Growing Organic

December 8, 2015
Speakers

Harbinder Maan, Almond Board (Moderator)

Joanna Clifton, Innova Market Insights

Kelly Damewood, California Certified Organic Farmers

Franz Niederholzer, UCCE - Sutter, Yuba, Colusa Counties
Growing Organic

Joanna Clifton
Innova Market Insights
The Innova new product database

tracking New Product Launches = NPLs

>70 countries
The bridge between R&D and Marketing

R&D: science, patents, technology, formulation, ingredients, regulation

Marketing: products, trends, consumer insights, category monitoring, news, packaging
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• Organic growth for Clear Label
• Organic growth for Almonds
• Conclusions & insights
From clean to clear label
## Consumers look for fresh and less processed claims

### Top-10 claims for European consumers

<table>
<thead>
<tr>
<th>Claim</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh</td>
<td>64%</td>
</tr>
<tr>
<td>100% juice</td>
<td>61%</td>
</tr>
<tr>
<td>Natural/All natural</td>
<td>55%</td>
</tr>
<tr>
<td>Grown without pesticides</td>
<td>55%</td>
</tr>
<tr>
<td>No Preservatives</td>
<td>53%</td>
</tr>
<tr>
<td>GMO Free</td>
<td>53%</td>
</tr>
<tr>
<td>No artificial colors</td>
<td>50%</td>
</tr>
<tr>
<td>No artificial flavors</td>
<td>49%</td>
</tr>
<tr>
<td>Low in saturated fat</td>
<td>48%</td>
</tr>
</tbody>
</table>

### Top-10 claims for American consumers

<table>
<thead>
<tr>
<th>Claim</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh</td>
<td>57%</td>
</tr>
<tr>
<td>100% juice</td>
<td>54%</td>
</tr>
<tr>
<td>Whole grain</td>
<td>48%</td>
</tr>
<tr>
<td>No preservatives</td>
<td>45%</td>
</tr>
<tr>
<td>No trans fatty acids</td>
<td>45%</td>
</tr>
<tr>
<td>No artificial sweeteners</td>
<td>44%</td>
</tr>
<tr>
<td>Good source of fiber</td>
<td>44%</td>
</tr>
<tr>
<td>Grown without pesticides</td>
<td>44%</td>
</tr>
<tr>
<td>Vitamins and minerals</td>
<td>43%</td>
</tr>
<tr>
<td>High fiber</td>
<td>43%</td>
</tr>
</tbody>
</table>

*When shopping for foods, how important are the following statements on labels? Response: very/extremely*
Market penetration of clean label claims by region

- Clean label related claims show the highest market penetration in Australasia and North America.

Penetration of clean label claims* in product launches tracked by region

*Clean label related claims included: Natural, no additives/preservatives, organic
Clean label has moved past being a trend
From clean to clear label

Claims
Moving beyond clean label

From claim to information
“Natural” claims are not defined by regulation and confuse consumers. In response, some manufacturers and retailers have chosen to show lists of what ingredients are (not) in their products.

“Absolutely nothing artificial. No MSG, artificial flavors or colors. Seasoned with real food ingredients. Made using only sunflower oil.”

Ingredient labeling
More transparency

Consumers want to understand
Consumers want to know where ingredients come from (source of origin) and understand what is in the products they eat (understandability).

Ingredients: Select vegetables in variable proportion (parsnips, sweet potatoes, beetroot), sunflower oil, sea salt.
Consumers look for products they understand

- 37% of European respondents report decreased consumption of **processed foods**.
  - 86% of European consumers consider food and beverages processed when they have ingredients they don’t recognize or understand.

It is important on food ingredient labels that most of the ingredients are things I recognize and would use at home.

Source: Health Focus International 2014
Becoming more *transparent* towards consumers

- More and more manufacturers, retailers and QSRs are choosing to be transparent about their sourcing and production processes.

**From claim to information**

As worries regarding ingredients in certain processed foods spread on social media, manufacturers fight back with transparency.
Organic claims growth for Clear Label
Development of clean label related claims over time

- No additives/preservatives and natural claims are stabilizing.
- Organic claims experienced significant growth and surpassed natural claims.

Market penetration of clean label related claims* in global F&B new product launches tracked (2011-H1 – 2015-H1)

*Threshold

*Troubled
FDA Requests Comments on Use of the Term "Natural" on Food Labeling

Constituent Update

November 10, 2015

Because of the changing landscape of food ingredients and production, and in direct response to consumers who have requested that the FDA explore the use of the term “natural,” the agency is asking the public to provide information and comments on the use of this term in the labeling of human food products.

The FDA is taking this action in part because it received three Citizen Petitions asking that the agency define the term “natural” for use in food labeling and one Citizen Petition asking that the agency prohibit the term “natural” on food labels. We also note that some Federal courts, as a result of litigation between private parties, have requested administrative determinations from the FDA regarding whether food products containing ingredients produced using genetic engineering or foods containing high fructose corn syrup may be labeled as “natural.”

Although the FDA has not engaged in rulemaking to establish a formal definition for the term “natural,” we do have a longstanding policy concerning the use of “natural” in human food labeling. The FDA has considered the term “natural” to mean that nothing artificial or synthetic (including all color additives regardless of source) has been included in, or has been added to, a food that would not normally be expected to be in that food. However, this policy was not intended to address food production methods, such as the use of pesticides, nor did it explicitly address food processing or manufacturing methods, such as thermal technologies, pasteurization, or irradiation. The FDA also did not consider whether the term “natural” should describe any nutritional or other health benefit.

Specifically, the FDA asks for information and public comment on questions such as:

- Whether it is appropriate to define the term “natural.”
- If so, how the agency should define “natural,” and
- How the agency should determine appropriate use of the term on food labels.

The FDA is accepting public comments beginning on November 12, 2015. To electronically submit comments to the docket, visit http://www.regulations.gov and type FDA-2014-N-1207 in the search box.
Organic is *on trend* and is becoming established in the mainstream globally.
Kroger proves that organic is more than a clean niche

- Kroger’s Simple Truth range generated US$1.2 billion in sales in 2014.
Consumers associate organic with healthier products

% of respondents who believe that foods and beverages are healthier if they are organic (2014)

- USA: 75%
- France: 87%
- Germany: 92%
- United Kingdom: 75%

Source: Health Focus International 2014
Organic growth for Almonds
Organic shows growth for global NPLs with almonds

- 13.1% of global product launches with almonds were tracked with an organic claim in 2015-H1 compared to 5.3% in 2011-H1.

**Market penetration of organic claims in global new product launches tracked with almond (2011-H1 – 2015-H1)**

- 2011-H1: 5.3%
- 2012-H1: 5.4%
- 2012-H2: 8.8%
- 2013-H1: 7.7%
- 2013-H2: 6.3%
- 2014-H1: 8.0%
- 2014-H2: 10.3%
- 2015-H1: 9.1%
- 2015-H1: 13.1%
Growing interest drives consumption of organic foods and beverages (2014)

% of respondents who state that they have increased their consumption of organic foods and beverages (2014)

Source: Health Focus International 2014
North America and Western Europe share leading position

- Western Europe and North America are leading regions for NPL with (organic) almonds, and also in terms of the market penetration of organic claims.

### Market penetration of organic claims in new product launches tracked with almonds (2011-H1 – 2015-H1)

- **North America**
  - 6.4% 7.4% 7.6% 9.2% 9.4% 10.0% 12.1% 14.0% 14.9% 18.5%
- **West Europe**
  - 7.4% 10.0% 10.9% 9.2% 9.4% 10.0% 11.8% 14.9% 15.4% 18.1%
Private label drives organic into mainstream

• Key retailers in North America and West Europe are adding organic products or complete organic brands/ranges to their private label portfolio.
US: 1 out of 5 NPLs tracked with almonds is organic

- US leads NPL with almonds in absolute numbers, followed by Germany.
- Germany shows the highest market penetration of organic claims in NPL with almonds.

Organic product highlights from Anuga 2015

- Anuga 2015 showcased a great number of innovations, also in the organic hall – showing that organic is trending strongly.
Organic: Key claim for almond based dairy alternatives

• A growing share of almond based dairy alternative drinks is organic.

Market penetration of organic claims in top-5 market categories for NPL tracked with almonds
(Global, 2011-H1 – 2015-H1)
Organic as a marketing platform for almond drinks

Coop Naturaplan Mandel Drink: Almond Milk Drink (Switzerland, Oct 2015)

Pacific Organic Unsweetened Almond Non Dairy Beverage With Vanilla Flavor (United States, Aug 2015)

Rude Health Organic Ultimate Almond Drink (United Kingdom, Oct 2015)
Conclusions
Conclusions & insights

• **From clean to clear label:** Clean label has evolved into the clear label platform, with a strong focus on providing more transparency to consumers.

• **Organic growth for clear label:** Products with an “organic” positioning are showing the strongest growth among clean label related claims.

• **Organic considered to be healthy:** Consumers associate organic with health, although the debate about the actual health benefits will continue.

• **Organic growth for almonds:** Organic claims are also growing among new product launches tracked with almonds.

  – **North America and West Europe share leading position:** Nearly 1 out of 5 products tracked with almond has an organic claim in the US.

  – **Significant growth in dairy alternative drinks:** Organic is leveraged as a marketing platform for almond based dairy alternative drinks.
Kelly Damewood,
California Certified Organic Farmers
CCOF
(California Certified Organic Farmers)

Kelly Damewood, Policy Director
Who is CCOF?
Mission

To advance organic agriculture for a Healthy World
• Certification
• Education
• Advocacy
• Promotion
Certification Services, LLC

- Database
- Customer Service
- Transitional program
- Food Safety/ GLOBALG.A.P. certification
Trade Association

- Organic Standards
- Farm Bill
- State Regulations
Foundation

1. Organic Training
2. Future Organic Farmer Grant Fund
3. Hardship Assistance
4. Consumer Education
Who is CCOF?

Advancing organic agriculture from all angles
Organic 101
Organic Food Production Act of 1990

National Organic Program (NOP) & National Organic Standards

Accredited Certifying Agent, e.g. CCOF

Organic Producer

Public

National Organic Standards Board (NOSB)
• Healthy Soil
• Biodiversity
• Animal Welfare
• Non toxic Inputs
• No GMOs
• No antibiotics, hormones, steroids
Organic Materials

Material up for 5-year review

NOP adds, removes, or sustains material

Public Comment

NOSB Reviews

More Public Comment

NOSB recommends action to NOP

NOP adds, removes, or sustains material

Public Comment

NOSB Reviews

NOSB recommends action to NOP
The Organic Checklist
Learn the rules
☐ Check your materials
Plan for the 3-year Transition
Develop holistic management practices
Create a recordkeeping system
Check postharvest requirements
Label your organic product
Apply for Organic Cost Share
Create an Organic System Plan (OSP)
Complete your application & inspection
CCOF Tools

• 10 Steps to Certification

• ccof.org

• Certified Transitional Program

• Call Jane Wade! 831-423-2263
Other Resources

- ATTRA – The National Sustainable Agriculture Information Service (www.attra.ncat.org)
- Organic Certification Cost Share Programs (bit.ly/CostShare)
- Organic Trade Association’s How to Go Organic (www.howtogoorganic.com)
- eOrganic (bit.ly/eOrganic)
- Natural Resources Conservation Service (NRCS, bit.ly/N-R-C-S)
- Agricultural Cooperative Extension System (bit.ly/Ag-Coop-Extension)
Connect with Organic Producers
CCOF
Chapters
2016 CCOF Annual Conference

Sheraton Grand
Sacramento Hotel,
February 29, 2015

https://www.ccof.org/blog/blueprint-organic-world-2016-annual-meeting-and-conference
Support the
Fair Organic Farming Act
Update California’s State Organic Law
California has the *only* State Organic Program
California Organic Producers

1. Pay more fees

2. Complete more paperwork

3. Comply with more regulations
The Fair Organic Farming Act

Prohibit Fees and Registration on Certified Organic Producers

Create Opportunities for the California Department of Food and Agriculture to partner with Organic.
Organic Standards

NOP

Certifier

California

Certifier

Other States
So what next?

1. Reach out to Jane Wade, jwade@ccof.org.

2. Connect with organic producers.

Kelly Damewood, Policy Director
kdamewood@ccof.org
831-346-6254

Jane Wade, Applicant Support
jwade@ccof.org
831-423-2263
Getting into organic almond production...
Getting into organic almond production...
Organic farmers have a limited toolbox.
Getting into organic almond production…

Start from scratch (plant new orchard)?

Or

Transition an existing orchard from conventional to organic?
Transition decision: Key points to consider

• Are you ready for a challenge?
• Is your operation/staff/PCA ready for a challenge?
• Do you have disease sensitive varieties?
• Do you have late harvesting varieties?
• What’s your rootstock?
• How isolated is your orchard from other pest sources?
## Transition decision: Key points to consider

<table>
<thead>
<tr>
<th>Disease</th>
<th>Butte</th>
<th>Carmel</th>
<th>Fritz</th>
<th>Mission</th>
<th>Monterey</th>
<th>Non-Pareil</th>
<th>Padre</th>
<th>Sonora</th>
<th>Ruby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown Rot</td>
<td>VS</td>
<td>VS</td>
<td>S</td>
<td>SR</td>
<td>S</td>
<td>SR</td>
<td>S</td>
<td>VS</td>
<td>VS</td>
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<tr>
<td>Anthracnose</td>
<td>S</td>
<td>S</td>
<td>VS</td>
<td>S</td>
<td>VS</td>
<td>SR</td>
<td>S</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Shot hole</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>--</td>
<td>VS</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Alternaria leaf spot</td>
<td>VS</td>
<td>VS</td>
<td>VS</td>
<td>S</td>
<td>SR</td>
<td>VS</td>
<td>SR</td>
<td>VS</td>
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<td>Scab</td>
<td>S</td>
<td>VS</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>--</td>
<td>VS</td>
<td>VS</td>
</tr>
</tbody>
</table>

VS = very susceptible  S = susceptible  SR = somewhat resistant  -- = no information
Transition decision: Key points to consider
Organic almond production is not conventional

- Going from conventional, micro-irrigated almonds to organic is challenging.
- Fertigating with organic fertilizers can be challenging.
- Get ready for fertilizer sticker shock.
- No effective controls for summer disease (except rust).
- No fumigation options.
- No cost-effective organic herbicides.
Case study: Organic almond production from the ground up at Nickels Soil Lab. Arbuckle, CA

- Site: Class 2-3 soil on rolling terrain, west of I-5 near Arbuckle, CA
- Planted by John Edstrom, Bill Krueger and Stan Cutter.
- Lovell rootstock; 75% NP & 25% Fritz. 16’ X 22’ planting.
- Every 4th tree in every row is a Fritz. Every NP has 2 Fritz adjacent.
- Double-line buried drip irrigation. No Treflan in organic hose.
- Not certified organic, but all practices/materials are certified organic.
- Half of the organic demo trees were started conventional and transitioned to organic, half were started as organic.
Program to date...
Program to date...

- Weed control by propane burner and mowing. Weed cloth tested, but abandoned in 2011.
- Nutrition via unincorporated compost until 2012, then switched to injected 4-0-2. Plugging has been an issue.
- Summer disease control improved starting in 2012 with summer sulfur sprays – also helped control mites. [2011-2015 were dry years.]
Good production under organic management has been achieved after rust controlled in 7\textsuperscript{th} leaf.

<table>
<thead>
<tr>
<th>Leaf</th>
<th>Year</th>
<th>Conventional (lbs./acre)</th>
<th>Organic (lbs./acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4\textsuperscript{th} leaf</td>
<td>2009</td>
<td>1076</td>
<td>926</td>
</tr>
<tr>
<td>5\textsuperscript{th} leaf</td>
<td>2010</td>
<td>1725</td>
<td>859</td>
</tr>
<tr>
<td>6\textsuperscript{th} leaf</td>
<td>2011</td>
<td>2358</td>
<td>894</td>
</tr>
<tr>
<td>7\textsuperscript{th} leaf</td>
<td>2012</td>
<td>2438</td>
<td>957</td>
</tr>
<tr>
<td>8\textsuperscript{th} leaf</td>
<td>2013</td>
<td>2971</td>
<td>2113</td>
</tr>
<tr>
<td>9\textsuperscript{th} leaf</td>
<td>2014</td>
<td>2450</td>
<td>1528</td>
</tr>
<tr>
<td>10\textsuperscript{th} leaf</td>
<td>2015</td>
<td>2630</td>
<td>2079</td>
</tr>
</tbody>
</table>
Similar NP reject levels possible with good management/location.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Pickup date</th>
<th>How many NOW generations</th>
<th>% Worms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Nonpareil</td>
<td>Aug 26</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Conventional Nonpareil</td>
<td>Aug 26</td>
<td>3</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Late harvesting varieties are more vulnerable than earlier harvesting varieties.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Pickup date</th>
<th>How many NOW generations?</th>
<th>% Worms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Nonpareil</td>
<td>Aug 26</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Organic Fritz</td>
<td>Oct 6</td>
<td>4</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Success and challenges of organic production (at this good organic location)

<table>
<thead>
<tr>
<th>Management</th>
<th>Success</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Insect/mite</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Weed</td>
<td></td>
<td>X (?)</td>
</tr>
<tr>
<td>Nutrient (N)</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

What will El Nino do to this “Success”?
Weed management in organic production is challenging.
Propane burners help control weeds in the tree row.
Increased yield can challenge fertility program(s)
Getting into organic almond production…

Start from scratch (plant new orchard)?

Or

Transition an existing orchard from conventional to organic?
Location, varieties and orchard system are key to successful organic almond production.

- Not all good locations for almond production are good locations for organic almond production.
- Plant trees in the direction of prevailing winds
- Avoid late harvesting and/or disease sensitive varieties
- Shelter organic blocks within conventional blocks?
- Consider organic almond farming a different crop from conventional production.
- Weather can be the wild card.
Not all good locations for almond production are good locations for organic almond production.

% Relative Humidity

- North County (E-W)
- Nickels (N-S)
Know the risks, know your operation. Don’t make long term decisions based on short term information.

Thank you.