

Succeeding in Academia – Presenting Academic Research

COLLEGE of
AGRICULTURE *and*
APPLIED SCIENCES
UtahStateUniversity



Today

- Research presentation opportunities
- Professional conference presentations
 - Abstract formatting suggestions
 - Oral presentations
 - Lightning/short presentations
 - Poster presentations
- Invited presentations or job talks
 - Presentation contents
 - Handling questions
- Practice, practice,.....



Research Presentation Opportunities

- Where can I present my research/program?
 - Professional association annual conferences/meetings
 - College or departmental seminars
 - Job market presentations
 - Extension or industry presentations
 - Regional research or coordinating committee meetings
- Why should I present my research/program?
 - Feedback and new ideas on your research design, data and modeling approaches
 - Use feedback to refine and improve your paper
 - Raise your profile as a researcher, explain research interests
 - Discuss research importance and implications to lay audiences



Professional Associations

- Almost all associations have annual conferences/meetings
 - Consist of selected, invited and keynote presentations, meals, social functions, networking, industry tours, etc.
- Submit an abstract for a paper presentation or poster
 - Presentations are oral and discuss all components of a standard research paper
 - Posters present the research on a large poster during a conference poster session
 - Abstracts are submitted through an online submission portal and are due in some cases 6-9 months in advance of the conference
 - Some conferences require a full paper be submitted prior to the conference
- Attending is a great way to learn about new research and network with others



Abstract Formats

- Each association has different conference abstract requirements
- Common abstract format...
 - Title and authors
 - Research motivation or importance
 - Data and model
 - Results
 - Impact on policy, society, etc.

Abstract Formatting

- Abstract submitted may mirror manuscript/paper abstract
 - Use the first sentence of your “hook”, research question, and value-added sections of your introduction
 - Should be readable/clear to any college educated person
- Interesting to audience/generate discussion
 - Impact(s) of research
 - Important new modelling
 - Contradict well-known theory
 - Support for one side of ongoing debate
 - Inspiration/new ideas for further research



Abstract Suggestions

- Follow all abstract style and formatting guidelines
 - Page length, word length, layout, margins, font size, etc.
- Be concise
 - Write only what is necessary, avoid wordiness
 - Use active voice and limit prepositions
- Be clear
 - Be specific and keep your audience in mind
 - Avoid jargon or discipline specific wording
 - Should be understandable to any educated audience
- Be clean
 - Final version should not have any errors/typos
 - Take out unnecessary words
 - Language should be professional and adhere to academic standards



Conference Travel Funding

- Association travel grants
- Department/college travel funding
 - USU Extension provides \$1000 annually
- Project funds – if working on a grant funded project
- University travel grants



Conference Presentations

- Session of 90 minutes with 3-4 presentations
- Each presentation is 15 to 20 minutes in length on average
 - Use no more than 15 to 20 slides
 - Do not present 60 slides at rapid fire
 - Do not take up more time than given
 - If you do you are taking time away from other presenters
- Audience more likely aware/educated on your research topic
 - May not need to spend as much time on motivation and importance



Presentation Contents

- Title page – Paper title, presenter name, date, location
- Introduction - Background or motivation, hook and research question, brief overview of results
- Data and description stats
- Theoretical and/or empirical framework
- Results and discussion
 - Use no more than 2-3 tables to show your results
 - List primary results as bullet points
- A summary/concluding remarks section isn't needed

- Place slides taken out due to time constraints in appendix
 - Available for questions if needed



Conference Lightning Talks

- Session at conferences where each speaker has 5-10 minutes
 - Deep cuts to conference presentation
 - Focus on one research question
 - Only provide information that is necessary
- Turn a detailed abstract into a presentation
 - 5 to 6 slides
 - Title, motivations and question, data, empirical framework, and results
- Almost like a long “elevator” speech (usually 1-2 minutes)
 - If you can express the importance and impact of your work in a few minutes you will be ahead of the pack



Poster Presentations

- Great for presenting research/ideas in preliminary stages
 - Should have some results
- The poster is divided into sections, like "slides" in a presentation
 - Space to provide more information than on a slide
- Pictures and graphics often included
- Usually 4 ft by 3 ft (48 x 36 inches) in size
 - Follow all content and formatting guidelines provided
 - Posters can be printed out by USU printing
 - Templates and printing info can be found at:
<https://research.usu.edu/ur/poster-presentations/>



Example Poster

Innovator Commercialization Strategies and Adopter Willingness to Pay The Case of New Fruit Varieties

Sherzod Akhundjanov¹, Karina Gallardo², Jill McCluskey³, Bradley Rickard³
¹Utah State University, ²Washington State University, ³Cornell University



Introduction

- The Bayh-Dole Act (1980) gave universities the ability to claim intellectual and property rights (IPR) for university research, where the revenue flows from the patents are used to support the universities' R&D efforts.
- Numerous new fruit varieties have been developed through university breeding programs in the recent years (Brown and Maloney, 2009).
- Universities such as Washington State University, University of Minnesota, Michigan State University, and Cornell University have employed different licensing schemes that include fixed fee, royalties, or a combination of both under exclusive and non-exclusive contracts to release these new patented varieties to growers.
- If the innovations are commercialized in a sub-optimal way, then the benefits of the research are greatly reduced (Richards and Rickard, 2014).
- The factors that affect the optimal mechanism for licensing a new variety are not well understood.
- Research is needed to assess how commercialization mechanisms impact the long-run revenues for the industry and breeding programs.

Research Objectives

- Investigate optimal licensing mechanisms for the commercialization of a newly developed patented fruit varieties to maximize revenues for both the innovator and adopter.
- Calculate revenues when using fixed fees, royalties, or a combination of fees and royalties in contracts characterized as either *exclusive* (limited number of licensees) or *non-exclusive* (non limited number of licensees).
- Determine the factors affecting optimal mechanism for licensing a new variety.



Experimental Design

- An experimental auction was conducted during the Annual Washington State Horticultural Association's meeting (2014) with 32 growers (decision makers) representing 26,080 acres or 16% of all apple acreage in the state of Washington.
- The auction consisted of three licensing arrangements, each with exclusive and non-exclusive contracts with a total of six treatments.

Exclusive contract		Non exclusive contract	
Fixed fee	Fixed fee	Fixed fee	Fixed fee
Per box royalty	Per box royalty	Per box royalty	Per box royalty
Combination of fixed fee and per box royalty		Combination of fixed fee and per box royalty	

- BDM auction (Becker, DeGroot, and Marchak, 1964)
- Subjects (growers) were asked to place a bid for a license under these six licensing treatment options.
- After the subjects submitted their bids for six treatments, a random clearing price was drawn for each of the six treatment options which determined the bids that would be accepted.
- If the bid placed by the subject for a treatment option was equal or greater than the randomly chosen market price, then the subject would be eligible to buy the trees at that market price.
- However, if the bid was smaller than the market price, then he/she would not be eligible to grow the new licensed variety.
- The participants were also asked to fill out a short survey with questions about their orchard operation and about their risk preference and demographic characteristics. They were compensated \$10 to \$30 depending on the hypothetical profits they earned during the auction.

Acknowledgment
We gratefully acknowledge funding from Washington State University's Emerging Research Initiative.

Data			
Variables	Units/Description	Mean	Stand dev
Bids			
Fixed fee	Exclusive	\$ per one acre of apples	5,207.58 4,909.85
	Non-Exclusive	\$ per one acre of apples	3,368.75 3,714.13
Per box royalty	Exclusive	\$ per one box of apples	2.02 2.14
	Non-Exclusive	\$ per one box of apples	1.10 1.95
Combination	Exclusive	Fixed fee \$ per one acre of apples	2,905.53 3,919.64
	Non-Exclusive	Fixed fee \$ per one acre of apples	1.34 2.00
	Non-Exclusive	Per box royalty \$ per one acre of apples	1,588.20 2,157.13
	Non-Exclusive	Per box royalty \$ per one box of apples	0.71 1.48
Grower characteristics (select)			
Total land	Acres	1,246.13	2,018.01
Total apple land	Acres	841.31	1,677.41
Income	<\$500,000	Percent	64.52 48.64
	>\$500,000	Percent	35.48 48.64
Education	Bachelor or higher	Percent	70.97 46.14
	High school/some college	Percent	29.03 46.14
Experience	Years in apple production	22.64	13.82

Methods

- To enable comparisons across net profits to be realized under the six licensing schemes, profits under per box royalty and combination were calculated using the net present value for 10, 15, and 20 years, at 5% discount rate. Cost of production of a new apple variety was assumed to be equivalent to Honeycrisp costs grown in the state of Washington (Galinato and Gallardo, 2012). The expected market price for the new apple variety was assumed to be \$54/40-lb box under the exclusive contract and \$47/40-lb under the non-exclusive contract.
- The estimated reduced form model for innovator's/grower's profits is

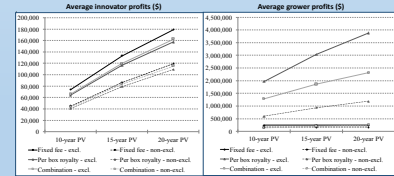
$$\pi_{ijk} = \alpha + \beta \cdot excl + \sum_{i=1}^6 \mu_i \cdot scheme_i + \sum_{j=1}^3 \nu_j \cdot excl \cdot scheme_j + \gamma \cdot land_i + \nu_i + \epsilon_{ijk}$$

where π_{ijk} is the present value of innovator's/grower's profits on 10% of grower's total apple land; $excl$ is the contract type (exclusive or nonexclusive); $scheme_i$ is the licensing scheme (fixed fee, per-box royalty, and combination); $land_i$ is the land size of the grower; ν_i is the individual fixed effects; and ϵ_{ijk} is the error term.

Results

Variables	Grower Profits			Innovator Profits		
	10-year PV	15-year PV	20-year PV	10-year PV	15-year PV	20-year PV
Exclusion contract (EC)	29,010.25***	46,084.33***	59,462.32***	114,080.7	128,642.4	140,050.1
Per box royalty (PBR)	-4,192.47***	-7,818.01***	-10,573.38***	493,088.8***	850,514.9***	1,129,399***
Combination (Combo)	-3,849.75***	-6,535.82***	-8,640.43***	460,099.3***	733,939***	948,499.6***
EC*PBR	-4,146.61***	-6,895.22***	-9,033.15***	988,529.3***	1,610,270***	2,097,420***
EC*Combo	-2,848.51***	-4,548.04***	-5,879.60***	317,631.7	506,387.3	654,282.9
Land	-25.87***	-36.81***	-45.38***	5,034.51***	7,214.32***	8,922.26***
Constant	48,134.26***	91,278.71***	125,083.50***	-476,788.4***	-755,481.5***	-973,844.8***
Clusters	27	27	27	27	27	27
Observations	83	83	83	83	83	83
R ²	0.975	0.975	0.975	0.678	0.638	0.622

Note: Standard errors are clustered at the individual level. ***Denotes p < 0.01, **Denotes p < 0.05, *Denotes p < 0.10.



Conclusion

- For adopters:
 - Overall the fixed-fee exclusive contract was the most profitable.
 - Of the non-exclusive contracts, the fixed fee contract also performed the best.
- For the innovator:
 - The most profitable scheme was the exclusive per-box royalty contract.
 - Of the non-exclusive contracts, the per-box royalty contract also results in the highest innovator profits.

References
1. Brown, S.E., Maloney, K.E. (2009) "Making sense of new apple varieties, trademarks and labels: Current status." *New York Fruit Quarterly*, 13(1): 9-12.
2. Blomqvist, T.L., Nilsson, B.J. (2014) "Patent commercialization: Post-licensing control of product quality." *European Review of Agricultural Economics*, 41(1): 81-94.
3. Becker G.M., DeGroot, M.H., Marchak, J. (1964) "Measuring utility by a single response sequential method." *Behavioral Science* 9(3): 226-32.
4. Gallardo, K., Gallardo, K.E. (2012) "Yield, Cost Estimates of Establishing, Producing, and Packing Honeycrisp Apples in Washington." *Washington State University Extension FactSheet FS02E*.

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Invited Presentations or Job Talks

- College/department seminars or job market presentations
- Purpose of the presentation is to...
 - Publicize one's research
 - Engage in a dialogue
 - Feedback from audience will improve the paper
- Consider the presentation a conversation “with” other researchers, not “at” them
- Questions will likely be plentiful



Invited Presentation Process

- Research paper is presented in its entirety
- Time frame is usually 60-90 minutes
- Audience questions may be anytime or at the end of the presentation (ask in advance)
- Number of slides should be less than the time allotted
 - If 60 minutes, then no more than 60 slides
- Each slide should have no more than 4-5 bullet points



Presentation Contents

- Title
 - Paper title, date and location of the talk
- Introduction
 - Slides needed to motivate the importance of the research question (contribution)
 - Descriptive stats, broad trends, stylized facts
 - Don't include a literature review, but cite lit on motivation, background etc.
 - Use the starting sentence of each paragraph of the paper's introduction and turn into a bullet point
 - Hook, research question, short discussion of literature, clear statement of the paper's value added, and a road map to the remainder of the presentation
 - Provide a preview of the results



Contents Cont.

- Theoretical framework
 - Introduce the building blocks of the framework
 - Assumptions for the building blocks
 - Relevant results
 - Do not include any proofs (save for the appendix)
- Data and descriptive stats
 - Data source, geographic area, data type (longitudinal, etc.), unit of analysis, how collected/purpose of the data, # of observations (if dropped why)
 - Any data transformations
 - Variables used in analysis described in descriptive stats
 - Data tables should be small, may use multiple slides if needed



Contents Cont.

- Empirical framework
 - Show estimated equations
 - Describe estimator used
 - Clearly define variables
 - Discussion of identification
- Results and discussion
 - Make sure all figures and slides are self explanatory & readable from the back of the room
 - Show core results and robustness checks
 - Discuss how the main research question(s) have been answered



Contents Cont.

- Summary and concluding remarks
 - Briefly summarize what you have just gone over
 - Discuss policy implications
 - Discuss areas for future research
- Appendix slides
 - Materials to answers to commonly asked questions
 - Additional robustness checks
 - Experimental protocols
 - Surveys or other visual aids



Handling Questions

- Write down questions/comments during the presentation
 - Helps to remember multi-part questions, shows you care about audience concerns, you will have notes to refer to when you revise your paper
- Restate the question and double check with the asker if correct or not
 - Shows respect and increases “understanding” of what is being asked
- Do not start to answer the question before the person is done speaking
- Approach questions as a discussion
 - Most will not be out of malice or to make you look bad
- If you do not have an answer, say so
 - Perhaps mention how you might address later
 - Mention that you could speak with the question asker after the presentation



Suggestions for Job Talks

- “About Me” slide
 - Where you did your graduate work (MS, PhD)
 - Which relevant positions you have held (post-doc, etc.)
 - Big-ticket, noteworthy items (awards, honors, etc.)
- “How you fit the position” slide
 - Find out why they are hiring and what problem/gap is the position filling
- Final “about me” slide
 - What you have worked on and what you are currently working on
 - Entire “research agenda” if you have been around a while
- Never assume your audience is in your “field of study”
 - Many search committees consist of faculty from other disciplines
 - Emphasize the motivations and intuition and define technical aspects in plain English



Practice Your Presentation

- Practice in advance if...
 - First time you give the presentation
 - English is not your first language
 - Your public speaking skills are not yet developed
 - Its important to "shine" for a job talk for example
- Practice to make sure you can stay within the time allowed
- Practice at a department seminar, in front of imaginary room, record on phone, etc.
 - For job interview talks a lunch departmental presentation works well



Next

- May 8: Presentation & Public Speaking Skills
- May 22: Finding & Selecting Grant Funding



Questions?

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