grower only completed three checks, they would only be eligible for 50% of the claim.

⁴ Maximum replacement for the Pivot Bio PROVEN® 40 treatment area is 40 lbs N/acre to be eligible for this Nitrogen Assurance.



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