



August, 2019

Safe Harbor Statement

This presentation contains, in addition to historical information, forward-looking statements. Such statements are based on management's current expectations and are subject to a number of uncertainties and risks that could cause actual results to differ materially from those described in the forward-looking statements. Factors that may cause such a difference include, but are not limited to, those described in the Company's Annual Report, on Form 10-K, and in other SEC filings.

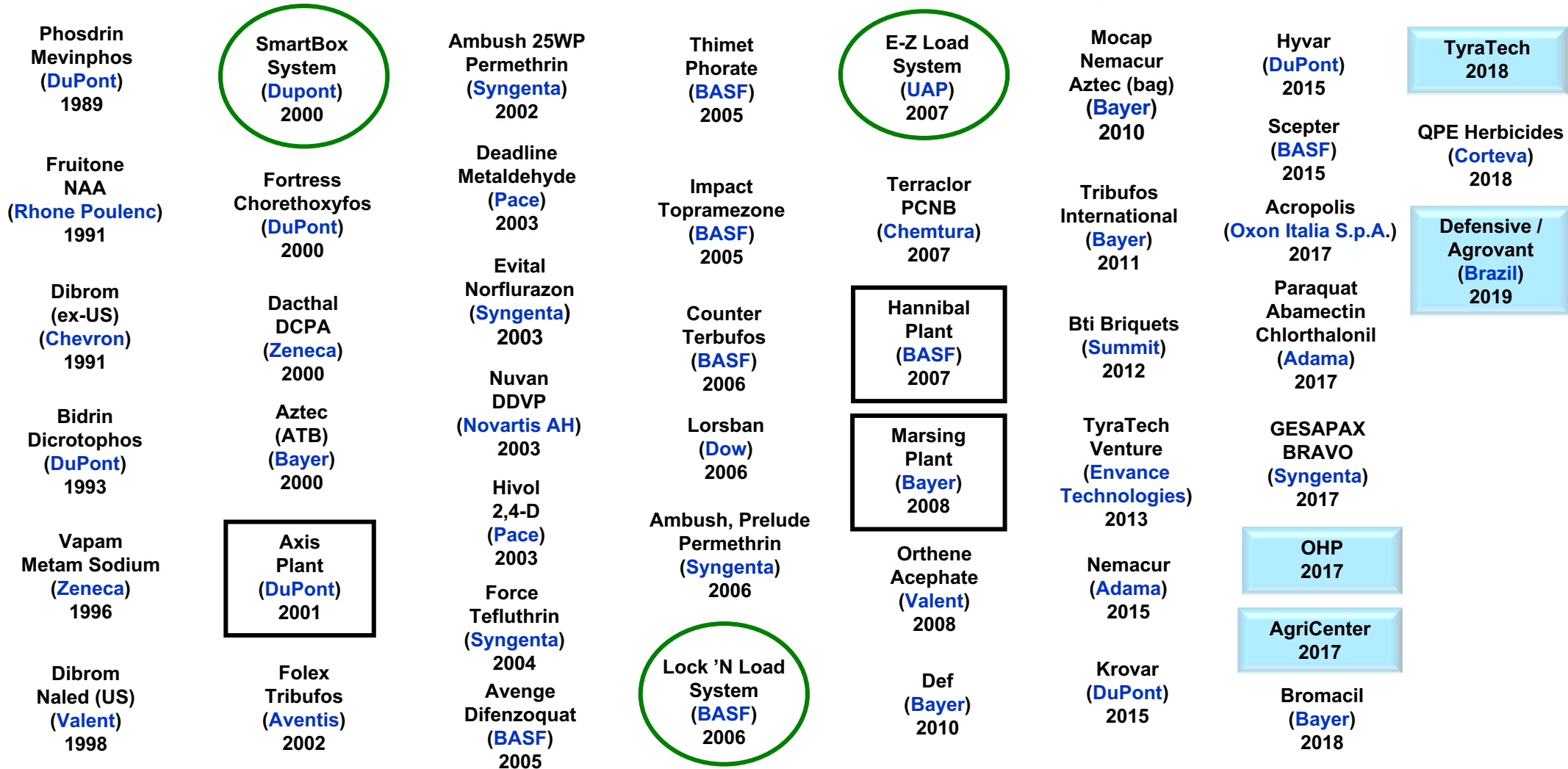
American Vanguard Overview

- **Traded on NYSE:AVD** Founded in 1969...currently 650 employees
- **Fully Integrated Operation** Including selective R&D
- **Business Model:** Acquire, develop, manufacture and market a diverse group of agricultural products, specialty non-crop products, and application technologies.

Mission: Enhance agricultural productivity & safeguard public health worldwide

- **Growth Focus:**
 - Acquire/license proven, branded, niche application products
 - Reinvent core products by identifying new opportunities
 - License new, active ingredients and product technologies
 - Develop and commercialize new product pipeline
 - Develop precision application equipment systems
 - Fully exploit significant domestic manufacturing capabilities

Proven Acquisition & Licensing Experience



1989

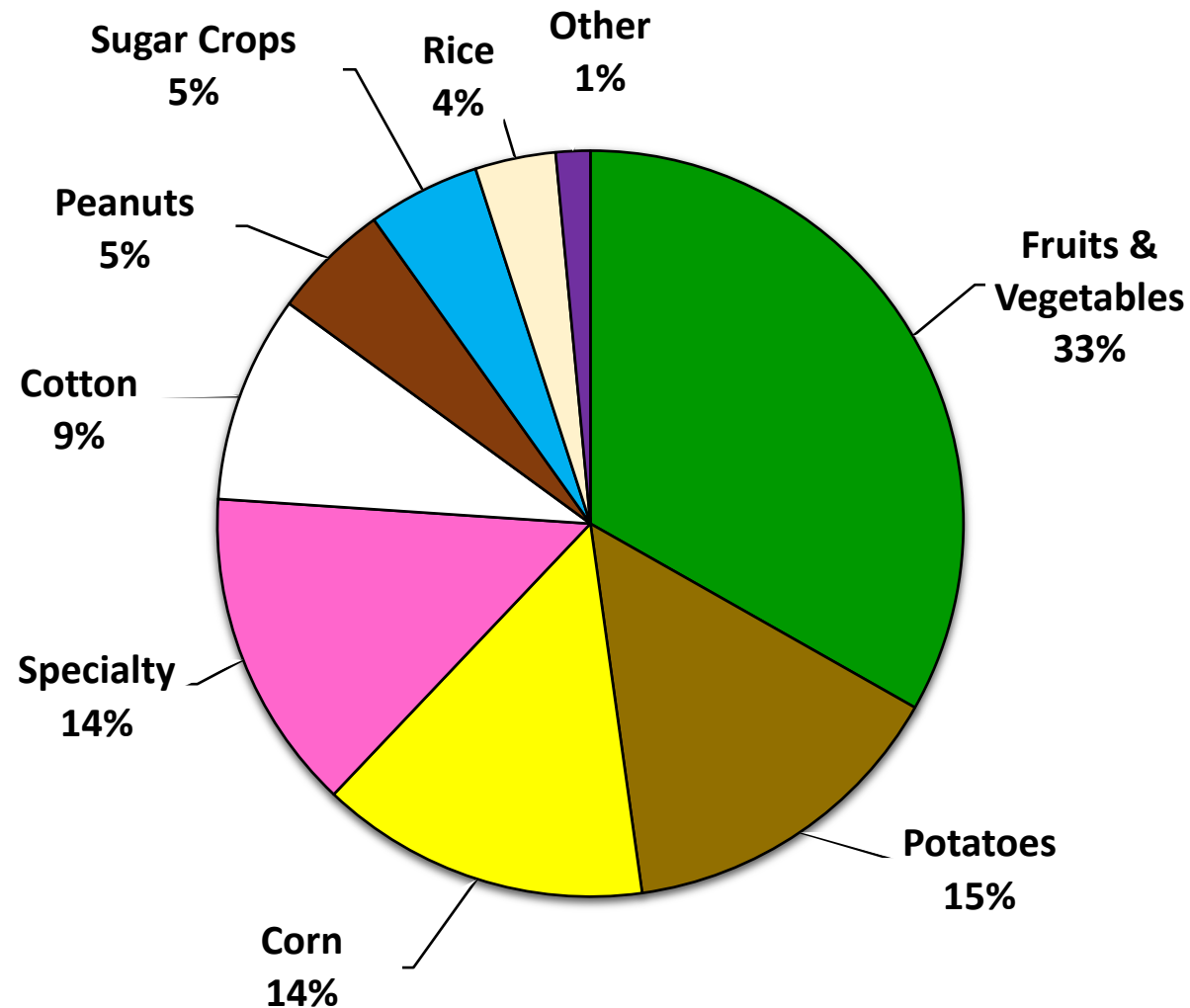
2019



AMERICAN VANGUARD™



AMVAC Diversified Participation



**2018 Revenue
\$454 Million**

AMVAC United States Manufacturing Sites



Los Angeles, CA



Axis, AL

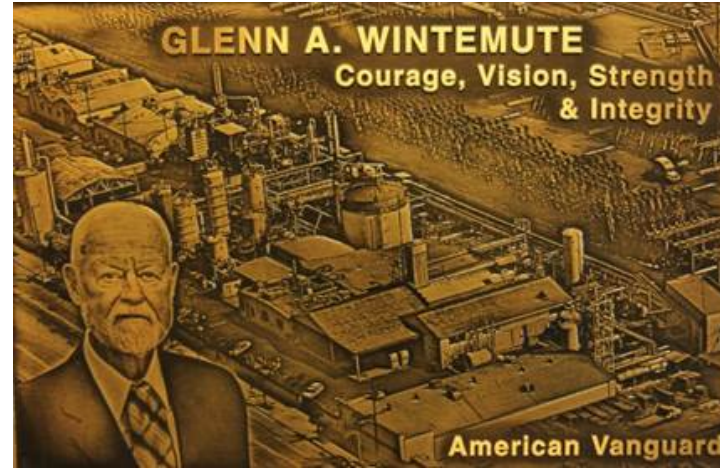
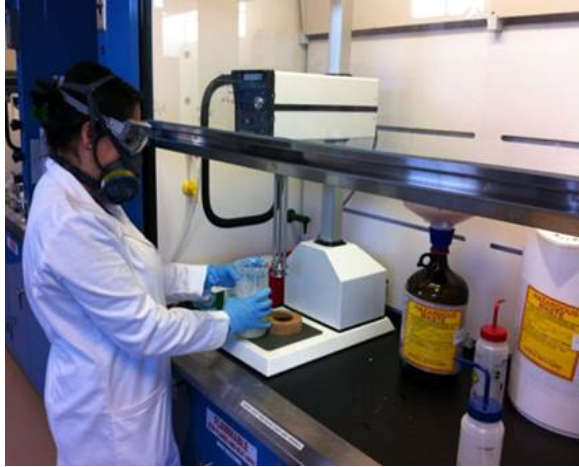


Hannibal, MO

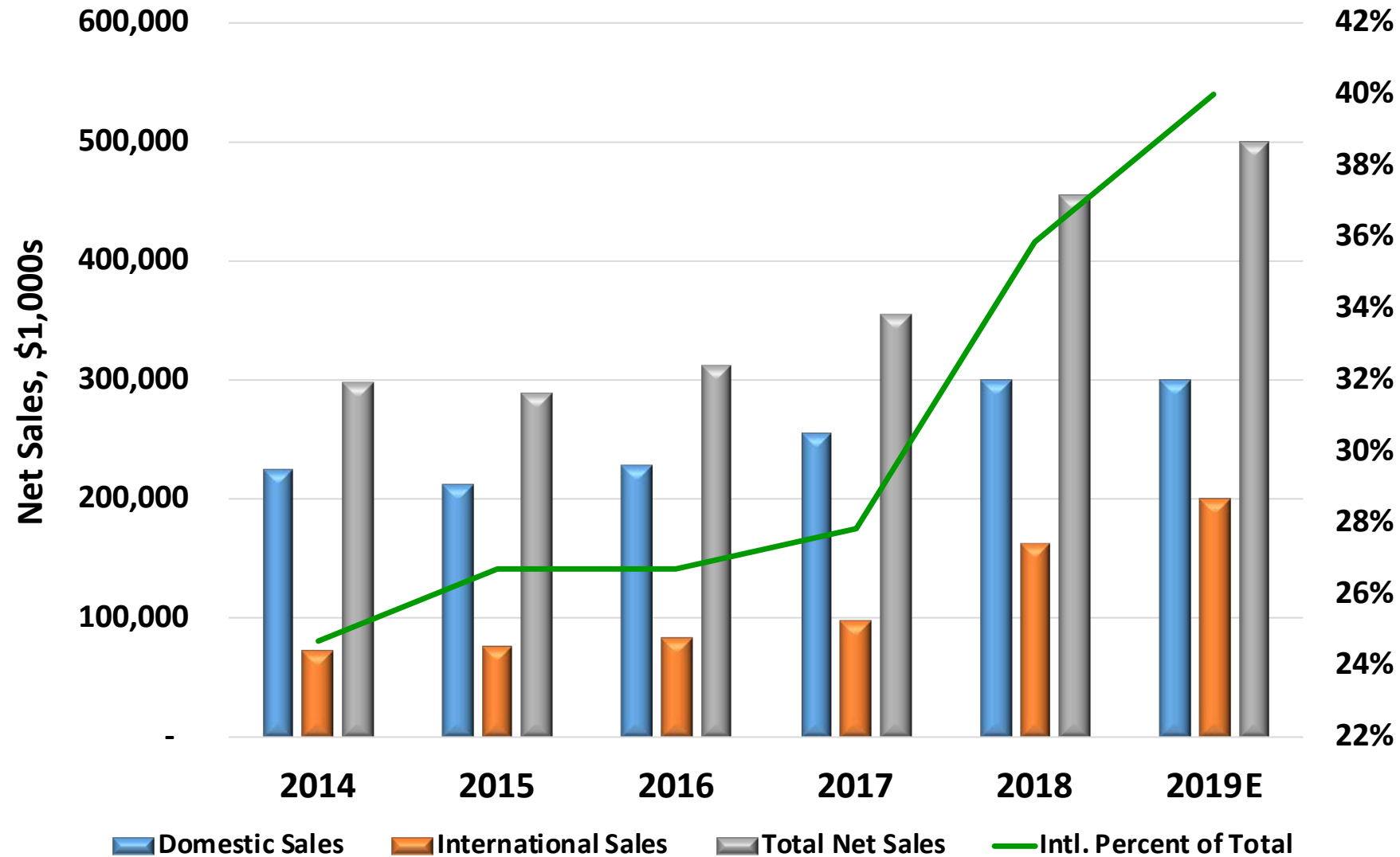


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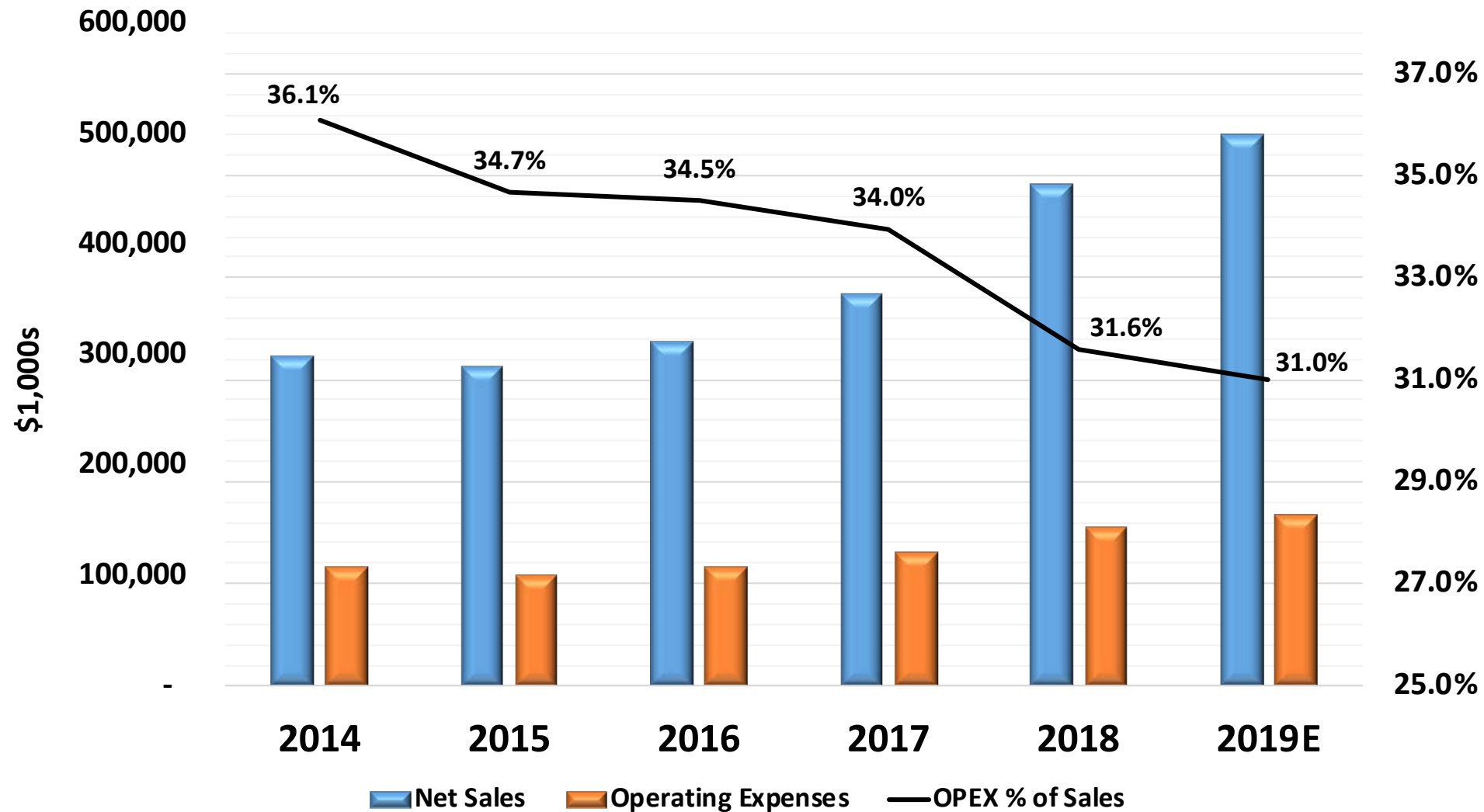
Technology Innovation



Net Sales – Domestic vs International



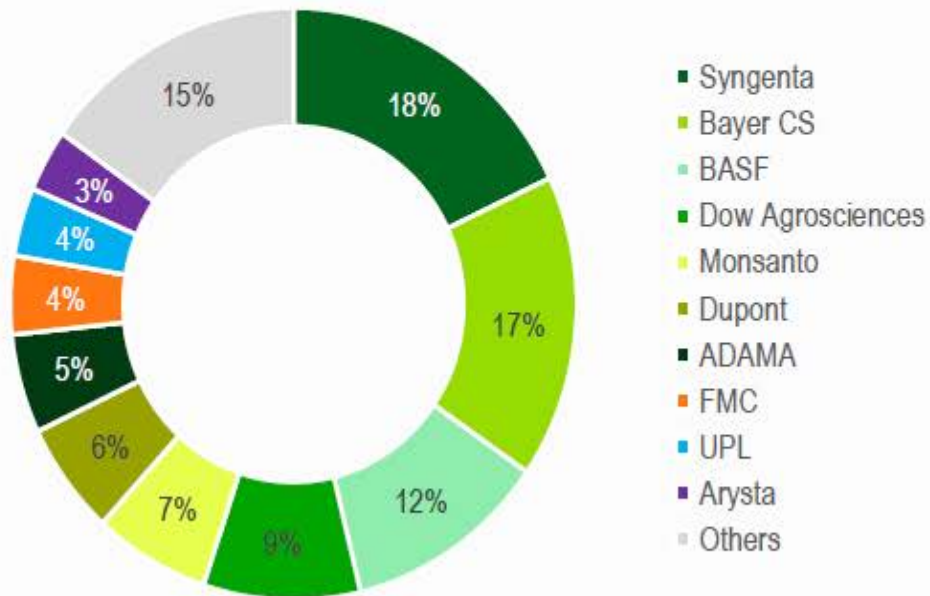
Operating Expense Performance



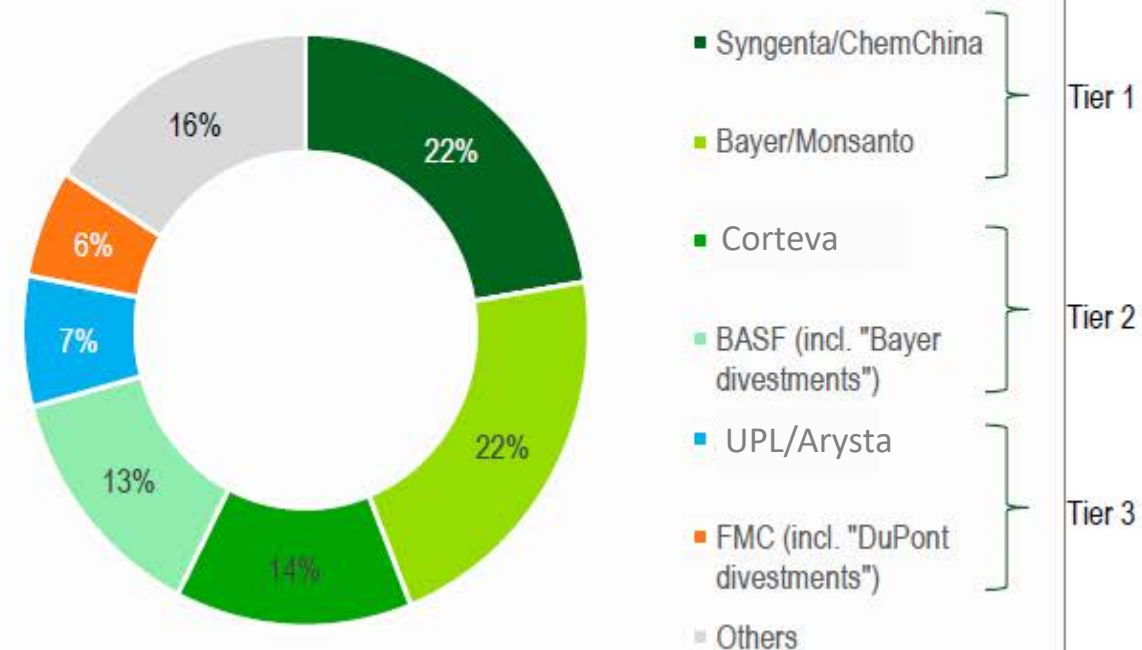
Consolidation Process in the Crop Protection Market

(Distribution of CP Sales Across TOP Companies – Pre- vs. Post-Merger Market Shares)

Pre-merger market shares in 2016 (in %)



"Pro-formal" post-merger market shares in 2016 (in %)



Key Recent Acquisitions

		Total	Revenue
2017			\$120MM
US Ag	Herbicide, Insecticide, Fungicide (ADAMA)		
Mexico	Portfolio of Niche Products (Syngenta)		
LATAM	Regional Marketing & Sales Company (AgriCenter)		
US	Horticultural Company (OHP)		
2018		Total	\$26MM
US/Canada	Quizalofop Herbicides (CORTEVA)		
US/Canada	Bromacil (BAYER)		
US	Trichlorofon (BAYER)		
2019		YTD	\$20MM
Brazil	Defensive / Agrovant		
Total Recent Acquisitions			\$166MM

Grupo AGRICenter

Market Access Platform

- ▶ Currently Operates in 7 Countries
- ▶ Annual Sales \$60 Million
- ▶ Gross Profit Margin 25+%
- ▶ Product Mix
 - ▶ Insecticides ≈ 25%
 - ▶ Fungicides ≈ 30%
 - ▶ Herbicides ≈ 20%
 - ▶ Nutrients & Other ≈ 25%
- ▶ Proven Customer Focused Consulting Services - Identify Problems and Provide Customized Solutions
- ▶ Greenplants – Unique Plant Nutrient & Micronutrient Formulations
- ▶ Distributor for Leading High-performance Biologicals Supplier
- ▶ 115 Highly-Qualified Personnel



Acquisition triples current Latin American presence & gives AMVAC a significant share of the LATAM regional market

OHP

Horticulture Focus

- ▶ **Greenhouse & Nursery Applications**
- ▶ **Annual Sales \$20-\$25 Million**
- ▶ **Gross Profit Margins \approx 40%**
- ▶ **Business Model:**
License, Develop, Register, Market, Sell and Service Products
for Horticulture Applications in the United States
- ▶ **17 Highly Experienced Personnel**

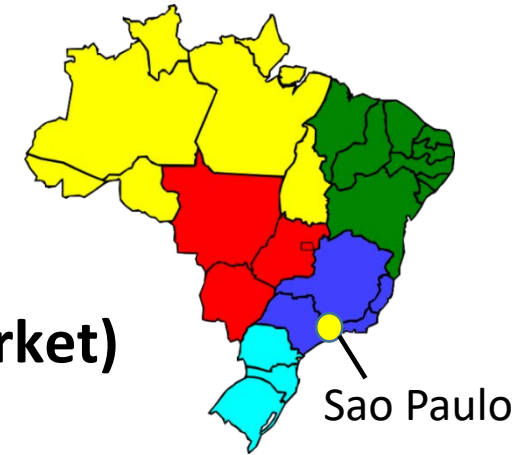


Acquisition increases AMVAC's non-crop business by \approx 40% adding horticulture segment to existing leading positions in mosquito control, commercial and consumer pest control, and turf & golf course maintenance

Defensive / Agrovant

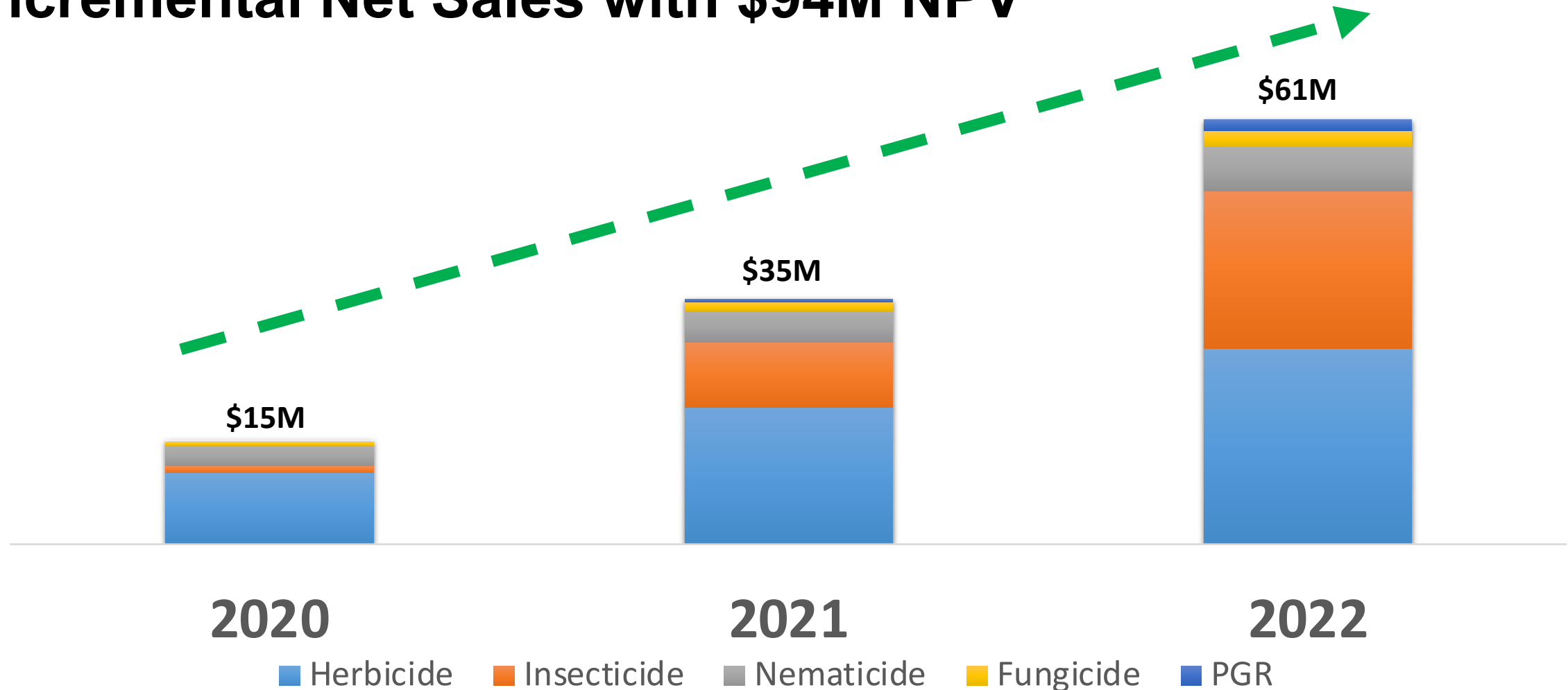
Market Access Platform

- ▶ **\$9+ Billion Crop Protection Segment**
- ▶ **Strong Position in Fruits & Vegetables (targeting huge soybean market)**
- ▶ **Annual Sales \$20 Million with excellent growth potential**
- ▶ **Gross Profit Margin 30+% (Crop Protection & MicroNutrients)**
- ▶ **Well-Established Marketing & Sales Organization**
 - ▶ **35 Full-Time Employees**
 - ▶ **Plus Additional Experienced Commissioned Sales Agents**
- ▶ **Launch Pad for SIMPAS Precision Application Technology**



New Product Launches

Incremental Net Sales with \$94M NPV



Growing Biological Portfolio



- Non-toxic insecticides derived from novel screening techniques
- License out under P&G ZEVO® brand
 - ProVerde™ line



- Licensing-in of 3rd party products
- Ecozin® bio-insecticide
 - Protein bio-fungicide
 - Testing multiple products and sources



- Commercial access to microbials in LA
- KlamicC® nematicide
 - TrichoMax® fungicide/biostimulant
 - Global pipeline rights



- Nine biological products for greenhouse & nursery
- Insecticides/miticides
 - Fungicides/bacteriacides

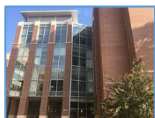


- Source of biologicals
- SeroX® insecticide
 - Vintec® fungicide



- Unique prescription delivery system
- Bio-pesticides
 - Biostimulants
 - (And traditional chemistry)
 - Especially suited to low-rate products

Emerging Pathogens Institute
University of Florida



Exclusive access to development technologies



Portfolio of biological products in Costa Rica



Biostimulants & micronutrients in Latin America



Patented technology synergy around essential oils as insecticides

Envance Technologies

- Envance is the emerging leader in “effective and safe” insect control technology
- Formed by AMVAC and TyraTech to develop and commercialize TyraTech’s novel insect control platform
 - *TyraTech was recently acquired by AMVAC and merged into Envance*
- World-class R&D capabilities enable Envance to develop compelling ranges of new solutions for consumer, professional, and agricultural insect control markets
- Envance leverages its patented technology and innovation capabilities to transform global pest control categories through partnerships with market leaders



Breakthrough Technology

- Core technology discovered at Vanderbilt-Ingram Cancer Research Center
- “Best-in-class” efficacy achieved by leveraging synergistic combinations of nature-derived compounds and novel formulations.
- Envance’s receptor targeting technology targets neurologic receptors that are not active in humans or animals.
- Unique mode of action is highly effective against insect species resistant to traditional chemistries.
- Experienced R&D team, proprietary screening capabilities, and growing patent portfolio provide Envance with a strong technical advantage.
 - *More than 15 years of research and development leading to 46 granted patents and 21 more pending*



Current and Future Market Focus

\$30B+ Global Market Opportunity

Current Market Focus

Consumer Insect Control

- > Household
- > Repellents
- > Lawn & Garden
- > Outdoor Living

Animal Health Insect/Parasite Control

- > Pets
- > Production Animals

Next Market Opportunities

Professional Insect Control

- > PMP
- > Institutional
- > T&O

Agricultural Insect Control

- > Crop Protection
- > Horticulture
- > Specialty Crops



zevo™
Way smarter than bugs.

Bio-selective: targets nervous system receptors only active in insects.
Safely and confidently use with no harsh chemical odor

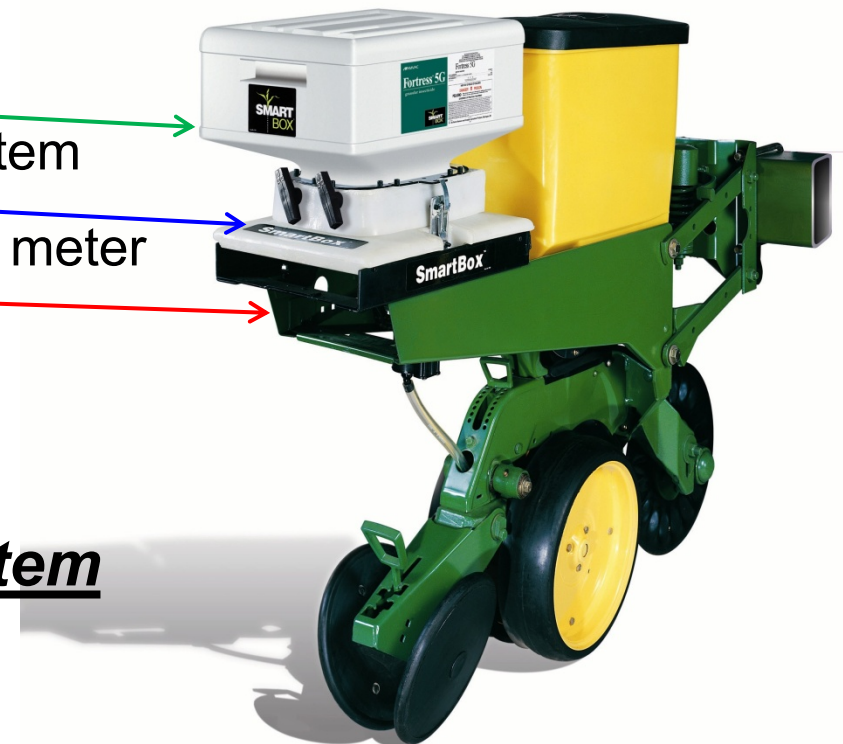


[Play Video](#)

Precision Ag Equipment SmartBox[®] Evolution

The most advanced *granule* application system available

- ▶ Patented, closed-container transfer and application system
- ▶ The sealed transfer-container is returnable and refillable.
- ▶ The on-planter base-container contains a locking valve system
- ▶ The electronic meter replaces the conventional mechanical meter



All three components work together with a cab
mounted computer to create the SmartBox System

Precision Ag Equipment

SmartBox® Evolution



Records FIELD application rates, but is not integrated with current GPS systems nor does it create as-applied maps

Not “Smart Enough”
for Future Precision Ag



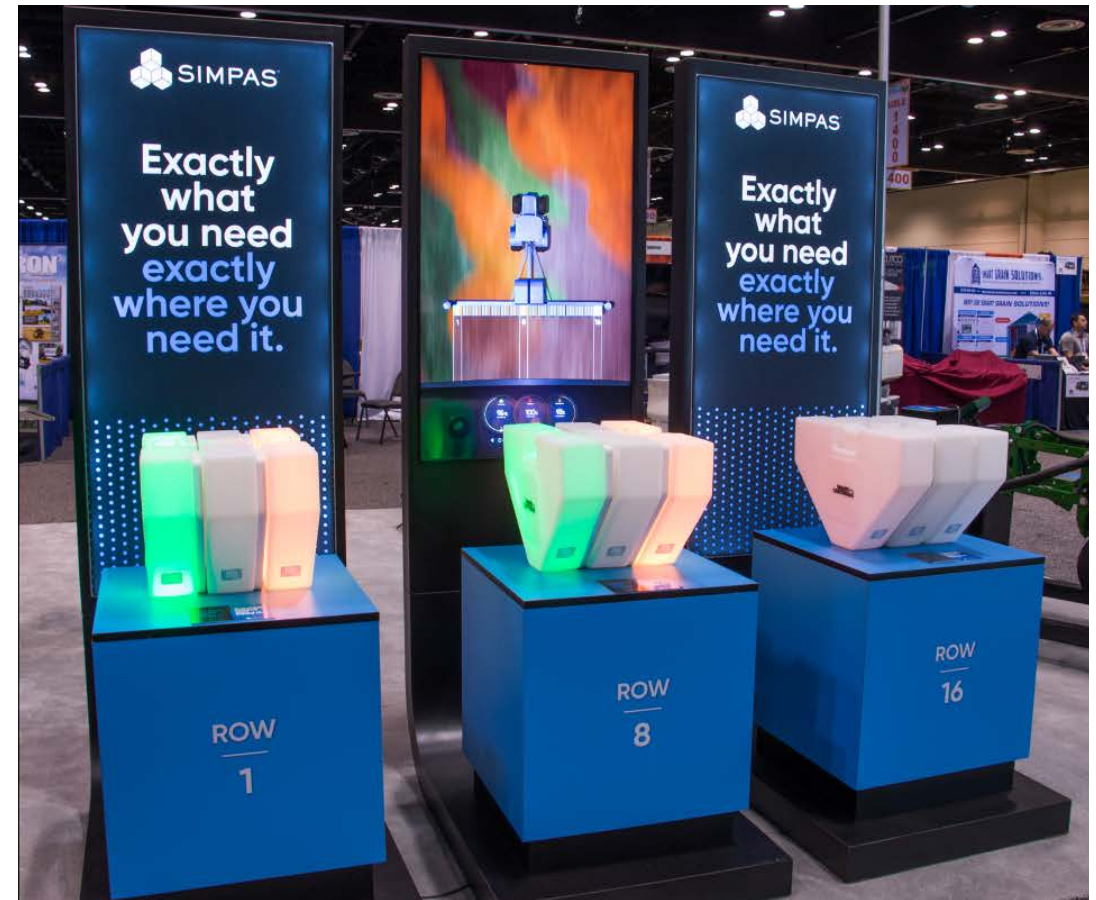
SIMPAS

Smart Integrated Multi-Product Prescription Application System

- ▶ One System for Insecticides, Fungicides, Nutritionals & Biologicals
- ▶ Dry and/or Liquid Products Applied Simultaneously
- ▶ RFID SmartCartridge Packaging Application Accuracy at Very Low rates

Value Proposition

- ▶ License Equipment Manufacturer
- ▶ Support Retail Distribution
- ▶ Supply Crop Protection Product Cartridges



SIMPAS Technology



SIMPAS™

[Play Video](#)



SIMPAS System

[Play Video](#)



SIMPAS Development and Commercialization Timeline

2019

Prescriptive Field Trials
on Corn

Liquid Pump
Assessment

RFID Data Flow Testing

2020

Limited Commercial
Launch

Combination
Application of Liquid
with Granular Products

Refine Equipment and
Systems

2021

Full Commercial
Launch

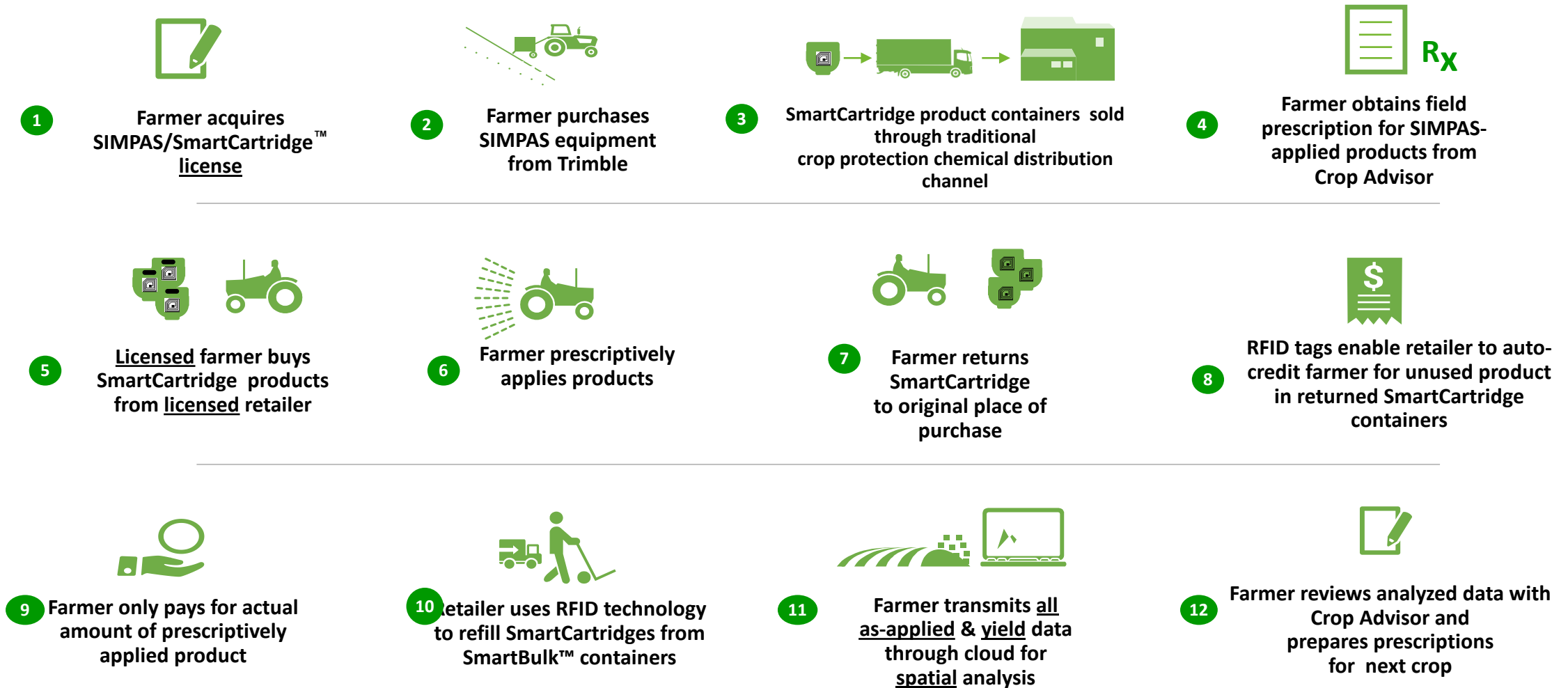
Broaden Retail and
Refilling Infrastructure

2022-2023

Incorporate
Synchronization
Technology

International
Expansion

Business Process



Value Capture Model







Farmer Subscriptions

License Fees

**Product & Cartridge
Sales**

Hardware Sales

Retail/Distribution Partnership Status

Partner	Key Areas of Focus
	<ul style="list-style-type: none"> • Trial Implementation & Analysis • Logistics Planning & Coordination for Implementation • Custom Micronutrient Product Development
    	<ul style="list-style-type: none"> • SIMPAS Overview & On-Boarding Sessions • Product Evaluation (Micronutrients) • Potential Trial Support

SIMPAS Partnerships & Stewardship

   		Targeted Retail-Distribution Partners	ULTIMUS™ Data Hub Administration	 Spatial Analysis
<ul style="list-style-type: none"> • Develop, Test, Register & Market Crop Inputs to be Sold in SmartCartridge Containers • Enter into Agency Agreements with Targeted Retail-Distribution Partners to Sell & Manage Logistics with Products 	<ul style="list-style-type: none"> • Sell, Install, Service & Support SIMPAS Equipment Through Trimble's Authorized Dealer Network • Manage In-Season Issues & Needs with SIMPAS Users 	<ul style="list-style-type: none"> • Develop Prescriptions for SIMPAS-Applied Solutions • Sell Products to Farmers • Manage All Logistical Elements of Sales Transaction on Behalf of Crop Input Manufacturers 	<ul style="list-style-type: none"> • Administer Overall Database of RFID-Based Movement of Products & Provide Service / Reporting to Crop Input Manufacturers & Retail-Distribution Partners 	<ul style="list-style-type: none"> • Provide Spatial Analysis Services through AgVeritas Software for SIMPAS-Applied Solutions

Domestic Base Case Forecast

- Over the next seven (7) years (2020-2026) the Company expects that sales of the SIMPAS system will ramp-up to approximately \$160 million/year by 2026 based upon 2,900 systems over 8.7 million treated acres.
- During that timeframe, the Company anticipates that gross profit margins will rise from the low 30's in the early introductory years to over 50% by the later years.

Market Opportunities



Initial Focus on 3 US Crops: Corn, Soybeans and Cotton

Crops

All row crops

- Corn
- Soybeans
- Cotton
- Potatoes
- Sugar beets
- Peanuts
- Sugercane
- etc.

Geographies

- US
- Brazil/Argentina
- China
- Eastern Europe

*Large farms,
technology adopters*

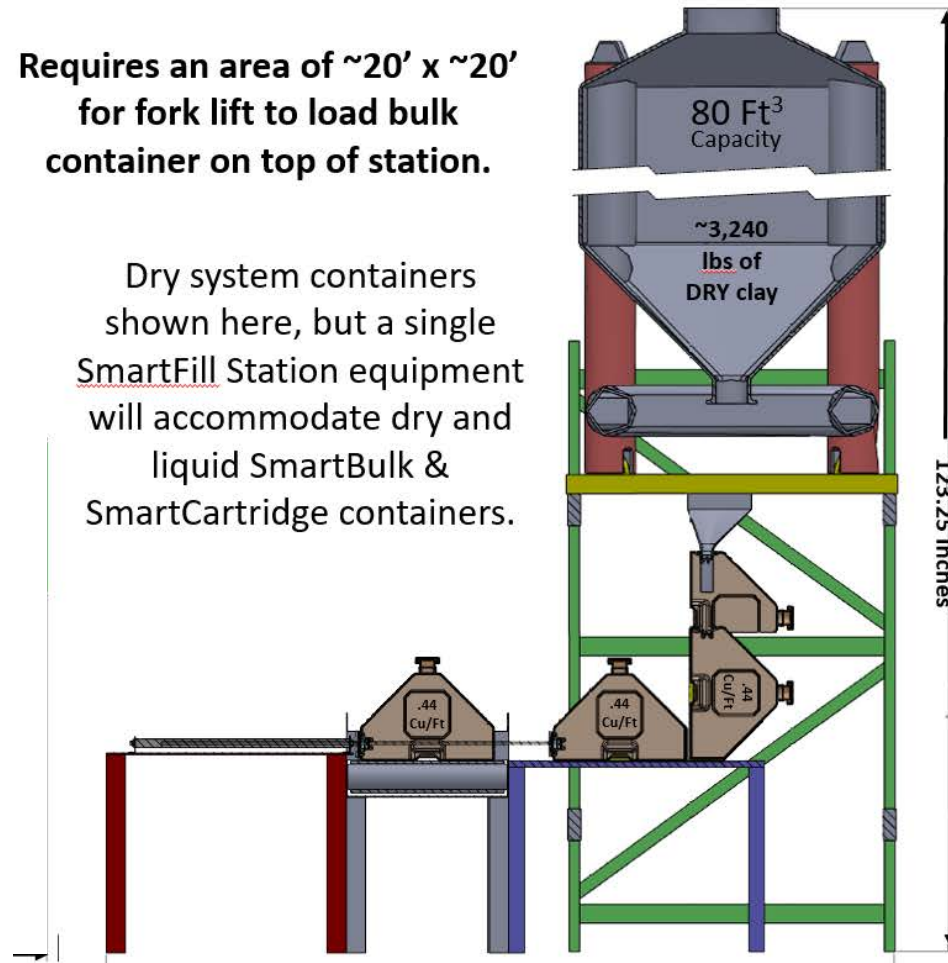
- UK, EU
- Canada
- Australia

Heavily regulated

SmartFill™ Station

Requires an area of ~20' x ~20'
for fork lift to load bulk
container on top of station.

Dry system containers
shown here, but a single
SmartFill Station equipment
will accommodate dry and
liquid SmartBulk &
SmartCartridge containers.



Precision “Placement” Technology

Synchronized application of input **with the seed** during planting, increasing profits and sustainability.

Current Method: Continuous In-Furrow Application



Future Method: Synchronized “Seed & Input” Application



Delivers in the 'Seed Zone' reducing total input applied per acre.



Guidance 2019 Full-Year

Revenue:	≈ \$500 Million
Gross Margin:	≈ 38% <i>(Subject to quarterly mix)</i>
Operating Expenses:	≈ \$155 Million
Tax Rate:	≈ 26% <i>(Estimated for all jurisdictions)</i>
Inventory Level	Reduce by \$45 Million
Debt Level	Reduce by \$50 Million

AMVAC Take Away Message

- ▶ **Solid Base Business**

Niche market positions; solid Balance Sheet

- ▶ **Product Portfolio Expansion**

Acquisition; licensing; internal development; partnership/collaborations

- ▶ **Increasing Market Access**

Domestic programs; international alliances

- ▶ **Technology Innovation**

Chemical products; biological products; precision-ag equipment systems

- ▶ **Organizational Excellence**

Manufacturing; financial discipline; managerial expertise

