

Richard Waycott – President & CEO, Almond Board of California



Richard Waycott joined the Almond Board of California (ABC) in 2002. Prior to heading up the ABC, he worked for more than 20 years, mostly in Latin America, in the food manufacturing and agribusiness industries, with extensive experience in the consumer products and B-to-B grains and oilseeds market segments.



California Almond Industry Update

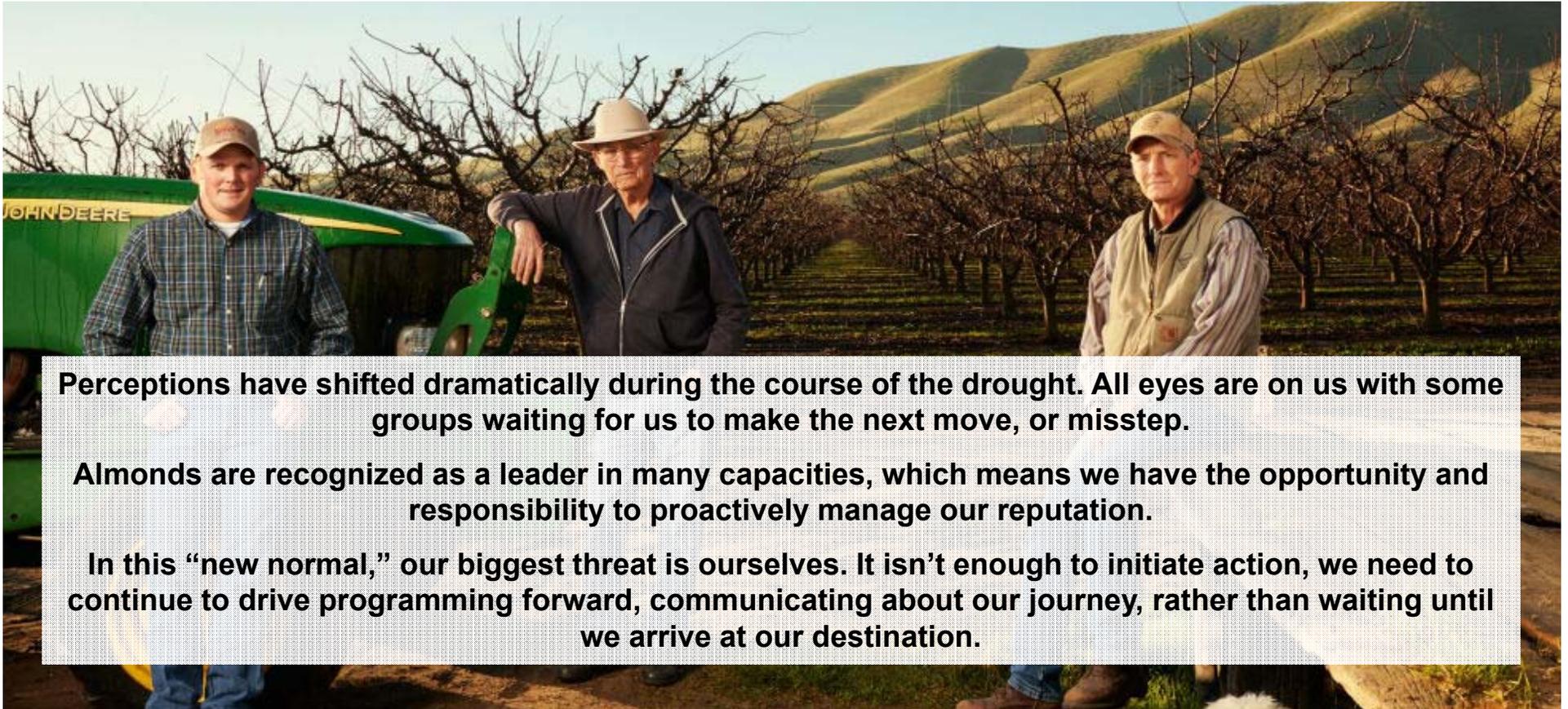
June 22, 2017

Reputation Management



The Drought is Over, but

What is Our New Normal?



Perceptions have shifted dramatically during the course of the drought. All eyes are on us with some groups waiting for us to make the next move, or misstep.

Almonds are recognized as a leader in many capacities, which means we have the opportunity and responsibility to proactively manage our reputation.

In this “new normal,” our biggest threat is ourselves. It isn’t enough to initiate action, we need to continue to drive programming forward, communicating about our journey, rather than waiting until we arrive at our destination.



Our Communications Goal

Proactively participate in a dialogue with customers and consumers about where almonds come from and how they are grown so they can continue to feel good about using and eating almonds.

We need to ensure our communications are placed within the context of the clearly visible growth of the industry

A major contributor to our reputational risks and our ability to reach these goals is: our size.

And we're continuing to grow with acreage up 6 percent since last year and tonnage expected to increase 25 percent by 2020.

Turning A Risk Into A Benefit – Our Filter for Communications

Use The Strength Of Our Size

While the California Almond community is 'big' it can also be good. A collective of small, primarily family-run farms are working together to embrace innovation and sustainable practices.

Because 'Big' is the sum total of thousands of people, investing in new research, putting in a little extra effort, making small changes.

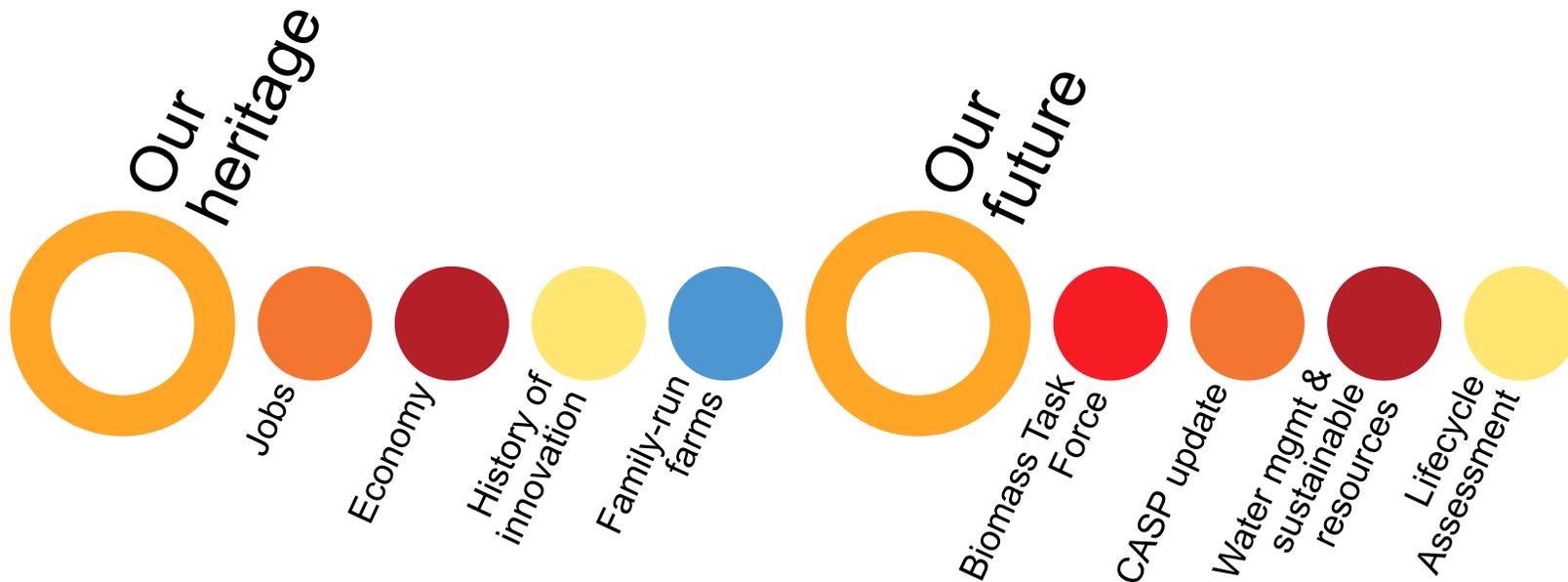
'Big' can create a positive impact, fuel innovation, embrace sustainable practices and stimulate economic growth. 'Big' can make healthy food more accessible to more people.

'Big' is able to reduce water consumption by 33% over a decade. 'Big' can create a sustainable future.

We will work together to ensure customers and consumers feel good about how almonds are grown so they can continue to feel good about eating almonds.

Our Story

Use the strength of our size as a filter to create communications activities that exist within the “Grow What You Know: campaign and creative

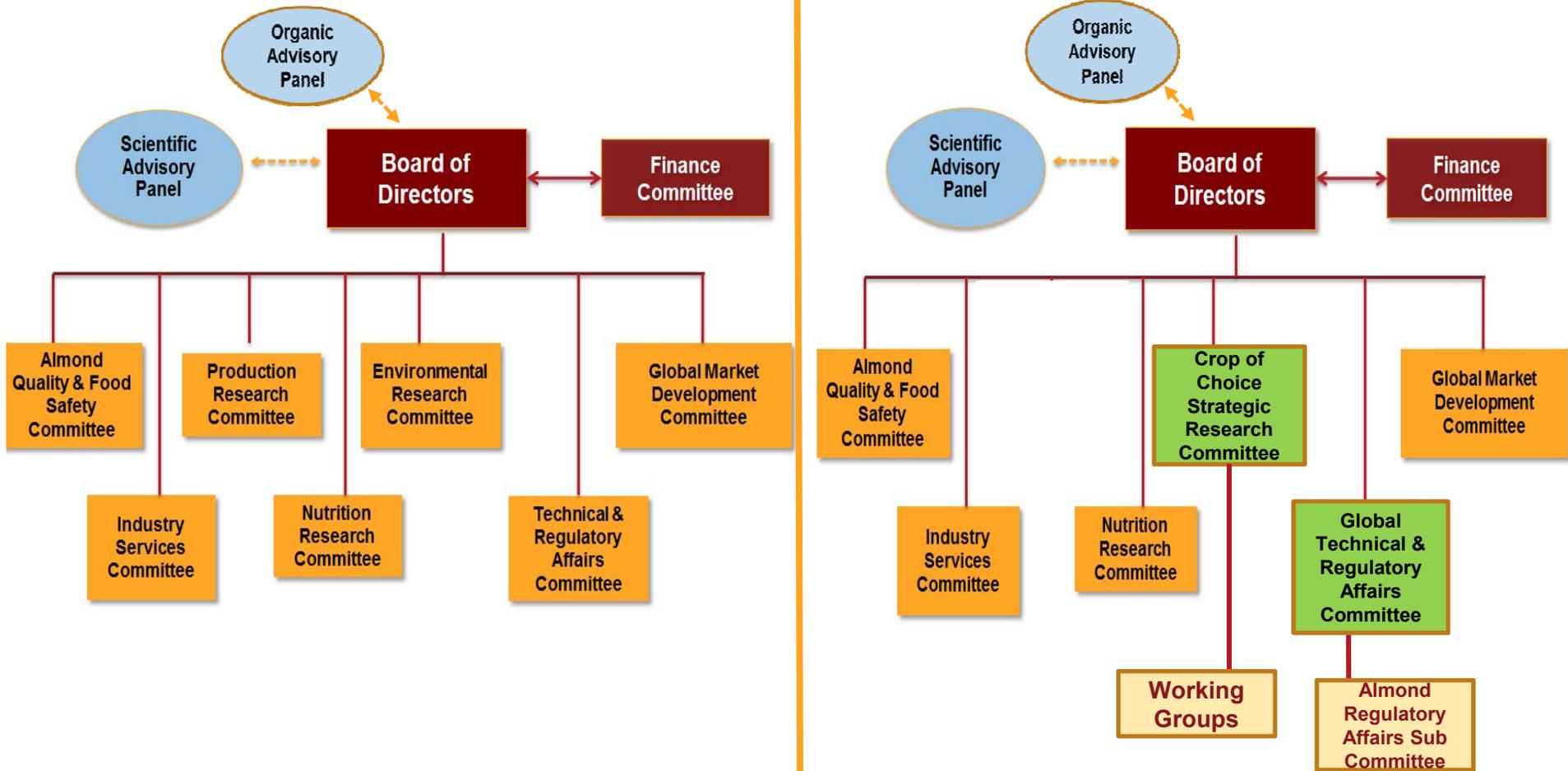




ABC
Organization &
FY 2017/2018
Budget



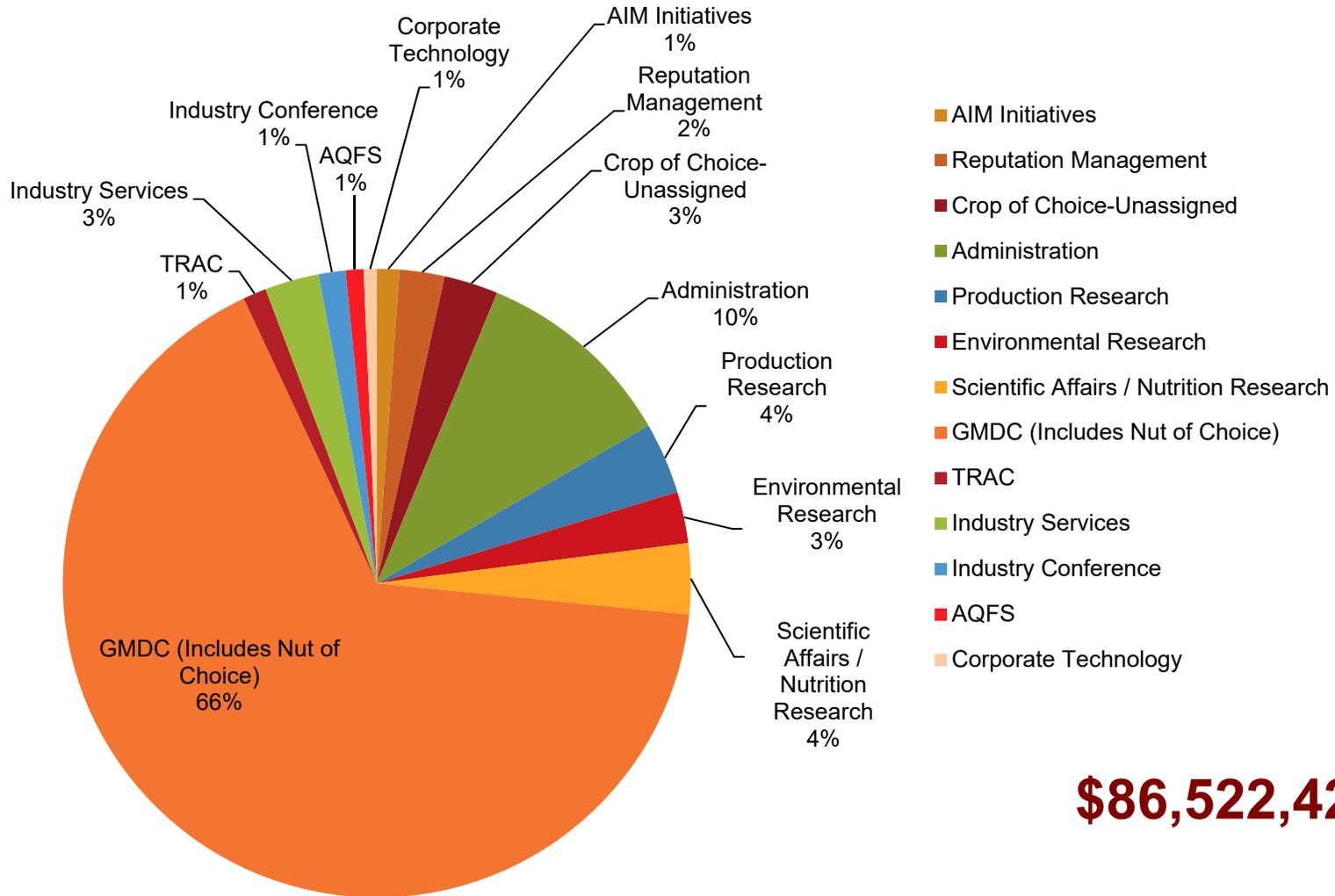
ABC Committee Restructuring



Program Budget Allocation Chart

FY17/18 Budget

Global Market Development
Top Budget Priority



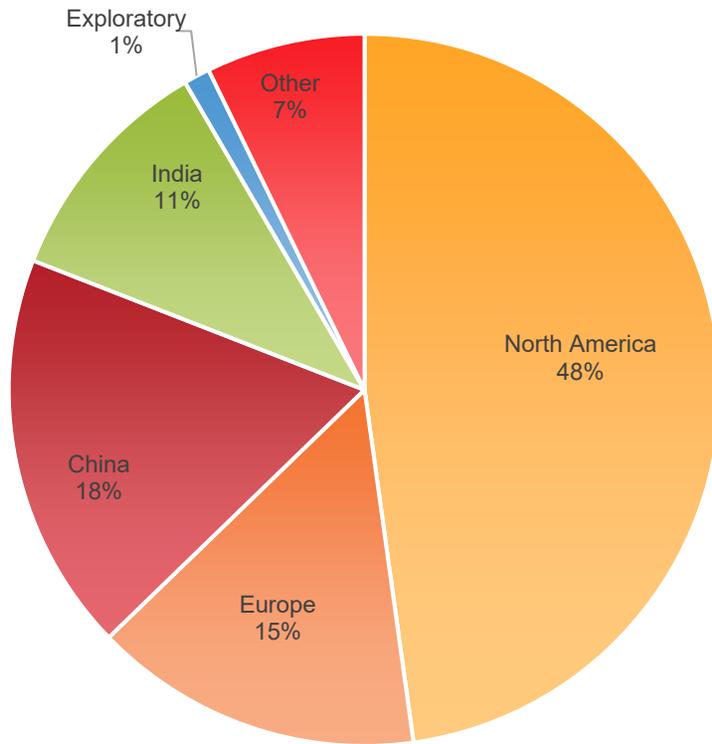
\$86,522,424



Global Market Development

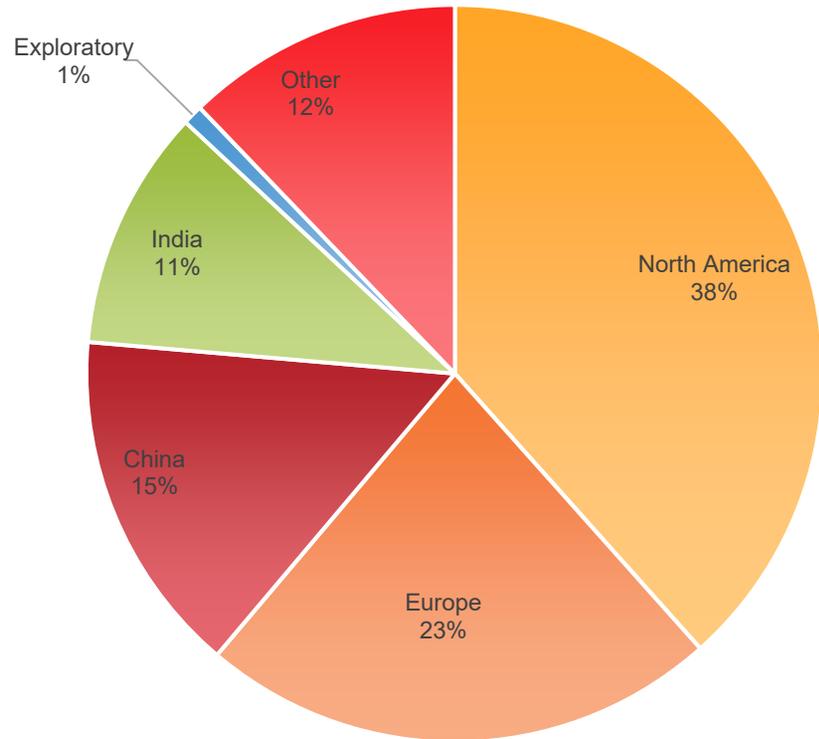
Global Market Development Budget Comparisons

FY16/17 GMD Program Budget



\$41,947,932

FY17/18 GMD Program Budget



\$56,730,175

Global Marketing – Different needs, different strategies



Global:
Maintain confidence in almond potential and smooth market access amongst importers and CPG.

NORTH AMERICA
Canada
U.S.

North America:
Position almonds as Savvy Snackers go-to snack.

EU 3:
Position almonds as a naturally satisfying snack that enhances "Jane's" day

EUROPE
UK,
France,
Germany

S. Korea:
Increase the consumption of almonds as a mid-morning snack and create differentiation between almonds and walnuts and peanuts.

ASIA
China, India,
S. Korea

INDIA

- Increase consumption of Almonds amongst all family members within our target
- Increase gifting of Almonds during festivals.

CHINA:

- Differentiate almonds and apricot kernels
- Elevate California
- Establish clear and consistent naming of almonds
- Drive usage at afternoon snack occasion with almond benefit of skin and beauty

Exploratory Markets
Mexico, Brazil, Indonesia, Saudi Arabia, South America, Italy

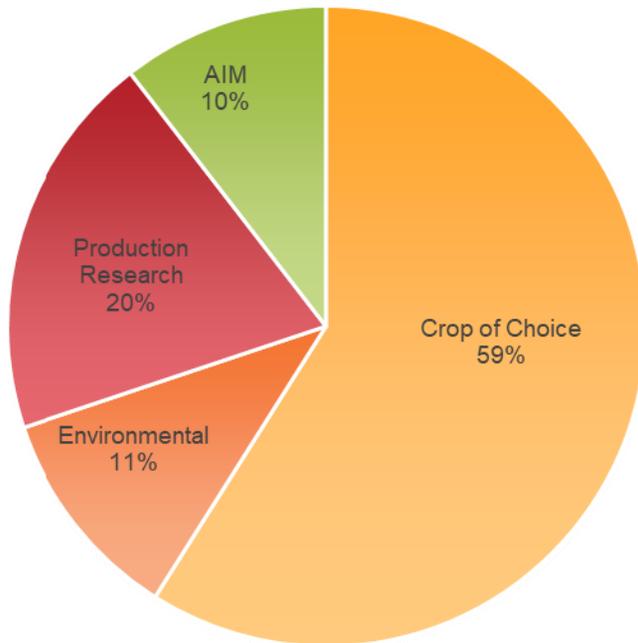




Accelerated Innovation
Management (AIM)
&
Crop of Choice

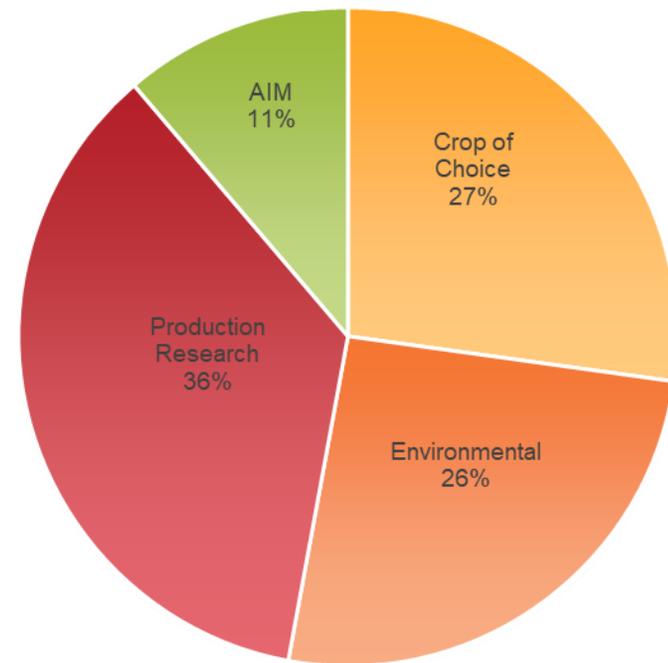
Research Budget Comparisons

FY16/17 Research Budgets

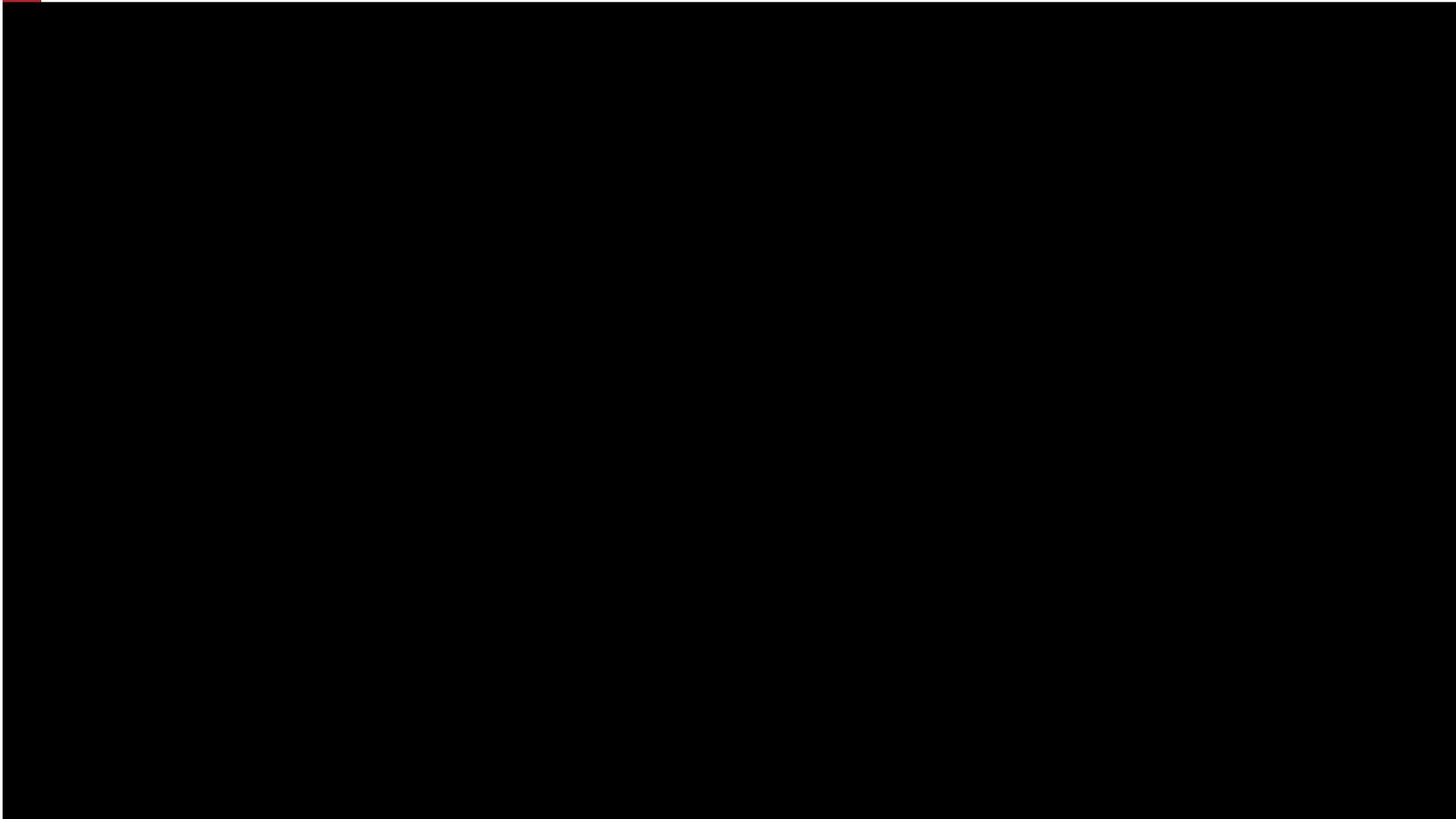


\$9,538,121

FY17/18 Research Budgets



\$8,887,594



AIM: WATER
MANAGEMENT
AND
EFFICIENCY



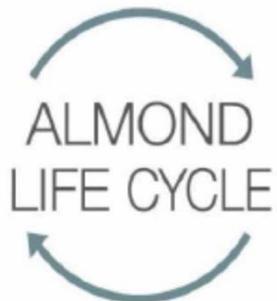
ALMOND ORCHARD OF THE FUTURE



AIM:
SUSTAINABLE
WATER
RESOURCES



AIM: 22ND
CENTURY
AGRONOMICS



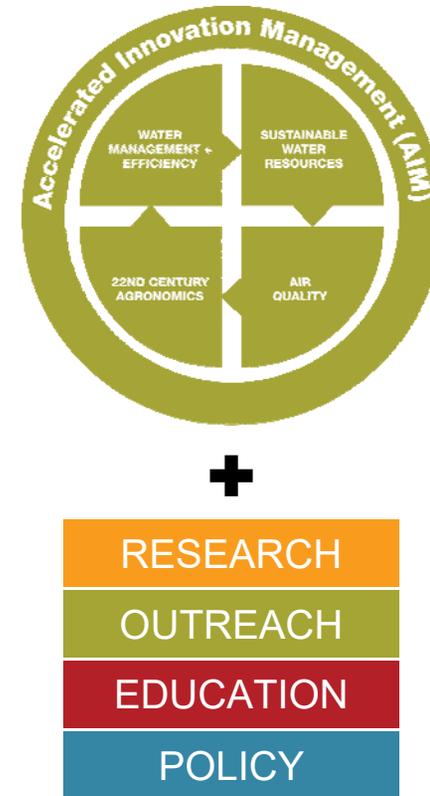
AIM: AIR
QUALITY



OPTIMIZING ALMOND BOARD RESEARCH PROGRAMS

While **AIM** enables the almond industry to accelerate innovation, it is underpinned with substantive goals that support advancement in **research, outreach, education and policy** across several key areas.

- 1 Orchard Irrigation and Nutrients
- 2 Tree, Rootstock
- 3 Harvesting
- 4 Almond Biomass, Co-Products, Energy
- 5 Soil Health Management
- 6 Pest Management
- 7 Food Safety
- 8 Pollination
- 9 Sustainability



Building the Almond Orchard of the Future

A sampling of research projects:

COUPLED GEOPHYSICAL SURVEYS FOR CRITICAL GROUNDWATER CHARACTERIZATION IN THE TULARE IRRIGATION DISTRICT

P. Nico & colleagues, Lawrence Berkeley Labs

- baseline measurements were done on de Groof orchard, Tulare, May 11
- group meeting with SusCon, TID, LBL, Stanford, UCD TBC for July 2017

UPDATES TO THE LIFE CYCLE (LCA) MODELING OF CALIFORNIA ALMOND PRODUCTION SYSTEMS: ENHANCED GROUNDWATER MODELING, SCENARIO ANALYSIS, AND NEW INDICATORS

A.Kendall & colleagues, UC Davis

- Collaboration with Land IQ to improve model/data.

ASSESSMENT OF ALMOND RESIDUAL BIOMASS AS SOIL AMENDMENTS FOR BIOSOLARIZATION C.

Simmons & colleagues, UC Davis

- lab results **VERY** promising for hulls & H/S mix

TREE ARCHITECTURE AND DEVELOPMENT OF NEW GROWING SYSTEMS

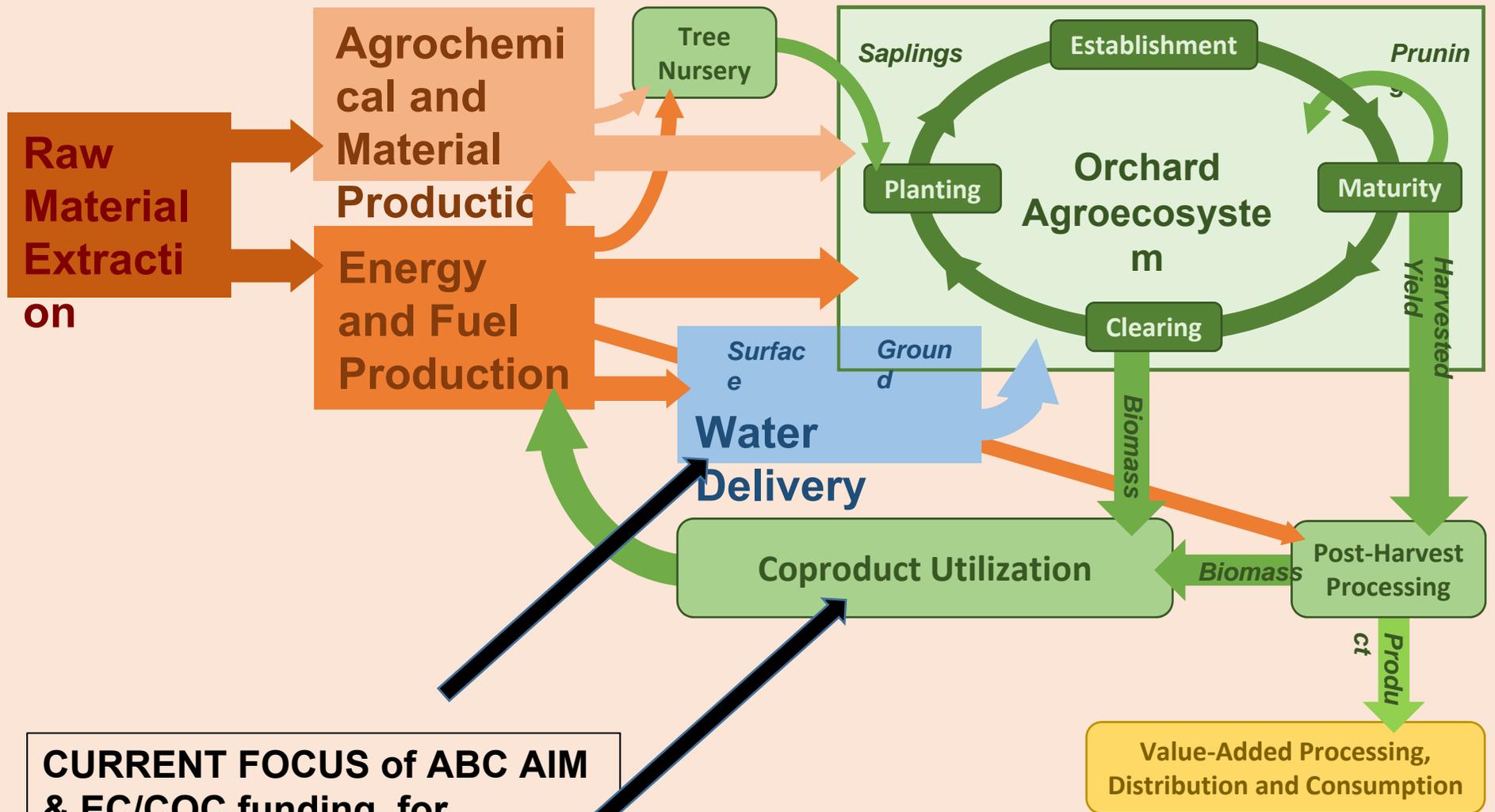
G. Thorp, Plant and Food Research Australia & US colleagues

- Drs Thorp & Wirthensohn were in CA early May, met with ABC and key research partners

SCALE UP PROJECT FOR TORREFACTION PROCESSING OF ALMOND SHELLS

- Results indicate that calorific (inherent energy) values of the torrefied shells showed that they contained roughly twice the energy values (in BTU/lb) of non-torrefied almond shells and roughly 70% of the energy of coal. Torrefied biomass makes feedstock for bioenergy go-generation.

UC Davis Almond Life Cycle Assessment Model



CURRENT FOCUS of ABC AIM & EC/COC funding for updating the UCD 2015 LCA modelling

Biomass, Harvesting, Soil Health Intertwined.....

Option	Woody Biomass	Fleshy Biomass
Disposal (short term)	<ul style="list-style-type: none"> Orchard recycling Soil amendment Fertilizer/composts Co-gen (old & new) 	<ul style="list-style-type: none"> Animal feed markets Orchard recycling Soil amendment
Value-Added (long term)	<ul style="list-style-type: none"> <u>Thermal</u> : biofuel, biochar, torrefied shells <u>Digestion</u>: biogas, biofertilizers <u>Others</u>: nanofibers, media/mulch, 	<ul style="list-style-type: none"> <u>Extraction</u>: sugars, bioactives, food/pharma <u>Biochemical conversion</u>: bioplastics, chemicals <u>Digestion</u>: insect feed, biofertilizers, biopesticides

- Orchard floor ecology may be improved
- New harvesting methods may be needed

What's upcoming with Crop of Choice....

Soil Health (& biomass)

- Possible summer field trial assessment of biosolarization with pollinator hulls & shells in commercial almond orchard prior to planting

Biomass (hulls & shells focus)

- Exploratory UCD Agr. Eng. project - insect feed for poultry -TBC
- Almond biochar in production for quality assessment and soil amendment testing
- Market access /regulatory issues related to exporting hulls underway
- Information/brainstorming session on greater uses of hulls for feed TBC

Harvesting

- 3 (north/central/south) harvest equipment/demo days planned for early Sept
- Development of protocol for possible retesting of PM 2.5 & 10 levels
- Exploring ability to harvest limited amount of almonds with catch frames with 2017 harvest - in order to evaluate hull/shell quality & applications

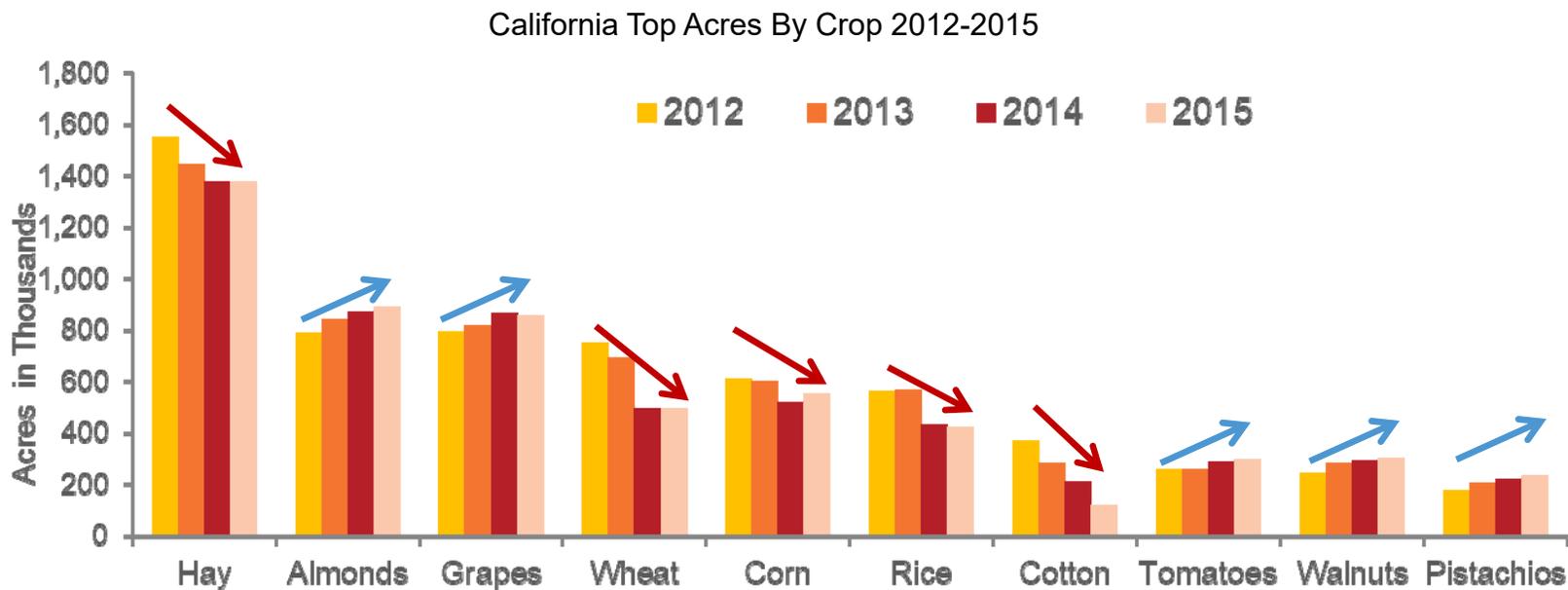
Rootstocks

- Research coordination meeting planned for July



Acreage, Production, Shipments

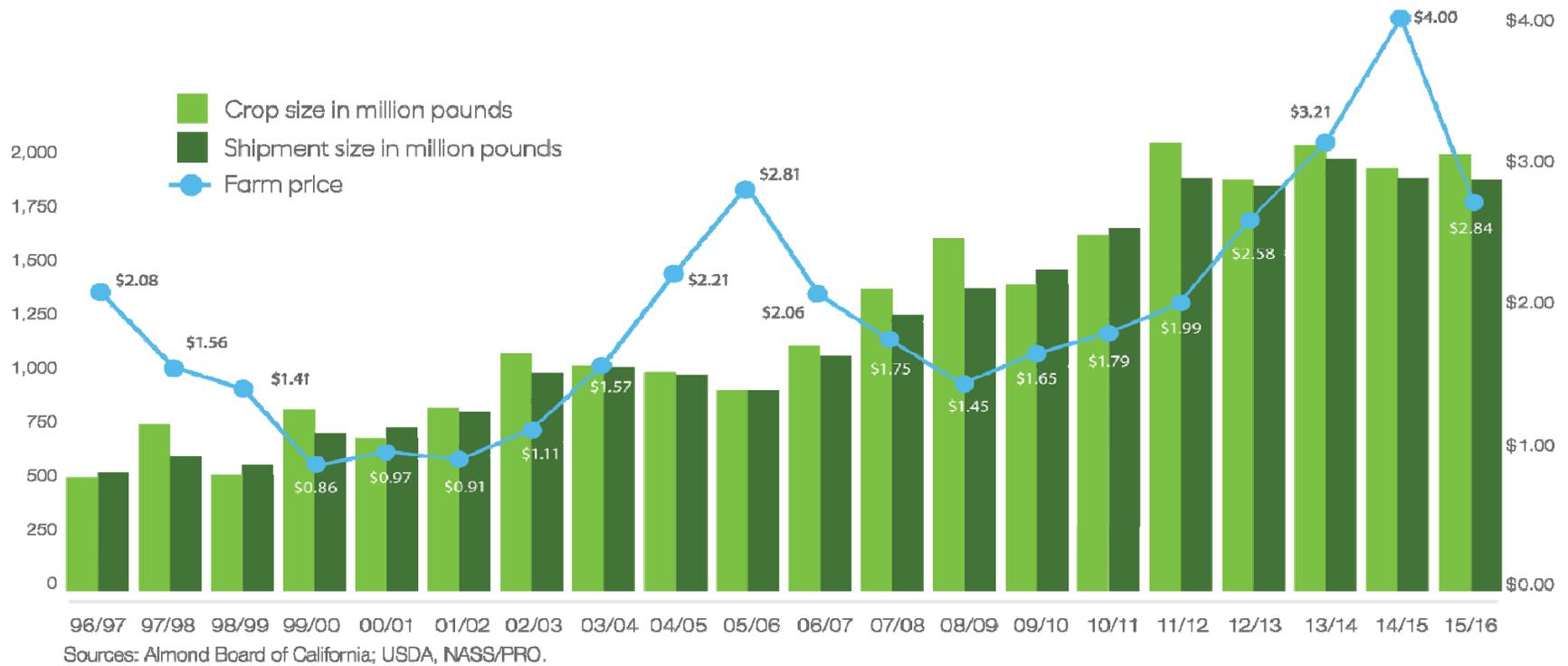
ACREAGE USAGE CHANGE OVER TIME



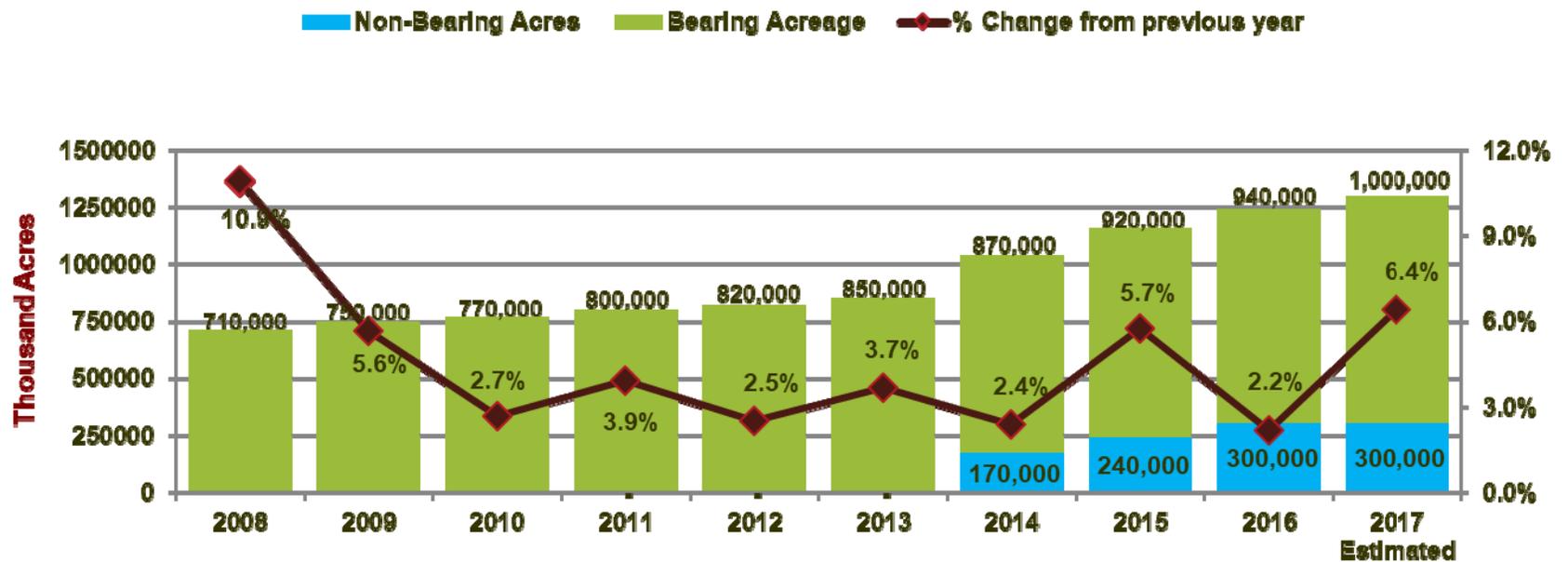
Source: USDA, NASS. †Value based on farm-gate prices. ‡This is the corn for grain value. Corn for silage value for 2014 not yet available.

HISTORICAL CROP SIZE + SHIPMENTS VS. FARM PRICE

CROP YEARS 1996/97–2015/16



CALIFORNIA ALMOND ACREAGE

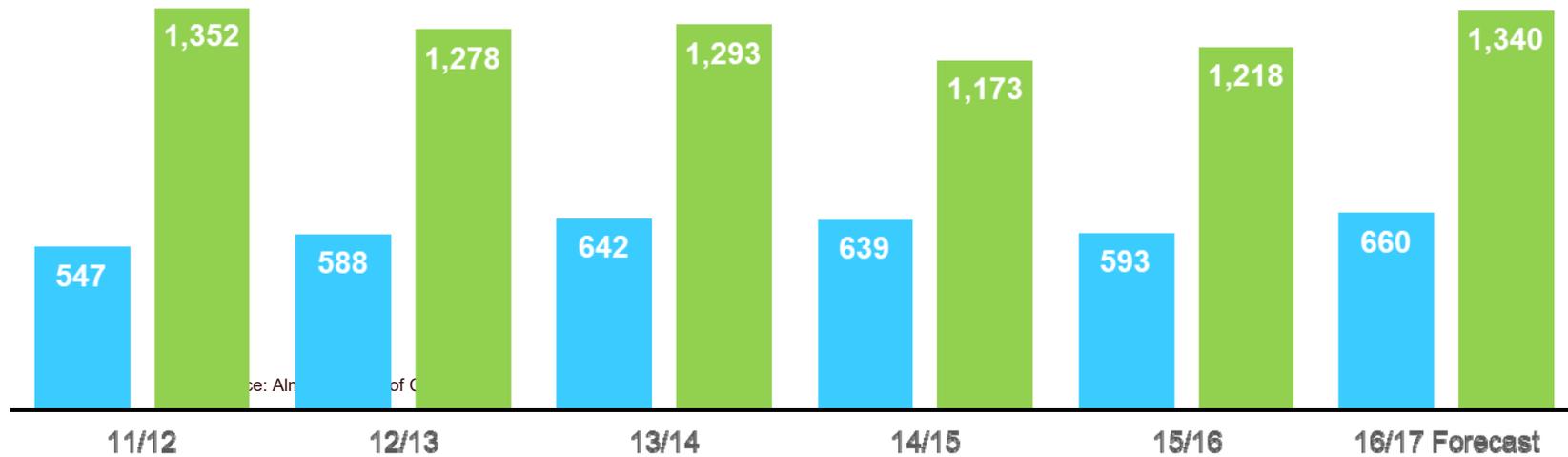


Source: USDA Agricultural Statistics Service, Pacific Region (NASS/PR) 2016 Acreage Report
 Source: USDA, NASS/PRO 2015 Acreage Report. *Non-bearing acreage available in April 2017. †Estimate.

DOMESTIC + EXPORT SHIPMENTS

In Million Pounds | 2011/2012 - 2016/17

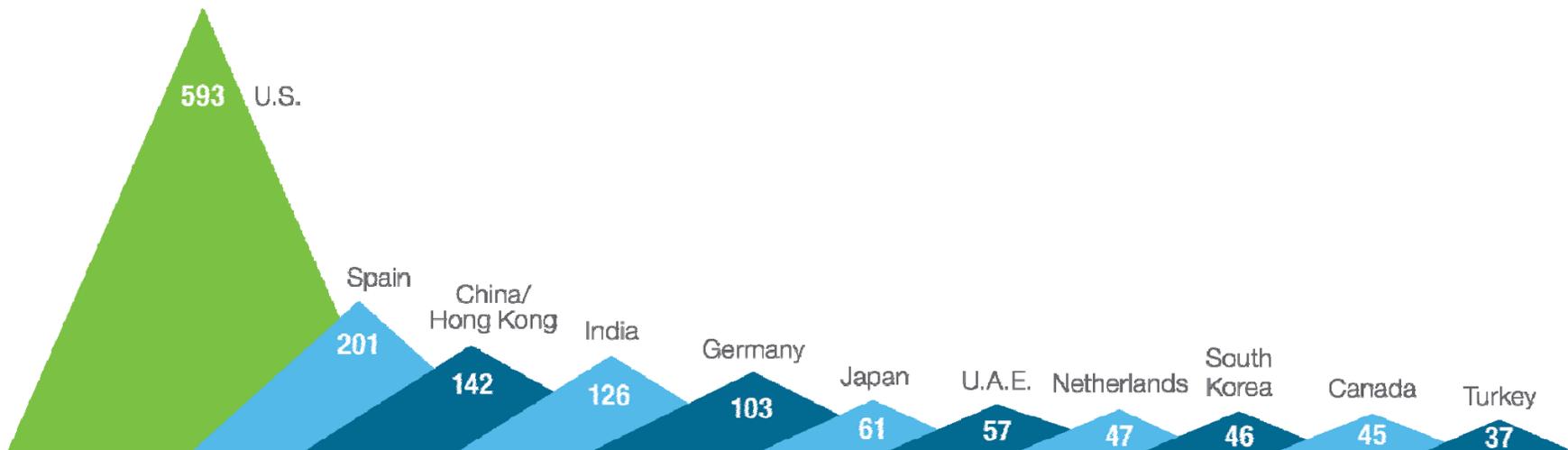
■ Domestic ■ Export



TOP WORLD DESTINATIONS

IN MILLION POUNDS | 2015/16

Top ten export markets represent 65% of total export shipments.



Source: Almond Board of California, July 2016 Position Report.

2016/2017 Year-To-Date (lbs.)

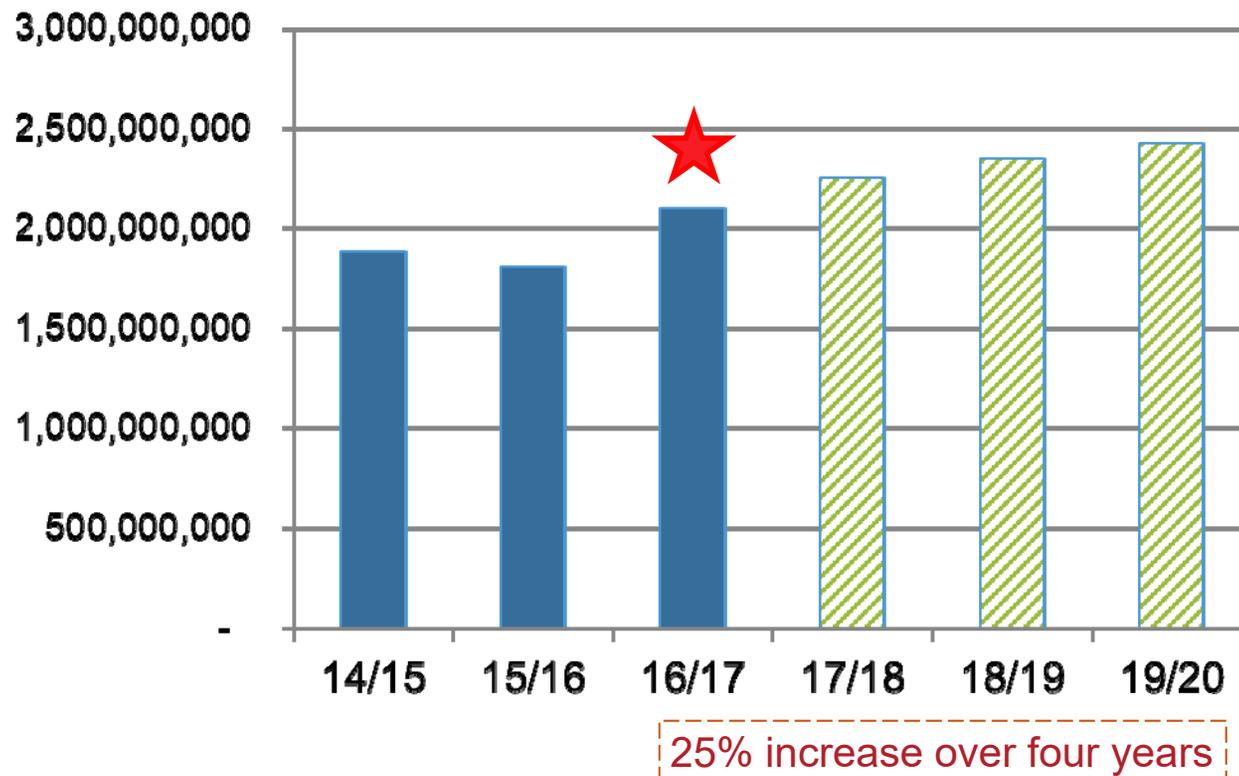
U.S.	553m
Spain	173m
China	135m*
India	148m
*Vietnam	40m

SHIPMENTS BY REGION – 2015/2016



Source: Almond Board of California.
Note: Totals may not add precisely due to rounding.

California Almond Production FY2014/2015 – FY2019/2020 Actual/Projections (Pounds)





QUESTIONS?



Thank You!!

Have a Great Almond
Quality & Food Safety
Symposium!!!