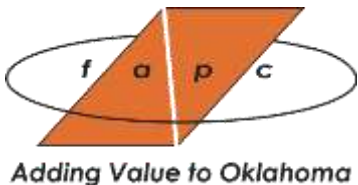




Where Does 3-A Fit?: Emerging Industry Needs

Timothy J. Bowser, Ph.D., P.E.
Associate Professor
Oklahoma State University

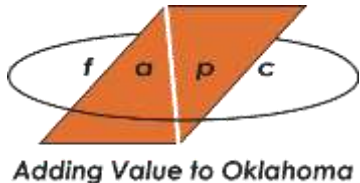
Robert M. Kerr Food & Agricultural Products Center
Biosystems & Agricultural Engineering Dept.
bowser@okstate.edu; 405-744-6688
3-A SSI Annual Meeting, 2012



Outline

1. 3-A strengths
2. Emerging industry needs
3. Needs of specific industries
4. Conclusions & recommendations

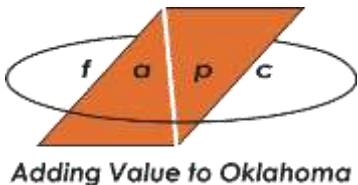
Food Industry
FSMA



3A Strengths



- Independent, non-profit
- Promote food safety, public health
- Represent: sanitarians, equipment fabricators & processors
- Third party verification: symbol authorization, conformance evaluation, certification



Emerging Industry Needs

- Trustworthy partner –help with FSMA
- Improved food safety (meet & exceed FSMA)
- Better cleanability
- Speed
- Security
- Reliable information



Industry Needs & 3-A Strengths

Is there a match?

Industry Needs

- Trustworthy partner
- Improved food safety
- Better cleanability
- Speed
- Security

3-A Strengths

- Independent, non-profit
- Promote food safety
- Represents: sanitarians, equipment fabricators & processors
- Third party verification: education and accreditation programs



Industry Needs

Trustworthy partner

- 3rd Party Audit
- Training
- Standards



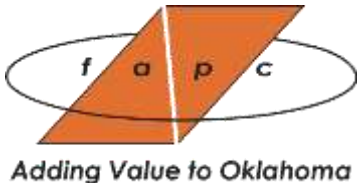
Industry Needs

Trustworthy partner; 3rd Party Audit:

“Consider 2nd and 3rd party audits to prepare for FDA certification”

Deloitte, LLP (2011)

Deloitte.



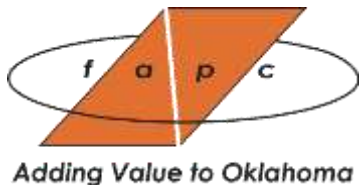
Industry Needs



Trustworthy partner; Training:

...there is one other control the FDA will scrutinize, and it is one that may have as much weight as all the others –**training**.

Laura Nelson, Industry Relations, Alchemy Systems, LP (Nelson, 2011)

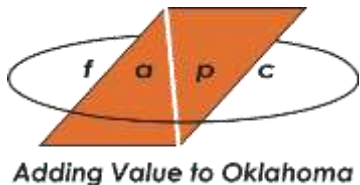


Industry Needs

Trustworthy partner; Training:

AIB International is working on its next equipment and design workshop focusing on allergens and pathogens. “This will focus on how equipment can be better designed for easier and more thorough cleaning”

Maureen C. Olewnik, Ph.D., VP Audit and Technical Services, AIB (White, 2012)

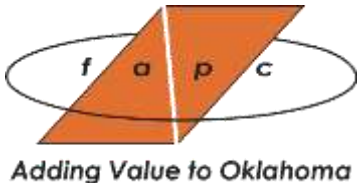


Industry Needs

Trustworthy partner; Training:

“...the legislation directs the Secretary of Health and Human Services to improve **training** of state, local, territorial and tribal food safety officials and authorizes grants for **training**, conducting inspections, building capacity of labs and food safety programs...”

Margret A Hamburg (2011), MD, Commissioner of Food and Drugs



Industry Needs

Trustworthy partner; Standards:

- Good news
- Not so good news



Industry Needs

Trustworthy partner; Standards:

Not so good news...

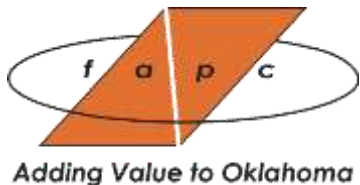
From Meat Equipment Manufacturers

We don't want a new sanitary standard.

Interview with Tom Mazuchowski

VP Engineering, Cozzini, LLC.

(Bowser, 2012)



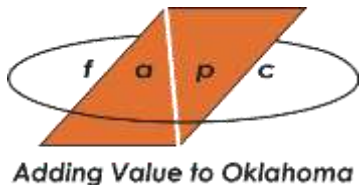
Industry Needs

Trustworthy partner; Standards:

Bakers

“This past year has been an exciting one for the baking industry, especially in terms of the progress made on revising the ANSI/ASB Z50.2 (formally referred to as the BISSC Standard)”

Robb MacKie, President and CEO, American Bakers Association (MacKie, 2012)



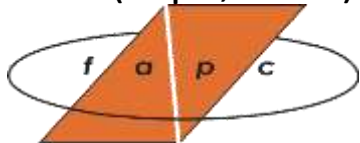
Industry Needs

Trustworthy partner; Standards, Equipment:

“...ask the equipment manufacturer about any certifications they have attained, such as that of the USDA, NSF, or BISSC. Although these certifications may not be required for many installations, the certification provides an assurance that the manufacturer conforms to specific standards.”

Ben Trustem, Applications Engineering Manager,
Arrowhead Systems

(Lupo, 2012)



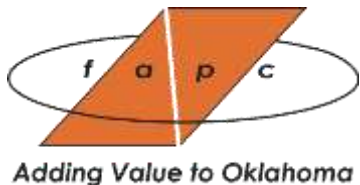
Adding Value to Oklahoma



Industry Needs

Trustworthy partner: Standards:
Emerging needs for guidance...

- Animal food
- Grain and oilseed milling
- Confectionary manufacturing
- Fruit and vegetable
- Snacks and condiments
- Transportation

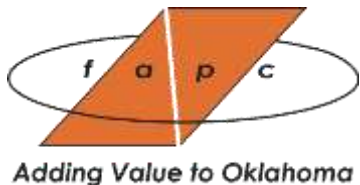


Industry Needs

Improved Food Safety:

...processors of **all types** of food will now be required to evaluate the hazards in their operations, implement and monitor effective measures to **prevent** contamination, and have a plan in place to take any corrective actions that are necessary.

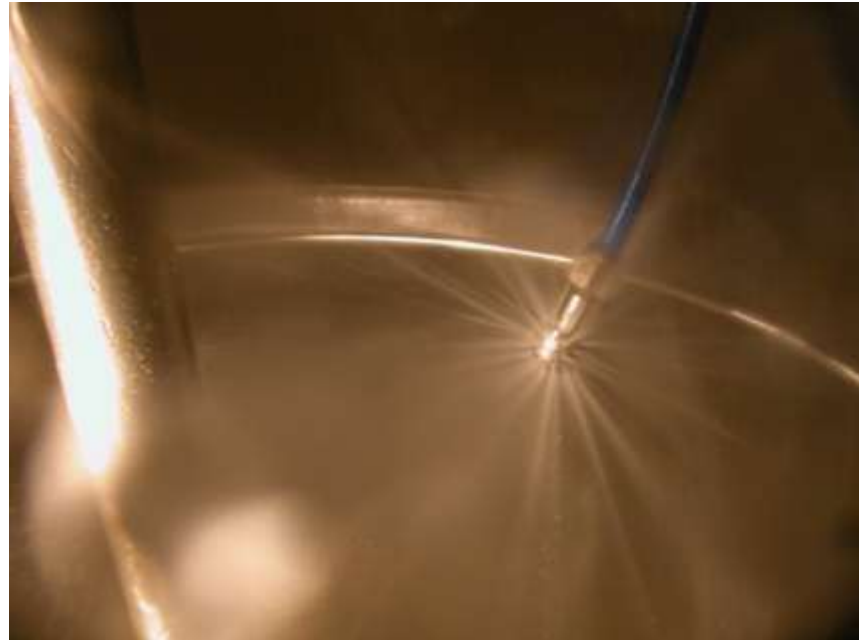
Margret A Hamburg, MD, Commissioner of Food and Drugs (Hamburg, 2011)



Industry Needs

Better cleanability

- Equipment
- Facilities



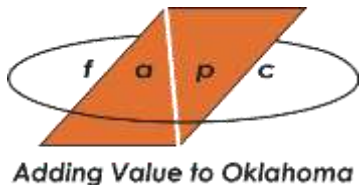
Industry Needs

Better cleanability; Equipment

“The Food Safety Modernization Act (FSMA) has changed the game for US packaging machinery manufacturers by obliging them to rethink their design strategies.”

Jim Pittas, Packaging Machinery Manufacturing Institute (PMMI) VP Trade Shows

(Harrington, 2012)



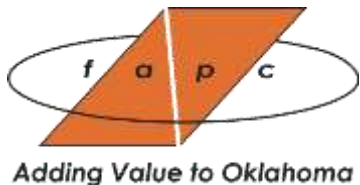
Industry Needs

Better cleanability; Equipment:

“It’s one of our highest priorities right now, there are so many unknowns, and the industry is trying to work through it. From an equipment standpoint, manufacturers are doing all they can to get in compliance.”

Kerwin Brown, Baking Equipment Manufacturers and Allieds (BEMA) President and CEO

(White, 2012)



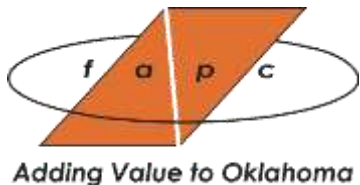
Industry Needs

Better cleanability; Equipment

"...bakers may need to invest in new equipment and facilities to meet the FSMA's regulatory requirements. ...retrofitting or replacement of some pieces of processing equipment."

Gale Prince, founder and president of Cincinnati-based Sage Food Safety Consultants

(White, 2012)



Industry Needs

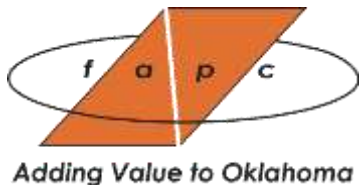
Better cleanability; Equipment:
Reality Check...



We aren't interested in adding costs to our products without adding value.

Interview with Tom Mazuchowski, VP Engineering,
Cozzini, LLC

(Bowser, 2012)



Industry Needs

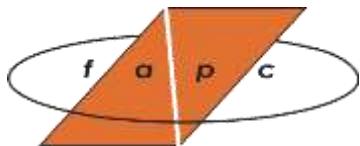
Better cleanability; Facilities:

“Combating product contamination may occur not only at the equipment level but also at the factory level.”

“The facility infrastructure can be so designed and constructed that it cannot contaminate food products...”

Frank Moerman, Chairman, EHE

(Moerman, 2010)



Adding Value to Oklahoma



Industry Needs

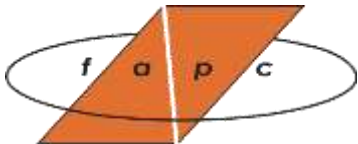
Speed:

- Product throughput
- Changeover
- Cleanup
- Maintenance
- Transportation
- Lab tests



Industry Needs

Speed?



Adding Value to Oklahoma



Industry Needs

Speed; Lab tests:



“FDA Director Margaret Hamburg says it will be a priority of FSMA to ‘increase the capacity of labs and food safety programs.’”

“The end result: more testing on site. And a greater need for faster results that deliver the accuracy and reliability of the lab.”

Searchlight™ biosensor

www.capwavesensors.com



Industry Needs

- Security
 - Intentional contamination
 - Peace of mind (?)

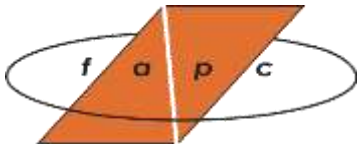


Industry Needs

Security; Intentional contamination:

- Regulations forthcoming
- Apply only to food in bulk or batch form (prior to packaging)
- Must be high-risk cases

(United Fresh Produce Assoc., 2011)



Adding Value to Oklahoma

Burchtank.com



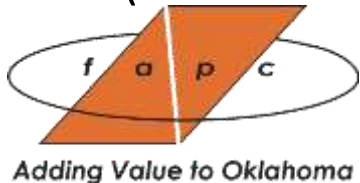
Industry Needs

Security; Intentional contamination:

Vulnerability Assessments for intentional adulteration of food by FDA and Department of Homeland Security (DHS)

- Consider risks and costs
- Determine the science-based protection strategies

(United Fresh Produce Assoc., 2011)



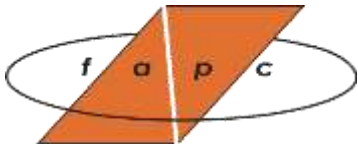
Industry Needs

Security; Peace of mind:

“This [Mandatory recalls by the FDA] is probably the most chilling issue a manufacturer can face... Now, the agency can order a food product recalled if there is a reasonable probability the food is adulterated or misbranded.”

Greg Wharton, VP Sales

www.leeind.com



Adding Value to Oklahoma



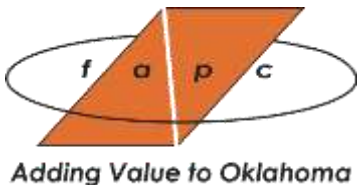
Industry Needs

Reliable information; Customized HACCP plan development based on:

- Regulations
- Literature

74% of all food processors are referencing literature –up from 47% last year

Krystal Gabert, Editor, Food Manufacturing (2012)



FOOD
Manufacturing®



Specific Industries

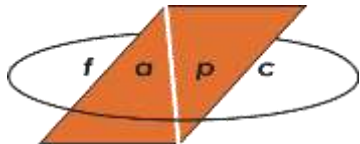


Inspection equipment:

“As knowledge becomes more widespread about how food safety can add to the efficiency and overall productivity of manufacturing operations more companies will take advantage of that capability.”

Robert Rogers, Mettler Toledo, Product Inspection Group

www.us.mt.com



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Specific Industries

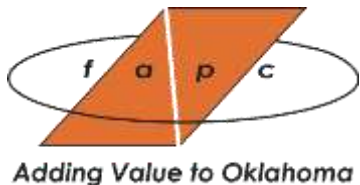
Pet Food:



“The pet food industry has customers with high expectations.” “The melamine contamination of pet food in 2007 is a good example; we received more than 14,000 reports in the first four weeks after the contamination was discovered.”

Michael Taylor, Deputy Commissioner for Foods,

FDA (2012)



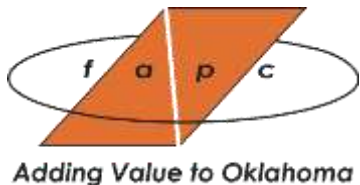
Specific Industries



Pet Food:

Salmonella must be controlled in pet food not because it can harm cats and dogs but because it could affect humans through cross contamination if mishandled in the home.

Michael Taylor, Deputy Commissioner for Foods,
FDA (2012)



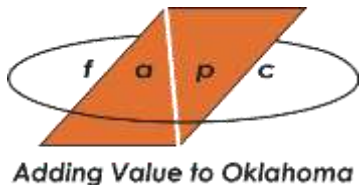
Specific Industries

Bakery:

Bama is extensively pursuing training/education at all levels

Interview with Randy Roark, VP Engineering,
Bama Companies, Inc.

(Bowser, 2012b)



Specific Industries

Bakery; Reality check...

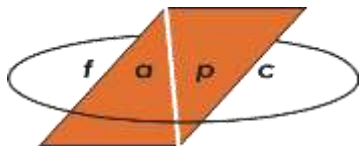
Is 3-A in the front any more?

Can 3-A help with systems issues?



Interview with Randy Roark, VP Engineering,
Bama Companies, Inc.

(Bowser, 2012b)



Adding Value to Oklahoma



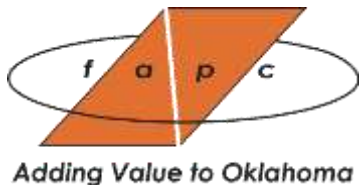
Review



In view of the FSMA:

- Where does 3-A fit?
- What are the emerging needs of industry?
- Can 3A meet needs with strengths?

Food Industry
FSMA



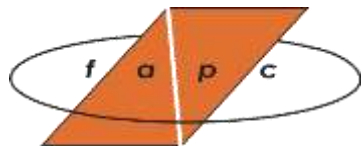
Abundant Match!

Emerging Industry Needs

- Trustworthy partner →
- Improved food safety →
- Better cleanability →
- Speed →
- Security →

3-A Strengths

- Independent, non-profit
- Promote food safety
- Represents: sanitarians, equipment fabricators & processors
- Third party verification: conformance, certification, authorization



Adding Value to Oklahoma



Conclusion 1

3-A is a **trustworthy partner:**

- Independent, non profit
- Longstanding
- Respected expertise
 - Training
 - 3rd party audit
 - Standards development



Conclusion 2

3-A promotes **improved food safety**:

- Highly focused
- 3-A mission statement
- Global scope
- Well-positioned to assist

industry with emerging needs



Conclusion 3

3-A can be a leader to industry for cleanability:

- Equipment
 - Components
 - Systems
 - Legacy
- Facilities



Conclusion 4

3-A can help meet emerging industry needs:

- Speed
- Security
- Reliable information



Recommendations

1. Prepare for unprecedented growth & demand for services
 - Hire
 - Acquire
 - Partner
2. Boost knowledge center
3. Expand third party verification programs & resources



Recommendations

4. Streamline standards development and implementation processes

- Reduce time
- Simplify



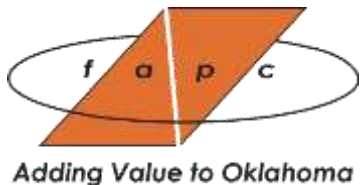
5. Extend training and educational outreach

- Distance learning
- Classroom/laboratory
- Workplace



Recommendations

6. Seek and serve industries with emerging needs, like pet foods
7. Shamelessly promote 3-A
 - Discover and open new markets
 - Find effective promotion techniques
 - Highlight benefits with documented case studies



Questions?



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