

Evaluating Need and Specific Skills Desired by Industry for a Feed Mill Program

Presented by: Andrew 'Dewey' Mann, PhD



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Overview of Presentation

- Institutional and College Structure
- Project Team
- Purpose of the Study
- Summary of Results and Findings
- Future Action Items

STRUCTURE OF THE OHIO STATE UNIVERSITY

- 18 Colleges and Schools, consisting of the Columbus campus, Agricultural Technical Institute (ATI) in Wooster, OH, and four regional campuses
 - All campuses (5-yr average) = 66,128 total students
 - 52,315 Undergraduate students
 - NFYS at Columbus (5-yr avg) = 7,375, w/ avg. ACT = 29.3
- College of Food, Ag. and Environ. Sciences (CFAES)
 - ATI – Wooster = 714 students
 - A regional campus, technical school, and community college
 - “Ohio State ATI is the associate-degree-granting academic unit within CFAES.”

INITIAL PROJECT TEAM

***Dewey Mann**

- Lecturer in the Department of Food, Agricultural and Biological Engineering – Columbus

***Sara Mastellar**

- Assistant professor (animal nutritionist) in the Division of Ag Engineering & Tech – ATI

***Kim Hostetler**

- Associate Professor (Ag. Business) & Business Technologies Coordinator – ATI

***John Foltz**

- Chair of the Department of Animal Science – Columbus

***Scott Shearer**

- Chair of the Department of Food, Agricultural and Biological Engineering – Columbus

^Ken Scaife

- Outlying Agricultural Research Stations, Assistant to the Director – OARDC

^Jack Bardall

- Feed Mill Manager – OARDC

^Jera Oliver

- Associate Director of Development

***Author**

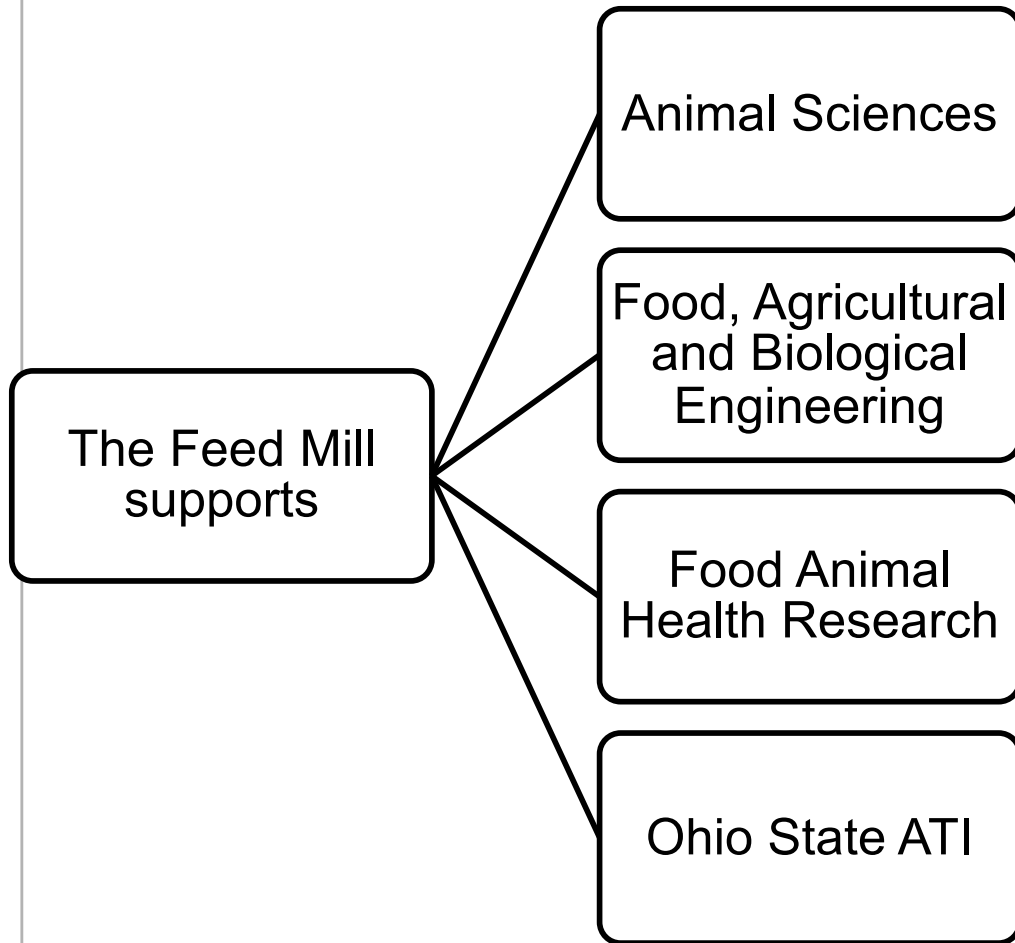
^Contributor

PURPOSE OF THE STUDY

- Survey to determine:
 - Demand for graduates and potential starting salaries
 - Industry preferences regarding curriculum priorities
 - Potential availability of internships
- Partnered with Ohio AgriBusiness Association (OABA), and Feed & Grain Magazine



FEEDSTOCK PROCESSING RESEARCH FACILITY



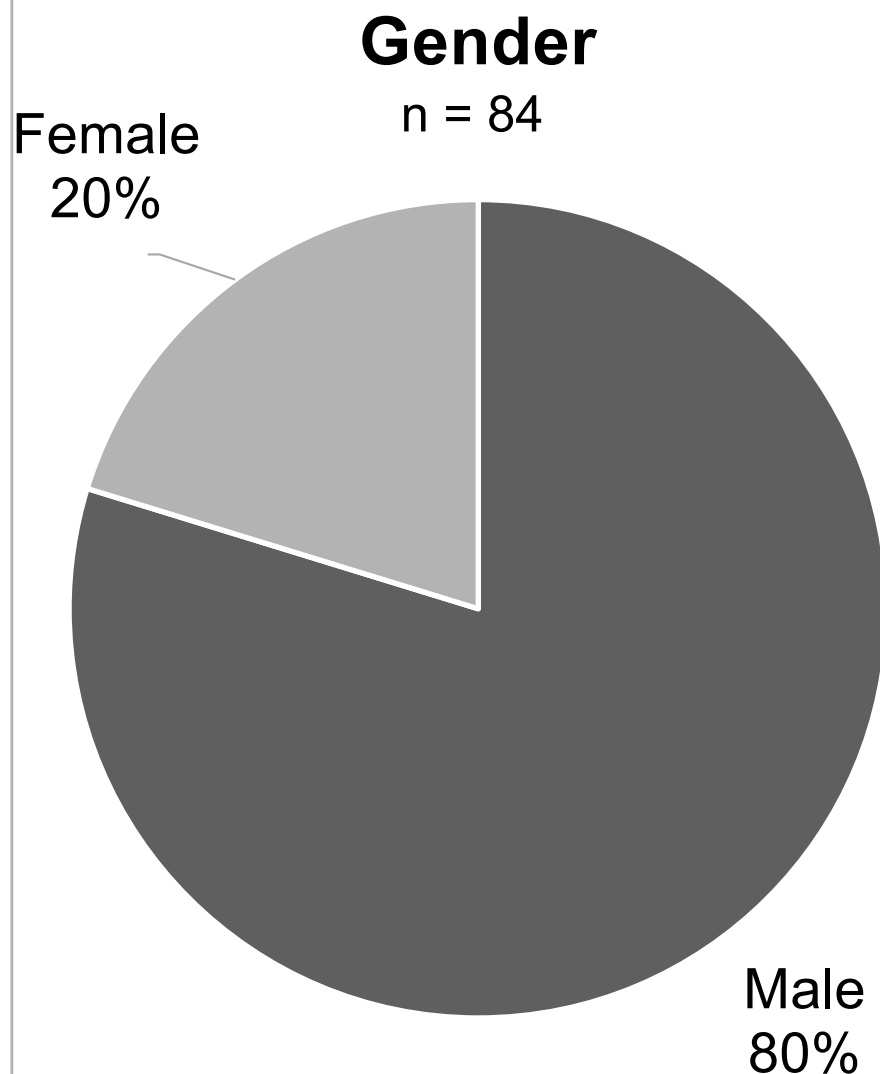
<https://researchoperations.cfaes.ohio-state.edu/wooster-ag-facilities/feed-mill>



INITIAL PHASE

- The curriculum was initially drafted as a specialization in the existing Associate of Applied Science Business Management program
- **Project team created a 28 item survey**
- Goals were to identify needs to start program:
 - Curriculum (Certificate, A.A.S. vs. A.S. -> B.S.)
 - Personnel
 - Infrastructure
 - Scheduling around research obligations at OARDC feed mill

Results: Demographics



- Avg age of respondent (n = 78): 48 ± 13.73 yrs
- # of employees at company (n = 76): 581 ± 3762



& Canada, Jamaica, worldwide

Results: Demographics

- Respondent responsible for hiring and/or managing?

#	Answer	%	Count
1	Hiring	2.04%	1
2	Managing	28.57%	14
3	Hiring and managing	67.35%	33
4	Other: _____	2.04%	1
	Total	100%	49

Results: Internships

- Does your organization provide internships?

#	Answer	%	Count
1	Yes	62.22%	28
2	No	35.56%	16
3	Unsure	2.22%	1
	Total	100%	45

- How are interns recruited?
 - Colleges, Universities (15, 53.6%)
 - “Word of mouth” (2, 7.14%)
 - “new program started this year; received an unsolicited resume for an intern position and created a position...” (2, 7.14%)

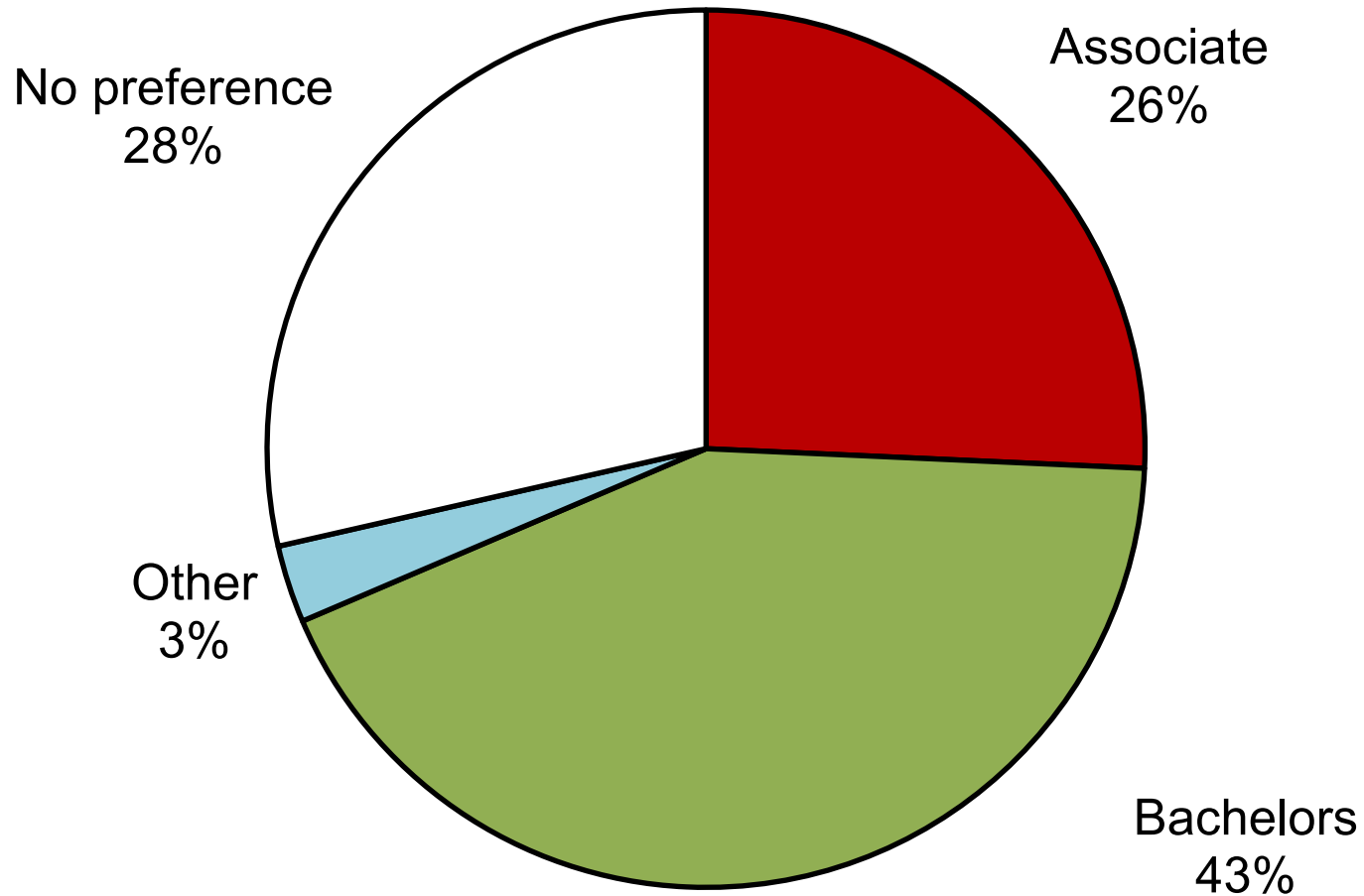
Results: **New hires**

- How does your organization recruit candidates for ENTRY LEVEL positions?

Response	%	Count
Hiring agencies (ex. Indeed/Monster)/ Head hunters	29.0%	18
Company website/Newspaper/Ads	24.2%	15
Word of mouth/Referrals	16.1%	10
<i>OTHER: Campuses (11.3%), Social Media (6.5%), Work program-high school (4.8%)</i>	30.6%	19
Total	100%	62

Results: **New hires**

- Which degree would you prefer to see on a resume?
(n = 35)



Results: Demand

- Approximately how many hires per year does your company make for positions that a(n) [A.S./B.S. degree] and feed milling expertise would be appropriate? (n = 34)

	Associate's degree (2 year)	Bachelor's degree (4 year)
Average \pm SD	2 \pm 4.1	1 \pm 1.9
Min., Max.	0 - 25	0 - 7

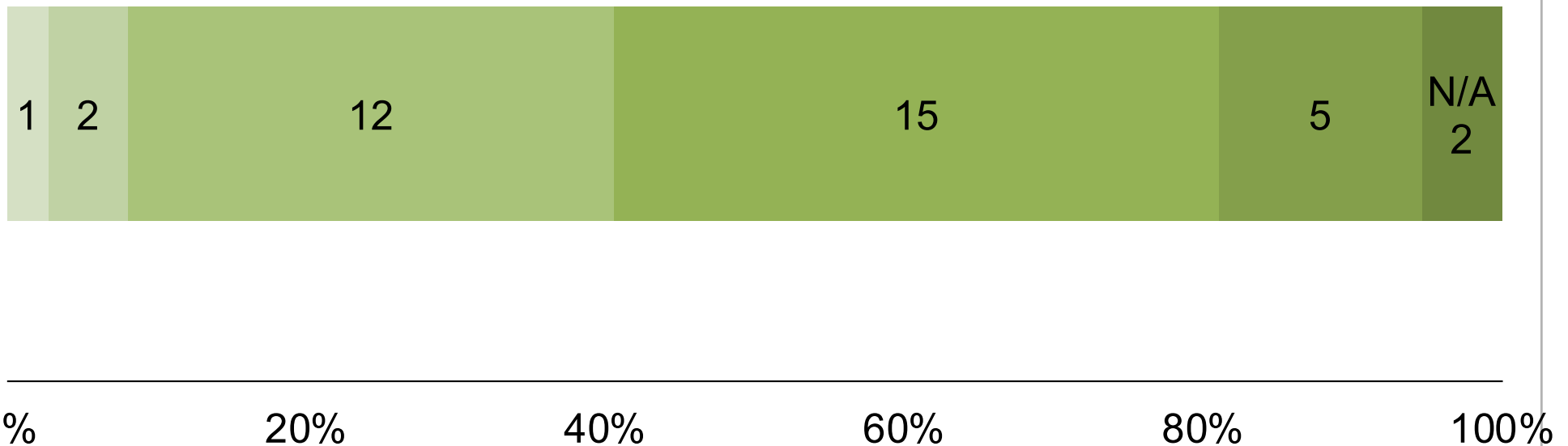
- What do new hires make with your organization? (n = 34)

	Salary (All)	Benefits value
Average \pm SD	\$33,379 \pm 13,664	\$11,621 \pm 9,403
Min., Max.	\$20,000 - \$60,000	\$3,000 - \$40,000

Results: Demand

- How difficult is it for your organization to fill ENTRY LEVEL feed milling positions? (n = 37)

Very easy Easy Neither easy nor difficult Difficult Very difficult N/A



Results: Curriculum

- Rank the following courses in their importance to a graduate of an **Associates program** with a focus on feed milling
- Top ranked courses (n=38), listed by order of importance:
 1. Feed Mill Operations and Technology
 2. Feed Quality Assurance and Animal Food Safety
 3. Introduction to Animal Sciences
 4. Agricultural Safety and Health
 5. Overview of Milling Principles
 6. Animal Nutrition
 7. Introduction to Material Handling Operations
 8. Quality Management Systems
 9. Grain Handling and Drying
 10. Preservation of Grain Quality

Results: Curriculum

- How important do you view the following? (n = 42)

Question	Not at all important	Somewhat important	Moderately important	Very important	Extremely important
College education	2%	31%	38%	21%	7%
On the job training	2%	2%	0%	50%	45%
Hands on experience	5%	0%	7%	24%	64%

Results: Curriculum

- What skills and qualities...

Response	%	Count
General Employability: Work ethic, Responsible, Respectful, Good communication skills	26.1%	29
Mechanical: Equipment, Maintenance	20.7%	23
Systems Management: Logistics, Operations	11.7%	13
Math-based and Practical Problem Solving: Analytical, Critical thinking	9.10%	11
Animal Nutrition: Feed ingredients, Quality mgmt.	9.10%	11
<i>OTHER: Regs and Safety (7.2%), Business mgmt. (3.6%), Tech/Basic computer skills (3.6%)</i>	21.6%	24
Total	100%	111

FUTURE ACTION ITEMS

- Determine 'best fit' within current curricular structure:
 - Specialization in Agricultural Systems Management
 - Specific to Feed Mill vs. broader context;
Ex. Post-Harvest Processing (Feed, Food, Grain)
- Development of Educational and Credential Item
 - Certificate in Feed Mill Operation
 - Associate's of Science (AS)
 - Bachelor's of Science (BS)

QUESTIONS

Please feel free to reach out to me
with questions or comments:

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