



VERDESIAN LIFE SCIENCES, LLC

Take Off[®] Technology

Todd Carpenter
Technical Development Manager

Take Off[®]

TECHNOLOGY THAT WORKS
FROM THE **INSIDE OUT**

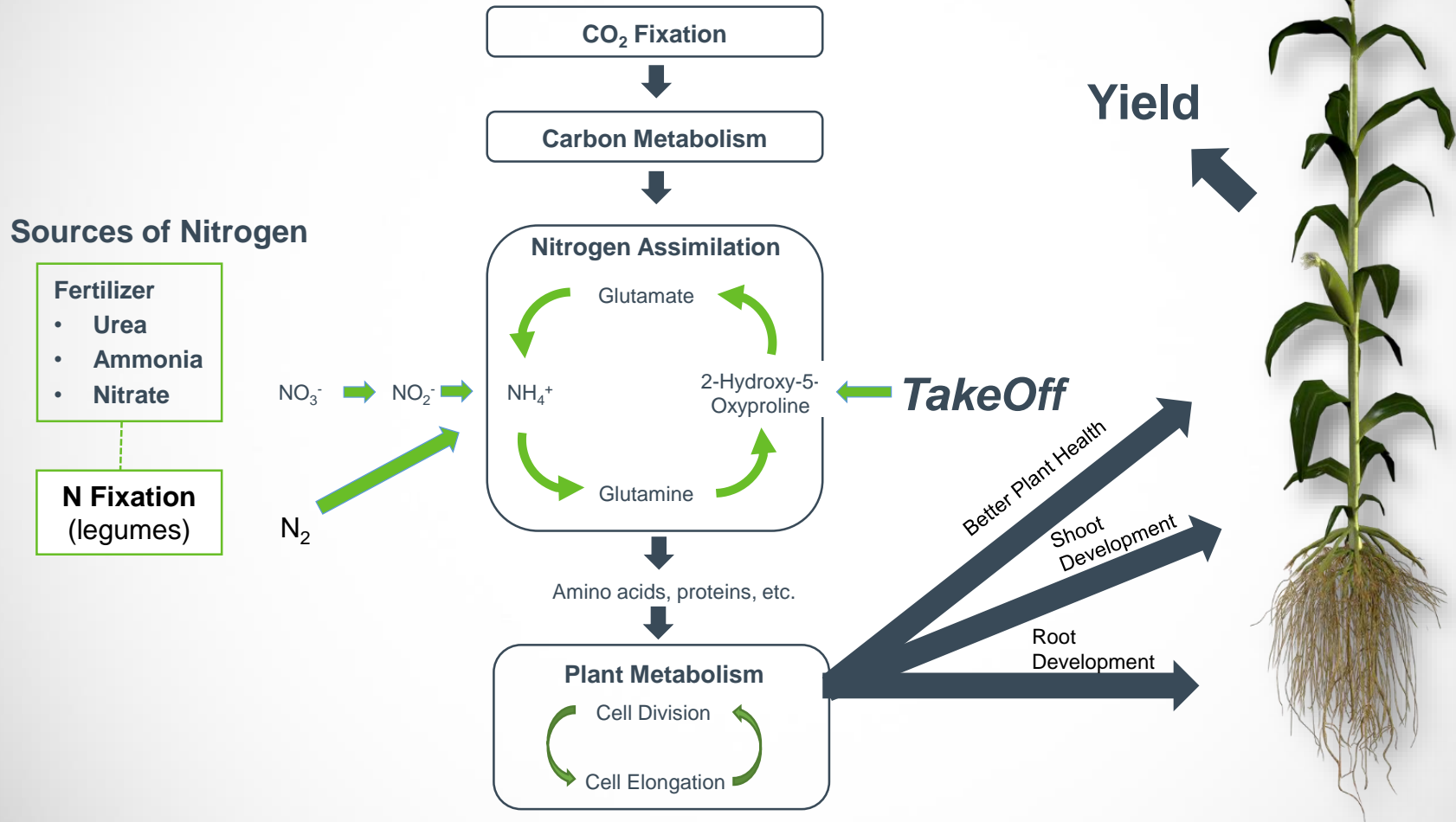
Key Differentiation Points



- Discovered at Los Alamos National Lab
 - Drs. Pat J. Unkefer and Thomas J. Knight
- Take Off mimics a common biochemical in all plants to accelerate the natural process of nitrogen uptake and assimilation
- The only multi-patented molecule with a defined mode of action that works within the plant; i.e. truly unique
- Not a Plant Growth Regulator

Mode of Action

The "Factory" Analogy



Take Off Application Scenarios



- Seed Treatment
- Inoculant
- In-furrow (w/starters)
- Layby/side-dress (w/UAN)
- Foliar
 - w/herbicides
 - w/fungicides
 - w/SRN products
 - w/?

Take Off[®]
ST

 **PRESIDE CL[®]**

Take Off[®]
SULFONE[®]

Symbol[™] / Advance
 **United Suppliers**
Powered by **Take Off**

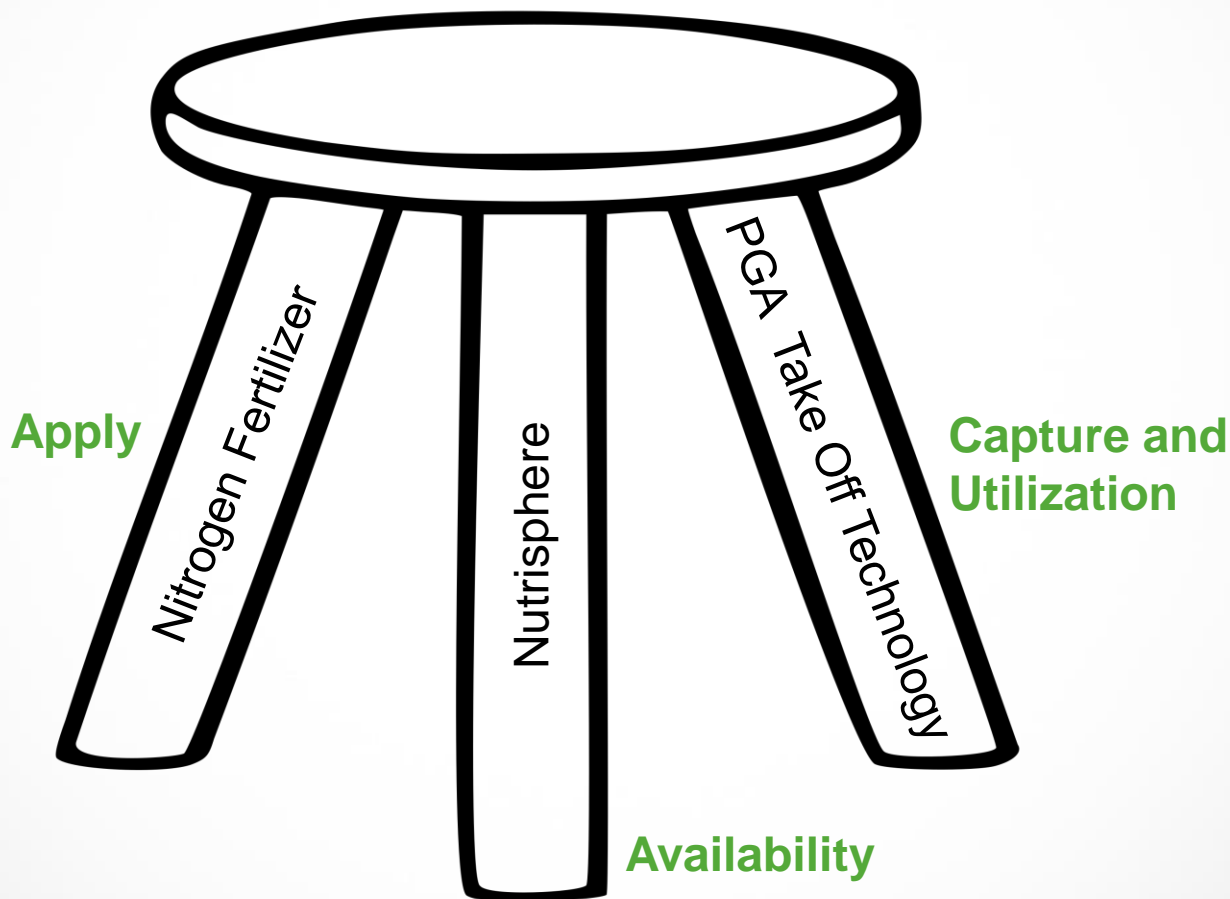
Take Off[®]
PHITE MZ

Take Off Booster = Liquid PGA formulation primarily for soil applications

Take Off LS = Liquid formulation of Take Off Sulfone

Take Off Technology:

The Third Leg of the Nitrogen Stool

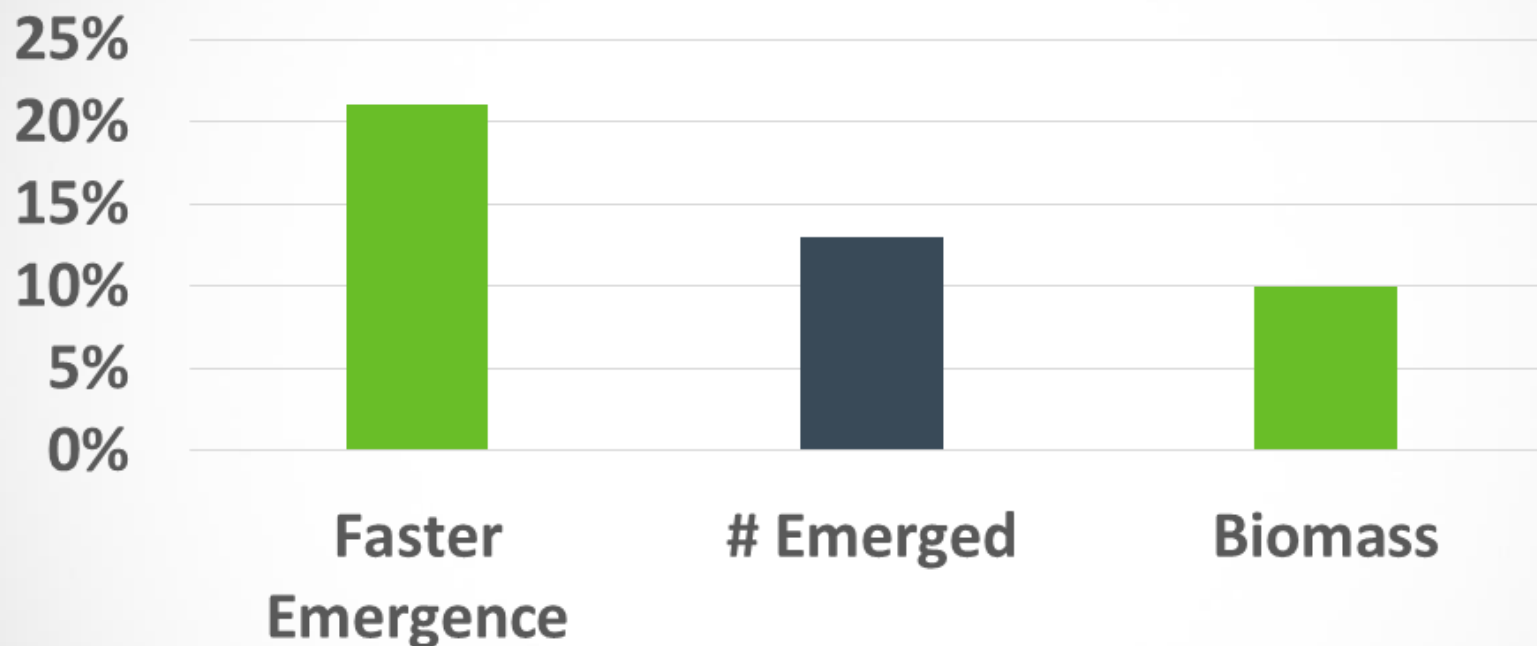


Take Off ST®

Faster germination and emergence



% Increase Over Untreated



- Faster emergence = mean days from sowing to first emergence
- # plants = # Emerged at 10 DAP

- 2014 VLS Trials. Visalia, CA

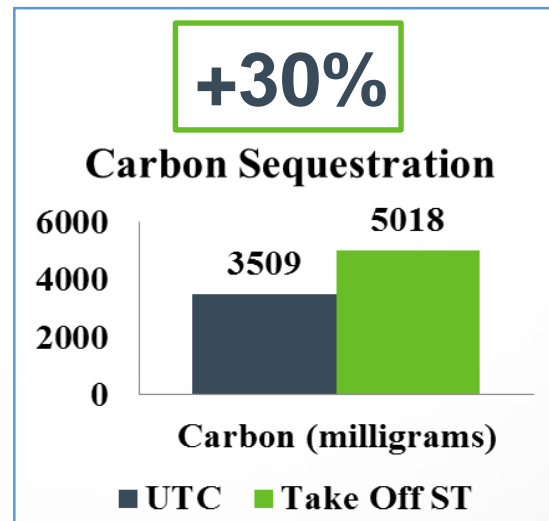
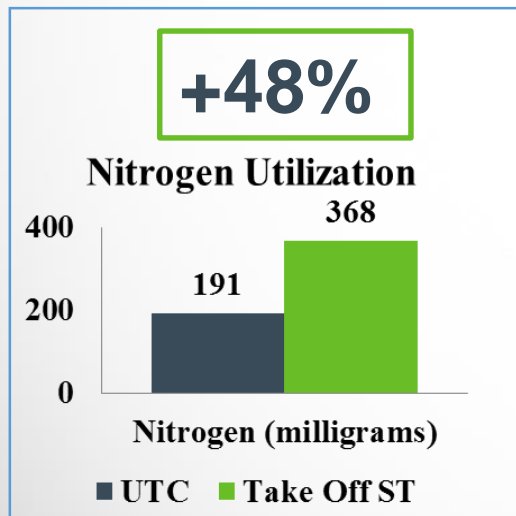
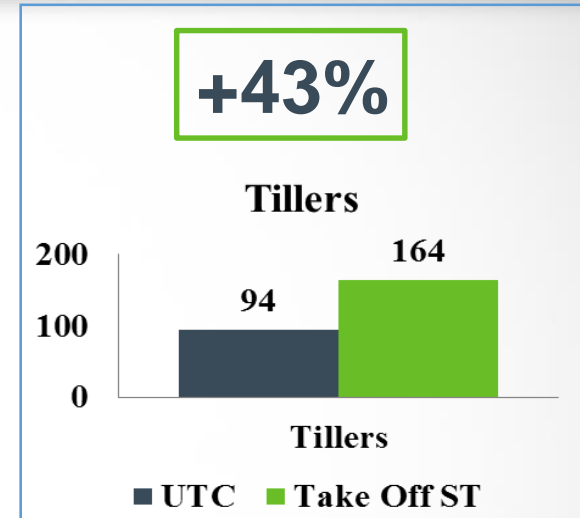
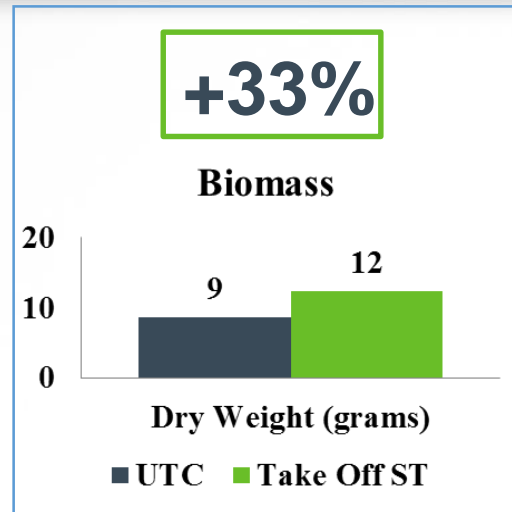
Improved early crop growth and performance

Take Off®

Wheat 2014 Trials



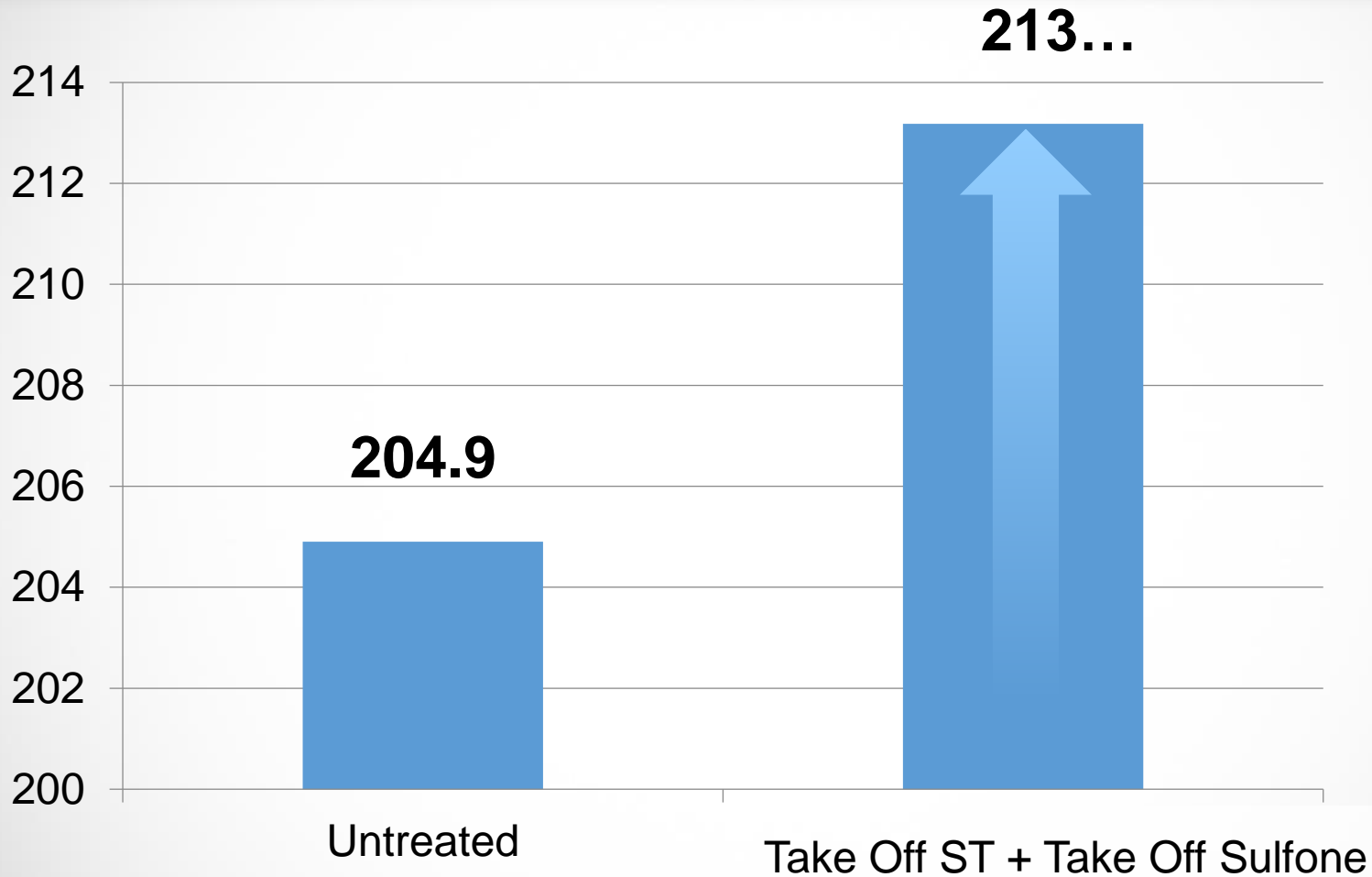
2014 VLS Laboratory Trials
Leawood, KS.
21 DAP



Take Off = capitalizing on the genetic potential of crops

Take Off®

Delivers significant yield increases in Corn



2014 VLS Field Trials, Midwest locations average

Take Off = Over 8 bushels per acre yield increase

Take Off ST® + Take Off Sulfone® 2014 Field Trials



Untreated



Take Off ST + Take Off Sulfone
0.6 fl oz/cwt fb 2 lb/A

2014 VLS Field Trial, Sparta, IL

Significant reduction of N cannibalization from lower leaves

Things to Know:

- Application timings focus on rapid growth / high N demand periods
- TO Sulfone / Symbol Advance may not dissolve well when water temperatures are below 55° F
- Do NOT use organo-silicone surfactants with TO Sulfone / Symbol Advance when tank mixing with herbicides.
- Do NOT apply TO Sulfone / Symbol Advance to cotton after matchhead square

Thank You!
Questions?



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