

Review

Experimental Economics in Agriculture: A Review of Worldwide Research

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Abstract: Over the last two decades, experimental economics has been gaining relevance in the research of a wide range of issues related to agriculture. In turn, the agricultural activity provides an excellent field of study within which to validate the use of instruments employed by experimental economics. The aim of this study is to analyze the dynamics of the research on the application of experimental economics in agriculture on a global level. Thus, a literature review has been carried out for the period between the years 2000 and 2020 based on a bibliometric study. The main results show that there has been a growing use of experimental economics methods in the research on agriculture, particularly over the last five years. This evolution is evident in the different indicators analyzed and is reflected in the greater scientific production and number of actors involved. The most relevant topics within the research on experimental economics in agriculture focus on the farmer, the markets, the consumer, environmental policy, and public goods. These results can be useful for policy makers and researchers interested in this line of research.



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1. Introduction

Experimental economics is a branch of Economics that enables the controlled study of experimental subjects, markets, economic institutions, and ground rules [1]. According to Vernon Smith, the Nobel prize-winner for Economics in 2002, “Experimental economics applies laboratory methods to study the interactions of human beings in social contexts governed by explicit or implicit rules” [2]. Experimental economics has become consolidated as a body of knowledge in its own right, similarly to other areas which were initially questioned as to their usefulness, such as game theory, mathematical economics, or econometrics [3].

Experimental economics enables policy makers to test whether certain public policies or actions could have significant effects before implementing them. In this way, the experiments can guide economic policy measures before they are applied [4]. The experiments enable researchers to observe groups of people participating in a specific problem, clearly specifying the decisions to make, avoiding uncontrolled effects or noise that can distort their decision-making process, simulating a context of the real economy [5]. During the experiment, the experimental subjects are offered appropriate incentives so that they act according to their own criterion, obtaining a compensation at the end of the experiment based on the result of their actions [6,7]. In this way, the researchers know how and why both markets and agents react to changes in the rules throughout the different stages of the experiment. Experimental economics provides important indications with respect to economic behavior in a wide variety of sub-disciplines of Economics, such as Game Theory, Consumer Behavior, Industrial Organization, Public Finance, Labour Economics, and Agricultural Economics [8,9].

Over the last twenty years, experimental economics has been gaining prominence in the research of a wide range of issues related to agriculture. This study field is relevant for policy makers when designing measures that enhance social well-being by improving the efficiency of the markets and creating a regulatory framework better adapted to reality, based on an improved understanding of the behavior of the agents involved (suppliers, demand, markets, and institutions) [10]. In addition, agriculture is considered to be an ideal scenario within which to implement the tools of experimental economics, with a mutually beneficial bidirectional relationship prevailing between the two [11]. On the one hand, experimental economics can be used to gain a deeper understanding of issues of interest to the agricultural sector. In this way, the experimental methods have been proven to be efficient in contributing greater knowledge about the behavior of the agents involved, such as farmers, producers, consumers, markets, and economic institutions [10,12]. On the other hand, agriculture constitutes an ideal area of research to test the validity of the experimental instruments, contributing to the development of this study field, and the debate existing in the literature on certain areas [13].

Although we can confirm a growing interest in the use of experimental economics methods in agriculture, to date, there are no known studies that analyze the dynamics that this line of research has followed on a global scale. Therefore, in order to contribute to covering this gap, this study conducts a review of the literature produced between the years 2000 and 2020 through a bibliometric analysis. The results obtained will allow us to identify the principal actors that constitute the driving agents of the knowledge and the most relevant topics within this line of research. Therefore, this article could serve as a reference for both policy makers and researchers interested in this line of research.

2. Methodology

In order to fulfil the proposed objective, a bibliometric analysis is considered to be the most appropriate methodology. Garfield developed this methodology in the 1950s with the aim of identifying, organizing, and evaluating the principal components of an area of specific knowledge [14,15]. Bibliometric analysis has been gaining ground in disciplines as diverse as economics, agronomics, biology, engineering, medicine, or psychology [16,17]. The possibilities that it offers include different mapping techniques to represent the bibliographic information available in different databases and statistical and mathematical methods to determine the trends in an area of research [18,19]. In order to conduct a bibliometric analysis, we can use different approaches, considered as being traditional [20]: co-occurrence, co-citation and bibliographic coupling analysis. The co-occurrence approach is understood as the study of the joint occurrences of two terms in a given text, with the purpose of identifying the conceptual and thematic structure of a thematic field. In the process of co-occurrence analysis, once the terms to be analyzed have been selected, co-occurrence matrices are constructed, with which similarity measures are calculated [21]. The similarity measures serve as input to different kinds of multivariate analysis, among which we can find clustering analysis and multidimensional scaling analysis. Therefore, this approach has been considered appropriate for the development of this work, given that the proposed objective is to analyze the structure of the body of scientific literature on Experimental Economics applied to Agriculture (EEA).

Furthermore, this methodology provides various types of indicators that measure different aspects of the bibliographic information [22]: quantity indicators measure productivity; relevance indicators reveal the impact of the publications; and structural indicators analyze the connections between the different elements of the same field of research. In order to conduct this study, three types of indicators have been used together with the traditional co-occurrence approach. Article counts were used to measure the output of the different actors. To assess the relative importance of research in this area, the quality indicators of citation counts, the h-index and the SCImago Journal Rank (SJR) impact factor were used. The second of these, the h-index, is defined as the total (h) of N papers with at least h citations each [23]. The SJR, on the other hand, measures the number of weighted

citations, where the weighting of citations depends on the subject and the prestige of the cited journal. Finally, the analysis of the co-occurrence structure of keywords has allowed us to identify the main themes in EEA research.

Once the methodological tool to be used has been determined, the following stage was the sample selection of studies to be analyzed. Regarding the database selection for the extraction of the paper sample, studies have been carried out to measure the overlap between databases and the use impact of different data sources for specific research fields on bibliometric indicators. A higher number of journals indexed by Scopus compared to WoS has been demonstrated [24]. In terms of overlap, 84% of WoS titles are also indexed in Scopus, while only 54% of Scopus titles are indexed in WoS [25]. This was the main reason for selecting Scopus for this work. It is therefore considered that the use of this database ensures that a representative sample of papers on EEA research is extracted [26,27]. The selection of the sample of articles to analyze in this study was made in April 2021 based on the following parameters: TÍTULO-ABS-CLAVE (“experimental economic”) Y TÍTULO-ABS-CLAVE (agricultur* OR crop* OR cultivation OR agrosystem OR agroecosystem OR farm*). The search covered the period 2000–2020. Only articles published until 2020 have been included to enable the comparison of complete annual periods [28,29]. It is important to remember that different search queries may generate different results. The final sample included a total of 105 documents.

With respect to the preparation, processing and analysis of the information, after being downloaded, the data were refined so as to eliminate duplications, omissions and errors and to detect any incomplete information [30]. Furthermore, a search for articles on agriculture was undertaken according to the same criteria in order to determine the relative importance of the use of experimental economics within the general field. The variables analyzed were the number of articles, their year of publication, subject area, the name of the journals and the institutions and countries of affiliation of the researchers. The tools used for processing the information were Excel (version 2016, Microsoft, Redmond, DC, USA), and SciMaT (v1.1.04, research group of Soft Computing y Sistemas Inteligentes de Información, University of Granada, Granada, Spain). Figure 1 summarizes the methodological development of this study.

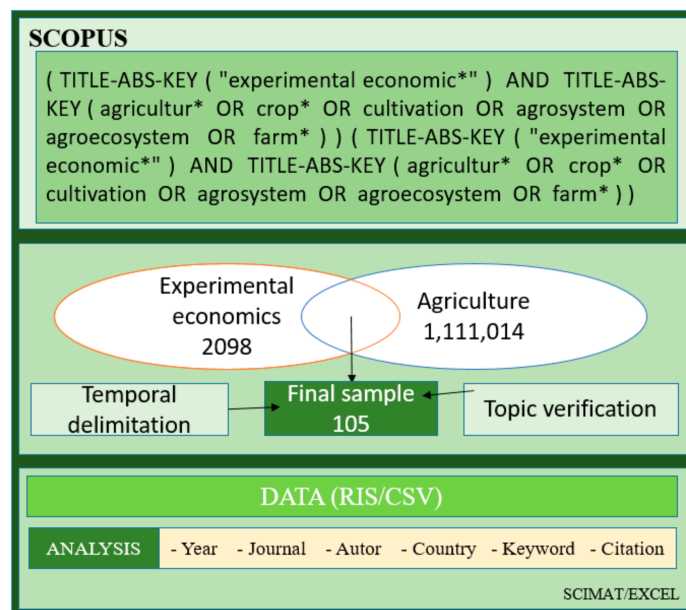


Figure 1. Summary of the methodology.

3. Results and Discussion

3.1. Evolution of the General Characteristics of Research on Experimental Economics in Agriculture

Table 1 shows the evolution of the main variables related to the research on experimental economics in agriculture (EEA) in the period 2000–2020. The number of articles has increased irregularly throughout the period, with a minimum value of 0 in 2002 and a maximum of 10 in 2013. It is important to note that this line of research has been experiencing strong growth in recent years, as more than 75% of the articles in the sample were published in the last decade and almost 40% in the last five years. In order to verify whether the increase in the number of publications is due to the overall trend in the research as a whole, the annual variation in the number of articles published with respect to the overall research has been calculated, taking the first year of the period analyzed as a base (Figure 2). The average annual growth in the number of studies on agriculture was 9.1% while that of articles on EEA was 11.6%. Although this line of research can be considered to still be in its infancy and exhibits an irregular evolution, these data suggest that EEA will become an increasingly relevant line within the research on agriculture.

Table 1. Main characteristics of the EEA research.

Year	Documents	Authors	Journals	Countries	Citation	Average Citation
2000	1	1	1	1	0	0.0
2001	1	5	1	1	1	0.5
2002	0	0	0	0	1	1.0
2003	1	6	1	2	4	2.0
2004	4	11	4	3	9	2.1
2005	3	7	1	1	12	2.7
2006	1	1	1	1	27	4.9
2007	2	6	1	2	28	6.3
2008	4	11	3	5	26	6.4
2009	9	27	5	4	26	5.2
2010	6	16	2	6	47	5.7
2011	9	27	9	9	69	6.1
2012	1	2	1	1	76	7.8
2013	10	26	7	9	127	8.7
2014	6	15	6	5	133	10.1
2015	7	29	7	7	132	11.0
2016	7	16	7	6	166	12.3
2017	8	27	8	10	208	13.7
2018	9	31	9	12	199	14.5
2019	8	31	8	9	237	15.8
2020	8	18	8	8	272	17.1

Throughout the whole period under study, a total of 242 authors participated in the 105 documents that make up the sample. This variable has grown from one author in 2000 to 18 in 2020, with a maximum of 31 in the years 2018 and 2019. The average number of authors per article varied considerably, with the minimum being one author per study in 2000 and the maximum being six per study in 2003. It should be noted that the number of studies undertaken by each author is very low. More than 80% of the researchers participated in just one study. Only 3.7% of the authors participated in four or more studies and only one author participated in more than ten. The average number of documents per publication has remained almost constant at one, with an average number of documents per publication for the whole period being 1.9. In total, the 105 documents were published in 55 different publications. With respect to the countries that participated in the studies, for the whole period analyzed there were a total of 30. The number of countries has also experienced a general growth trend, but with irregular oscillations throughout the period. Thus we can observe 1 in 2000, 8 in 2020, and a maximum value of 12 in 2018. Overall, the documents in the sample accumulated a total of 1800 citations for the whole period. This figure increased from one in 2001 (first year with citations) to 272 in 2020. The average number of citations obtained per document increased from 0.5 in 2001 to 17.1 in 2020.

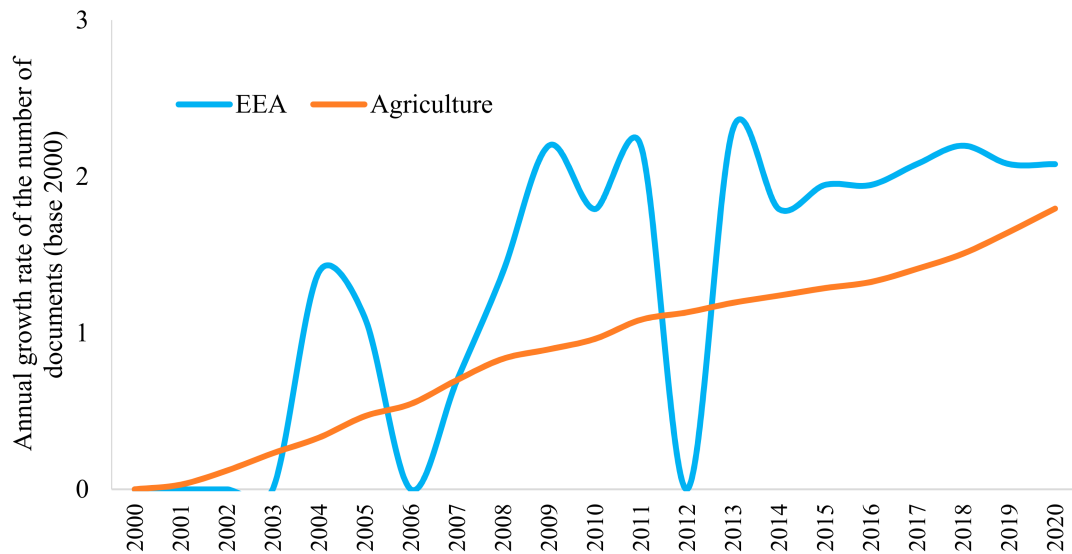


Figure 2. Comparative trends between EEA and agriculture research.

3.2. Distribution of the Research on EEA by Subject Area, Type of Document, and Language

Figure 3 shows the distribution of the documents published based on the classification by subject area established by Scopus. It is necessary to point out that the same study may be classified in more than one category concurrently. As expected, the categories that include a higher number of studies are Economics, Econometrics, and Finance with 74.3% of the total of the sample and Agriculture and Biological Sciences with 66.7%. These two categories coincide with the established search parameters (economics and agriculture). However, these disciplines are not the only ones that intervene in the studies making up the sample. There are also studies from the perspectives of Environmental Sciences accounting for 21%; Social Sciences with 18.1%; and Business, Management, and Accounting with 4.8%. Table 2 reveals the type of document and language in which the studies on EEA were published. It can be observed that 80% of the studies were published in the format of a scientific article. These are followed by conference papers, accounting for 10.5% and literature review studies, representing 6.7%. The rest are books, data papers and notes, each representing just 1%. With respect to the language, 95.2% of the studies in the sample were published in English, which is the dominant language in this line or research, as could be expected. The other languages found were German and French, representing 2.9% and 1.9% of the studies respectively.

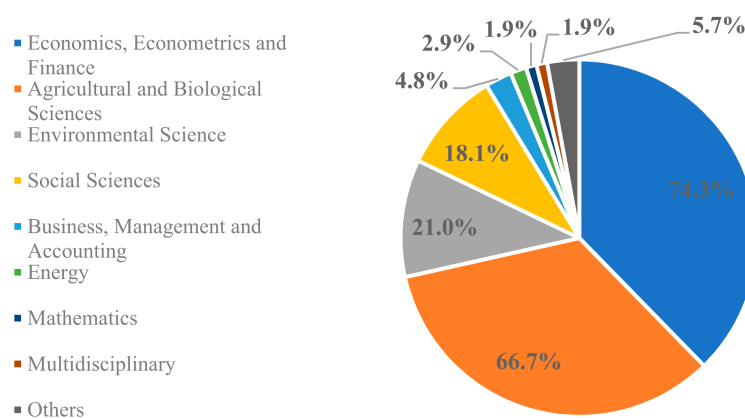


Figure 3. Distribution of EEA research by subject area.

Table 2. Document type and language related to EEA research.

Document Type	%	Language	%
Article	80.0	English	95.2
Conference Paper	10.5	German	2.9
Review	6.7	French	1.9
Book	1.0		
Data Paper	1.0		
Note	1.0		

3.3. Most Relevant Journals in Research on EEA

Table 3 shows the most prolific journals in EEA in the period 2000–2020 and the principal characteristics of their publications. This group includes all of the journals that published two or more studies on this field of research during the period studied. Of the 55 journals that published studies on EEA, this group accounts for 27.3% of the total. The remaining 72.7% only published one study on this subject matter. Overall, the journals in the table published 65 documents included in the sample, which represent 61.9% of the total. Furthermore, this group accumulates 84.6% of the total citations of the documents of the sample. Therefore, these journals can be considered to be the basic core of the publications that promote research on EEA.

Table 3. Major characteristics of the most active journals related to EEA research.

Journal	Documents	SJR ¹	H Index	Country	Citation	Average Citation	1st Article	Last Article
American Journal of Agricultural Economics	16	1.949 (Q1)	13	UK	847	52.9	2001	2020
European Review of Agricultural Economics	10	1.400 (Q1)	8	UK	284	28.4	2009	2019
Agricultural and Resource Economics Review	7	0.475 (Q2)	5	USA	95	13.6	2004	2011
Journal of Agricultural and Resource Economics	5	0.548 (Q2)	3	USA	68	13.6	2008	2018
Agricultural Economics	3	1.200 (Q1)	2	UK	12	4.0	2016	2019
Applied Economics	3	0.569 (Q2)	3	UK	36	12.0	2013	2015
Environmental and Resource Economics	3	1.270 (Q1)	3	Netherlands	32	10.7	2010	2019
Food Policy	3	2.092 (Q1)	3	UK	41	13.7	2000	2015
Journal of Agricultural Economics	3	1.157 (Q1)	2	USA	27	9.0	2013	2020
Applied Economic Perspectives and Policy	2	1.400 (Q1)	2	UK	49	24.5	2011	2015
Cahiers Agricultures	2	0.381 (Q2)	1	France	3	1.5	2011	2018
Canadian Journal of Agricultural Economics	2	0.505 (Q2)	2	USA	7	3.5	2008	2016
Ecological Economics	2	1.917 (Q1)	2	Netherlands	12	6.0	2015	2018
German Journal of Agricultural Economics	2	0.146 (Q4)	1	Germany	2	1.0	2014	2015
World Development	2	2.386 (Q1)	2	UK	7	3.5	2017	2019

¹ Scimago Journal Rank 2020.

The journal that published the most articles is the *American Journal of Agricultural Economics* with a total of 16. This journal has 847 citations, an average number of citations per article of 52.9 and an H index of 13. Its impact factor in the Scimago Journal Rank (SJR) in 2020 was 1.949 and it has been publishing on EEA since 2001, when it published its first text on this subject field. *European Review of Agricultural Economics* holds the second place with 10 studies. Its H index is 8, it has 284 citations and an average number of citations per article of 28.4. Its SJR impact factor is 1.400. In third place is *Agricultural and Resource Economics Review* with 7 documents. This journal last published on EEA in 2011. It has an H index of 5, it has 95 citations in total and an average number of citations per study of 13.6.

The most veteran journal in the table is *Food Policy*, given that it published its first article on EEA in 2000. This journal shares fifth place, with three texts published on EEA.

Its H index is 3, it has 41 citations and 13.7 citations per article, on average. The SJR factor in this case is 2.092, but the last study published by this journal on this subject area was in 2015. *World Development* is the journal with the highest SJR in the table with 2.386. This journal shares tenth place, with two texts published on EEA. It accumulates a total of 7 citations and an average of 3.5 citations per article. It first published on this subject area in 2017 and is therefore the most recent incorporation. This explains the low number of citations obtained by its publications on EEA.

3.4. Most Relevant Countries in Terms of Research on EEA

Table 4 shows the most prolific countries in terms of research on EEA for the period 2000–2020 and the main characteristics of their studies. This group of countries is highly heterogeneous as they are located in every continent except for Africa. We should take into account that there is wide disparity with respect to the incorporation of the different countries into the research on this field of study. Furthermore, not all of them published studies in 2020, taken as a reference given that it is the last year of the period analyzed. The USA is the country that has published most documents on this subject area, with 48. Germany is next with 21, followed by France with 16. The rest of the countries have published less than 10 studies on this subject area. The pioneer countries in this line of research were France, the USA, the Netherlands, and Norway, in this order. The latest country to publish on EEA is China, given that its first study in the sample was published in 2017. With regard to the relevance of the research, measured through the number of citations of the studies, the USA leads the table with a total of 1236. France follows with 315 and then Germany with 198. However, in terms of the average number of citations per article, the UK is the most prominent country with 27.3. This is followed by the USA with 25.8 and France with 19.7.

Table 4. Main characteristics of the most active countries related to EEA research.

Country	Documents	Citation	Average Citation	H Index	1st Article	Last Article
USA	48	1236	25.8	18	2001	2020
Germany	21	198	9.4	8	2011	2019
France	16	315	19.7	9	2000	2019
Netherlands	6	46	7.7	3	2003	2020
Canada	5	38	7.6	3	2008	2016
Sweden	5	31	6.2	3	2013	2019
Australia	4	24	6.0	3	2007	2020
China	4	11	2.8	2	2017	2020
Norway	4	12	3.0	3	2004	2020
UK	3	82	27.3	2	2010	2019

Table 5 shows the results of analyzing of the collaboration networks established between the most active countries with respect to research on EEA. An average of 53.2% of studies were conducted through international collaboration by the group of the 10 countries. Four countries, on average, made up the collaboration networks. The UK is the country with the highest percentage of studies carried out through international collaboration, that is, 100%. This is followed by China and Norway with 75% and Sweden with 60%. The USA has the largest collaboration network with 17 different collaborators. Next is France with eight and Germany with seven. Australia is at the other end of the scale as it has not published any studies in collaboration with institutions from other countries. The table also includes the main collaborators of each country. Finally, the table shows the average number of citations of the studies, differentiating whether they were conducted through international collaboration or not. On average, in the former case the studies have a total of 10.8 citations, while in the latter case they have 8.8 citations. However, as the table shows, the result varies depending on the country.

Table 5. Major characteristics in the collaboration of the most active countries related to EEA research.

Country	Percentage of Collaboration	Number of Collaborators	Main Collaborators	Average Citation	
				Collaboration	Non Collaboration
USA	37.5	17	Norway, Canada, China, Netherlands, Spain, UK	19.4	29.6
Germany	38.1	7	France, Belgium, Jordan	15.0	6.0
France	56.3	8	Germany, Austria, Belgium	20.4	18.7
Netherlands	50.0	3	USA, Ethiopia, UK	13.7	1.7
Canada	40.0	1	USA	3.5	10.3
Sweden	60.0	3	Germany, Indonesia, UK	2.3	12.0
Australia	0.0	0	-	0.0	6.0
China	75.0	2	USA, France	3.7	0.0
Norway	75.0	1	USA	2.7	4.0
UK	100.0	5	USA, Colombia, India, Netherlands, Sweden	27.3	0.0

3.5. Most Relevant Institutions in the Research on EEA

The most active institutions in terms of research on EEA in the period 2000–2020 and the principal characteristics of the studies can be seen in Table 6. These institutions belong to Germany, the USA, France, and the Netherlands. Worth noting is the small number of documents per institution, given that only two of them have published more than 10 studies on this subject area. The Georg-August-Universität Göttingen in Germany is in first position with 13 documents. This institution has 74 citations, an average of 5.7 citations per study and an H index of 6. The institution with the second highest number of studies is Cornell University in the USA with 11 publications. This university has 223 citations, an average of 20.3 citations per document and an H index of 8. In third place is the University of Delaware, also in the United States, with seven documents in total, 150 citations, an average of 21.4 citations per study and an H index of 6. The Oklahoma State University-Stillwater has the highest total number of citations of those included in the table, with 362 and the highest average number of citations per study, with 72.4. This institution shares sixth position with five studies published on EEA.

Table 6. Major characteristics of the most active institutions related to EEA research.

Institution	Country	Documents	Citation	Average Citation	H Index	Percentage of Collaboration	Average Citation	
							Collaboration	Non Collaboration
Georg-August-Universität Göttingen	Germany	13	74	5.7	6	15.4	10.5	4.8
Cornell University	USA	11	223	20.3	8	18.2	4.5	23.8
University of Delaware	USA	7	150	21.4	6	28.6	4.5	28.2
Centre de recherche Île-de-France-Versailles-Grignon	France	6	220	36.7	6	50.0	37.3	36.0
Economie Publique	France	6	133	22.2	6	66.7	30.3	6.0
Oklahoma State University-Stillwater	USA	5	362	72.4	5	0.0	0.0	72.4
French National Institute for Agricultural Research	France	5	125	25.0	4	80.0	29.8	6.0
Arizona State University	USA	4	56	14.0	3	50.0	18.0	10.0
Wageningen University and Research	Netherlands	4	23	5.8	3	50.0	10.0	1.5
University of Wyoming	USA	4	7	1.8	2	25.0	3.0	1.3
Technical University of Munich	Germany	4	115	28.8	4	100.0	28.8	0.0

With regard to the international collaboration of the institutions, the average percentage of studies conducted in collaboration is 44%. Most noteworthy are the Technical University of Munich in Germany with 100% of its studies carried out through international collaboration and Oklahoma State University-Stillwater with 0%. On average, the studies jointly conducted among different institutions obtained a total of 16.1 citations. Meanwhile, the studies carried out autonomously had 17.3 citations on average. Again, similarly to the countries, there is wide disparity between the institutions in this field of study.

3.6. Most Relevant Authors in Research on EEA

Table 7 shows those authors who conducted the most research on EEA together with the most noteworthy characteristics of their studies. This group comprises 12 authors belonging to 10 institutions in four different countries. Six of the institutions are also on the list of the most active institutions (see Table 6). New institutions appear in this section due to the establishment of collaboration networks between authors, which helps to place some of them in prominent positions. The most published author, with 15 documents is Oliver Musshoff from Georg-August-Universität Göttingen. This author has 100 citations in total, an average of 6.7 citations per document and an H index of 7. Musshoff shares authorship with other prominent authors from the same institution, such as Daniel Hermann and Syster C. Maart-Noelck, in fifth and seventh position, with six and four studies respectively. Another notable author in the table with whom he conducts research is Jens Rommel, from the Swedish Sveriges lantbruksuniversitet, who shares the 10th position with three documents.

Table 7. Major characteristics of the most active authors related to EEA research.

Author	Documents	Citation	Average Citation	H Index	Country	Affiliation	First Article	Last Article
Musshoff, Oliver	15	100	6.7	7	Germany	Georg-August-Universität Göttingen	2013	2019
Messer, Kent D.	8	169	21.1	6	USA	University of Delaware	2005	2019
Kaiser, Harry. M.	7	153	21.9	5	USA	Cornell SC Johnson College of Business	2005	2015
Lusk, Jayson L.	7	520	74.3	7	USA	Purdue University	2001	2019
Hermann, Daniel	6	24	4.0	4	Germany	Georg-August-Universität Göttingen	2015	2019
Marette, Stephan	6	127	21.2	6	France	Economie Publique	2008	2017
Maart-Noelck, Syster C.	4	57	14.3	2	Germany	Georg-August-Universität Göttingen	2013	2014
Roosen, Jutta	4	115	28.8	4	Germany	TUM School of Management	2008	2013
Bastian, Christopher T.	3	4	1.3	2	USA	University of Wyoming	2009	2019
Blanchemanche, Sandrine	3	94	31.3	3	France	French National Institute for Agricultural Research	2008	2013
Rommel, Jens	3	9	3.0	3	Sweden	Sveriges lantbruksuniversitet	2018	2019
Schulze, William D.	3	68	22.7	3	USA	Cornell University	2004	2010

In second place in terms of the number of documents published is Kent D. Messer from the University of Delaware, with eight. This author has 169 citations, an average of 21.1 citations per article and an H index of 6. In this field of research he collaborates mainly with Harry M. Kaiser and William D. Schulze, from Cornell University and Johnson College of Business, with whom he shares five and two studies respectively. Jayson L. Lusk, shares the third position in terms of the number of documents with seven in total. This researcher from Purdue University accumulates the most citations with 520, the highest average number of citations per study with 74.3 and an H index of 7. He is the most veteran author of the table, publishing his first study on EEA in 2001.

3.7. Relevant Topics in Research on EEA

An analysis of the keywords enables the most relevant topics within the research on EEA to be identified. These topics focus on the consumer, the farmer, the markets, environmental policy, and public goods.

With regard to consumer behavior, willingness-to-pay (WTP) is widely used as an analytical tool. In this respect, Stenger [31] elicits the WTP in a laboratory setting of the subjects for products that offer greater food safety as they have not been grown on land

irrigated with wastewater. On the other hand, Lusk et al. [32] conduct a field experiment that reveals that consumers prefer to pay a higher price for tender steaks in a blind tasting of different meats. Toler et al. [33] find that concern for equity can explain why consumers prefer to shop at farm markets rather than traditional grocery stores, with a greater WTP premium for local food products. Economic experiments also measure the acceptance of technology in the consumption of food products. In this respect, Bieberstein et al. [34] conclude, after a laboratory experiment, that consumers are reluctant to accept both food and packaging produced with nanotechnology.

Another aspect of consumer behavior is its stance towards risk. Taking food safety as a base, Lusk and Coble [35] carried out a laboratory experiment in which they elicited the risk perception and risk preferences of the subjects in relation to the consumption of genetically modified food. Another aspect of consumer behavior studied is how the information presented affects decision making, which is interesting for advertising and marketing campaigns. This is the case of Marette et al. [8] in which, through a field experiment, the weight that certain messages related to health in the choice of the consumer was tested.

Second, the analysis of farmer behavior within the studies of the sample is noteworthy. In relation to decision making that affects management and investment, De Koeijer et al. [36] investigate the relationship between the complexity of farm management and technical farm performance, applied to the management of nitrogen in arable farms. The results enable the identification of the weak aspects in the management of individual farms, laying the foundations on which to work to improve their management. The behavior of producers is also studied with respect to the management of financing needs. This is the case of Messer et al. [37], who investigate, in a laboratory, the effectiveness of alternative voluntary financing mechanisms of agricultural commodities as opposed to generic advertising programmes. In a study of the behavior of agricultural entrepreneurs, Musshoff et al. [38] conduct a within-subject experiment in a laboratory setting to determine how de-investment decisions are affected not only by economic reasons, but also by non-monetary factors (emotions, attachment to farming, and different facets of psychological inertia). Given that classical investment theory and the real options approach do not correctly explain the behavior of investors, Maart-Noelck and Musshoff [39] perform a laboratory experiment with farmers which reveals how they learn from their previous investments as well as considering that waiting is of great value in decision-making.

Other studies explain the risk attitude of farmers. In this sense, Warnick et al. [40] conduct a field experiment that analyses risk and ambiguity aversion in rural Peru, showing how the latter has a negative effect on the probability of farmers planting more than one variety of the main crop. In a field experiment setting, Bocqu  ho et al. [41] find that farmers are averse to risk and are doubly sensitive to losses than gains. Brunette et al. [42] carry out a lab experiment focused on forest parks and the influence of the risk attitude of the forest owners on the harvesting decision, due to the interest of policy makers to promote a public-private initiative. Gars and Ward [43] show how we use our own personal experience and that of others in order to learn a new technology. This is the case of the adoption of a hybrid rice in India, where farmers' risk and uncertainty preferences are elicited using lottery based experiments. Pollard et al. [44] conduct a field experiment with farmers in Scotland to test the results obtained through laboratory experiments that find that cooperation is low in a context of uncertainty and work with different sources of uncertainty. Senapati [45] continues with the study of farmer's risk attitudes in terms of irrigated and rain-fed farming in India. This lab experiment shows that factors such as age, the level of education, the farm size and the HL lottery have a positive and significant effect on the risk behavior of the farmers in the sample.

The third relevant topic within the research on EEA is the functioning of the markets. In this respect, Wu and Roe [46] justify why it is appropriate for growers and processors to use fixed performance contracts instead of tournament contracts in the regulation of agricultural production contracts. Also, in relation to failure markets, Yesuf and Bluffstone [47] carry out a field experiment in the rural areas of Ethiopia to study the determinants of

risk aversion in communities that largely depend on rain-fed agriculture/livestock production, which involves a high level of risk if mechanisms to transfer this risk to third parties are not available. In relation to the marketing of the products, Kanter et al. [48] undertake an experiment involving milk and show how labeling new products (“rBST-free”, “organic food”) stigmatizes the conventional products that are already on the market. Dillaway et al. [49] study the impacts of media information on the purchasing decision of products, using an experimental case study on food safety. Based on a laboratory experiment with a within-subject design, Wu et al. [50] provide insights into how domestic agricultural producers seek to differentiate themselves through labeling with the place of origin and local messages in response to growing international competition.

A fourth topic in the research on EEA is environmental policy. The study by Palm-Forster et al. [51], provides a reference of policy-making for the design of programmes that mitigate environmental damages and enhance the environmental benefits produced by agricultural landscapes. Murphy and Stevens [52] explain how experimental economics helps to improve the effectiveness of calibrating and estimating the aggregates used in environmental valuation. Along the same lines, Poe et al. [53] refer to experimental economics results to justify the design of policies to improve mechanisms for controlling environmental pollution. Lybbert [54] experimentally analyses the willingness of poor farmers in India to use “pro-poor seeds” that stabilize crop yields and limit yield losses and better withstand climate fluctuations and biotic stresses. Bougherara and Combris [55] use a mixed within-subject and between-subject laboratory experiment to study the WTP for products that are labeled ‘eco-friendly’. Important issues arise related to fair practices, farmers and local production, the purchase of ‘organic food’ being associated with interest, not only of an individual’s well-being but also of that of the group, which allows distinction to be made between altruist and selfish behavior. Cecchini et al. [56] focus on the interest of consumers in agricultural and ecologically sustainable products (which translates in a willingness to pay a higher price), highlighting the use of ‘certificates’ to guide consumers.

A fifth relevant topic within the research on EEA is the study of public goods. In this respect, not only does experimental economics contribute its wealth of benefits to agriculture, but it also helps to confirm the experimental methods. Along these lines, Chang et al. [57] conduct a field experiment to study consumer behavior, in which different scenarios are contemplated (hypothetical vs. non-hypothetical) in the purchase of certain products (ground beef, wheat flour). The results confirm previous evidence of experimental economics, indicating that non-hypothetical scenarios have a higher predictive power to elicit consumer behavior. With a laboratory experiment, Lusk and Norwood [58] analyze the altruism of consumers expressed towards animal well-being (a positive externality), measuring the public-good value of farm animal welfare. An important point in this topic is the distribution of water, a problem of cooperation that is studied in Abbink et al. [59], derived from the collapse of the USSR and the conflicting interests of Kyrgyzstan, Uzbekistan, and Kazakhstan. With a multi-round laboratory experiment, based on a three-player Trust Game with non-binding contracts, they show the difficulty of establishing cooperation between the actors involved. Examining the guidelines of some of the journals of the Agricultural and Applied Economics Association, they find that researchers are able to use some forms of deception. In this respect, they evaluate 10 potentially deceptive experimental techniques, discussing arguments both in favor of and against the practices used.

Finally, it has been possible to establish the evolution of the main research topics identified throughout the analysed period. From 2000 to 2004 the main research topics focused on food safety [29], consumer demand [30,50], as well as arable farming and environmental practices [34,51]. From 2005 to 2009, the central addressed issues were how consumer information affects consumers [35], especially related to biotechnology [52], and product labeling [46]. From 2010 to 2014, the research focus shifted to water management [57], investment management [36], and farmer training [39]. During this period, animal welfare [56] also appeared as a concern, as well as the continuing study of ambiguity and risk [38,39]. Finally, from 2015 to 2020, studies related to agroenvironmental

policy [42,49,54] and the attention drawn to developing countries [40,41,43] will definitely become a greater importance [40,41,43].

4. Conclusions

The objective of this study was to analyze the dynamics of the research on the application of experimental economics to the field of agriculture over the last two decades. In this respect, the principal drivers of the subject area have been analyzed in depth together with the most relevant research topics. The results of the study reveal that there has been a growing use of experimental economics methods in the research on agriculture, particularly over the last five years. This progress is evident in the different indicators analyzed and is reflected in the greater scientific production and number of actors involved. It has been found that the number of articles published on the use of Experimental Economics as a tool for analysis is increasing to a greater extent than articles on agriculture in general terms. Thus, this field of study is becoming a relevant research line within agriculture.

The main categories that included articles on the use of experimental economics in agriculture were Economics, Econometrics and Finance (74.3%); and Agricultural and Biological Sciences (66.7%). The preferred format for the publication of research papers is the scientific article, with 80% of the total. The dominant language in this field of study is English, with 95.2% of the papers published. The countries that published most articles were the USA, Germany, and France, although the countries that published the articles with the highest impact were the UK, USA, and France. Countries publishing the most articles with international collaborations were the UK, China, and Norway. Australia, USA, and Germany are the countries that less use this formula. The small size of the international collaborative networks is noteworthy. This is due to the incipient nature of research in this field, as well as the still small number of published papers.

The most relevant institutions within this field of study belong to the following four countries: Germany, USA, France, and the Netherlands. The emergence of this field is evidenced by the small number of works carried out per institution. The same observation applies to the main authors in the application of experimental economics to the field of agriculture. It is precisely this fact that makes it possible to identify incipient networks of collaboration between authors, who, in these initial stages, tend to belong to the same institution or to a small group of national institutions.

Among the principal contributions of experimental economics applied to agriculture, particularly noteworthy is the interest in better characterizing the behavior of the agents and institutions that interact in the agricultural environment. In terms of the consumer, the research has identified different factors that can increase or reduce the willingness of the subjects to consume certain products (depending on where the products are produced, how consumers perceive the information received from the media or depending on their labeling). With respect to agricultural entrepreneurs, the intrinsic motivations of their decision are identified as are the determinants of the degree of their aversion to risk. Premises are also obtained referring to the functioning of the markets in accordance with the regulations that prevail. With respect to environmental policy, experimental economics offers interesting results regarding measures to prevent environmental pollution and how to promote certain crops in specific geographical areas that generate more stable yields. Finally, the research offers results concerning public goods, which are of interest to policy makers when establishing cooperation strategies between countries for managing common resources.

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References

1. Doyon, M.; Rondeau, D.; Mbala, R. Keep It Down: An Experimental Test of the Truncated Double Auction. *Agric. Resour. Econ. Rev.* **2010**, *39*, 193–212. [\[CrossRef\]](#)
2. Smith, V. What is Experimental Economics? Interdisciplinary Center for Economic Science (ICES) at George Mason University: Arlington, TX, USA, 2003.
3. Brañas-Garza, P.; Paz-Espinosa, M. Economía Experimental y del Comportamiento. *Pap. Psicólogo* **2011**, *32*, 185–193.
4. Birol, E.; Meenakshi, J.V.; Oparinde, A.; Perez, S.; Tomlins, K. Developing country consumers' acceptance of biofortified foods: A synthesis. *Food Secur.* **2015**, *7*, 555–568. [\[CrossRef\]](#)
5. Canavari, M.; Drichoutis, A.C.; Lusk, J.L.; Nayga, R.M., Jr. How to run an experimental auction: A review of recent advances. *Eur. Rev. Agric. Econ.* **2019**, *46*, 862–922. [\[CrossRef\]](#)
6. Whitaker, J.B. Whispering in the Ears of Princes—Using Experimental Economics to Evaluate Agricultural and Natural Resource Policies: Discussion. *Am. J. Agric. Econ.* **2008**, *90*, 1216–1217. [\[CrossRef\]](#)
7. Costanigro, M.; Onozaka, Y. A Belief-Preference Model of Choice for Experience and Credence Goods. *J. Agric. Econ.* **2019**, *71*, 70–95. [\[CrossRef\]](#)
8. Marette, S.; Roosen, J.; Blanchemanche, S.; Verger, P. The choice of fish species: An experiment measuring the impact of risk and benefit information. *J. Agric. Resour. Econ.* **2008**, *33*, 1–18.
9. Galdeano-Gómez, E.; Pérez-Mesa, J.C.; Aznar-Sánchez, J.A. Internationalisation of SMEs and simultaneous strategies of cooperation and competition: An exploratory analysis. *J. Bus. Econ. Manag.* **2016**, *17*, 1114–1132. [\[CrossRef\]](#)
10. Nguyen, Q.; Leung, P. Do fishermen have different attitudes toward risk? An application of prospect theory to the study of vietnamese fishermen. *J. Agric. Resour. Econ.* **2009**, *34*, 518–538.
11. Roosen, J.; Marette, S. Making the 'right' choice based on experiments: Regulatory decisions for food and health. *Eur. Rev. Agric. Econ.* **2011**, *38*, 361–381. [\[CrossRef\]](#)
12. Disdier, A.-C.; Marette, S. Globalisation issues and consumers' purchase decisions for food products: Evidence from a laboratory experiment. *Eur. Rev. Agric. Econ.* **2012**, *40*, 23–44. [\[CrossRef\]](#)
13. Hermann, D.; Musshoff, O. Measuring time preferences: Comparing methods and evaluating the magnitude effect. *J. Behav. Exp. Econ.* **2016**, *65*, 16–26. [\[CrossRef\]](#)
14. Garfield, E.; Sher, I.H. New factors in the evaluation of scientific literature through citation indexing. *Am. Doc.* **1963**, *14*, 195–201. [\[CrossRef\]](#)
15. Huang, L.; Zhang, Y.; Guo, Y.; Zhu, D.; Porter, A. Four dimensional Science and Technology planning: A new approach based on bibliometrics and technology roadmapping. *Technol. Forecast. Soc. Chang.* **2014**, *81*, 39–48. [\[CrossRef\]](#)
16. Aznar-Sánchez, J.A.; Velasco-Muñoz, J.F.; López-Felices, B.; Román-Sánchez, I.M. An Analysis of Global Research Trends on Greenhouse Technology: Towards a Sustainable Agriculture. *Int. J. Environ. Res. Public Health* **2020**, *17*, 664. [\[CrossRef\]](#) [\[PubMed\]](#)
17. Velasco-Muñoz, J.F.; Aznar-Sánchez, J.A.; Batlles-Delafuente, A.; Fidelibus, M.D. Rainwater Harvesting for Agricultural Irrigation: An Analysis of Global Research. *Water* **2019**, *11*, 1320. [\[CrossRef\]](#)
18. Santos, J.; Maldonado, M.; Santos, R. Inovação e Conhecimento Organizacional: Um Mapeamento Bibliométrico das Publicações Científicas até 2009. *Rev. Organ. Contexto* **2011**, *7*, 31–58. [\[CrossRef\]](#)
19. Albort-Morant, G.; Henseler, J.; Leal-Millán, A.; Cepeda-Carrión, G. Mapping the Field: A Bibliometric Analysis of Green Innovation. *Sustainability* **2017**, *9*, 1011. [\[CrossRef\]](#)
20. Robinson, D.K.; Huang, L.; Guo, Y.; Porter, A. Forecasting Innovation Pathways (FIP) for new and emerging science and technologies. *Technol. Forecast. Soc. Chang.* **2013**, *80*, 267–285. [\[CrossRef\]](#)
21. Galvez, C. Análisis de co-palabras aplicado a los artículos muy citados en Biblioteconomía y Ciencias de la Información (2007–2017). *Transinformação* **2018**, *30*, 277–286. [\[CrossRef\]](#)
22. Durieux, V.; Gevenois, P.A. Bibliometric Indicators: Quality Measurements of Scientific Publication. *Radiology* **2010**, *255*, 342–351. [\[CrossRef\]](#) [\[PubMed\]](#)
23. Li, W.; Zhao, Y. Bibliometric analysis of global environmental assessment research in a 20-year period. *Environ. Impact Assess. Rev.* **2015**, *50*, 158–166. [\[CrossRef\]](#)
24. Mongeon, P.; Paul-Hus, A. The journal coverage of Web of Science and Scopus: A comparative analysis. *Science* **2015**, *106*, 213–228. [\[CrossRef\]](#)
25. Gavel, Y.; Iselid, L. Web of Science and Scopus: A journal title overlap study. *Online Inf. Rev.* **2008**, *32*, 8–21. [\[CrossRef\]](#)

26. Aznar-Sánchez, J.A.; Belmonte-Ureña, L.J.; Velasco-Muñoz, J.F.; Manzano-Agugliaro, F. Economic analysis of sustainable water use: A review of worldwide research. *J. Clean. Prod.* **2018**, *198*, 1120–1132. [[CrossRef](#)]
27. Aznar-Sánchez, J.A.; Piquer-Rodríguez, M.; Velasco-Muñoz, J.F.; Manzano-Agugliaro, F. Worldwide research trends on sustainable land use in agriculture. *Land Use Policy* **2019**, *87*, 104069. [[CrossRef](#)]
28. Aznar-Sánchez, J.A.; Velasco-Muñoz, J.F.; Belmonte-Ureña, L.J.; Manzano-Agugliaro, F. Innovation and technology for sustainable mining activity: A worldwide research assessment. *J. Clean. Prod.* **2019**, *221*, 38–54. [[CrossRef](#)]
29. Cascajares, M.; Alcayde, A.; Salmerón-Manzano, E.; Manzano-Agugliaro, F. Transfer of Agricultural and Biological Sciences Research to Patents: The Case of EU-27. *Agronomy* **2021**, *11*, 252. [[CrossRef](#)]
30. Bonilla, C.A.; Merigó, J.M.; Torres-Abad, C. Economics in Latin America: A bibliometric analysis. *Science* **2015**, *105*, 1239–1252. [[CrossRef](#)]
31. Stenger, A. Experimental valuation of food safety: Application to sewage sludge. *Food Pol.* **2000**, *25*, 211–218. [[CrossRef](#)]
32. Lusk, J.L.; Fox, J.A.; Schroeder, T.C.; Mintert, J.; Koohmaraie, M. In-store valuation of steak tenderness. *Am. J. Agric. Econ.* **2001**, *83*, 539–550. [[CrossRef](#)]
33. Toler, S.; Briggeman, B.C.; Lusk, J.L.; Adams, D.C. Fairness, farmers markets, and local production. *Am. J. Agric. Econ.* **2009**, *91*, 1272–1278. [[CrossRef](#)]
34. Bieberstein, A.; Roosen, J.; Marette, S.; Blanchemanche, S.; Vandermoere, F. Consumer choices for nano-food and nano-packaging in France and Germany. *Eur. Rev. Agric. Econ.* **2012**, *40*, 73–94. [[CrossRef](#)]
35. Lusk, J.L.; Coble, K.H. Risk perceptions, risk preference, and acceptance of risky food. *Am. J. Agric. Econ.* **2005**, *87*, 393–405. [[CrossRef](#)]
36. de Koeijer, T.; Wossink, G.; Smit, A.; Janssens, S.; Renkema, J.; Struik, P. Assessment of the quality of farmers' environmental management and its effects on resource use efficiency: A Dutch case study. *Agric. Syst.* **2003**, *78*, 85–103. [[CrossRef](#)]
37. Messer, K.D.; Schmit, T.M.; Kaiser, H.M. Optimal Institutional Mechanisms for Funding Generic Advertising: An Experimental Analysis. *Am. J. Agric. Econ.* **2005**, *87*, 1046–1060. [[CrossRef](#)]
38. Musshoff, O.; Odening, M.; Schade, C.; Maart-Noelck, S.C.; Sandri, S. Inertia in disinvestment decisions: Experimental evidence. *Eur. Rev. Agric. Econ.* **2012**, *40*, 463–485. [[CrossRef](#)]
39. Maart-Noelck, S.C.; Musshoff, O. Investing Today or Tomorrow? An Experimental Approach to Farmers' Decision Behaviour. *J. Agric. Econ.* **2012**, *64*, 295–318. [[CrossRef](#)]
40. Warnick, J.C.E.; Escobal, J.; Laszlo, S.C. Ambiguity Aversion and Portfolio Choice in Small-Scale Peruvian Farming. *BE J. Econ. Anal. Policy* **2011**, *11*, 1–56. [[CrossRef](#)]
41. Bocquého, G.; Jacquet, F.; Reynaud, A. Expected utility or prospect theory maximisers? Assessing farmers' risk behaviour from field-experiment data. *Eur. Rev. Agric. Econ.* **2013**, *41*, 135–172. [[CrossRef](#)]
42. Brunette, M.; Foncel, J.; Kéré, E.N. Attitude towards Risk and Production Decision: An Empirical Analysis on French Private Forest Owners. *Environ. Model. Assess.* **2017**, *22*, 563–576. [[CrossRef](#)]
43. Gars, J.; Ward, P.S. Can differences in individual learning explain patterns of technology adoption? Evidence on heterogeneous learning patterns and hybrid rice adoption in Bihar, India. *World Dev.* **2019**, *115*, 178–189. [[CrossRef](#)]
44. Pollard, C.R.J.; Redpath, S.; Bussi ere, L.F.; Keane, A.; Thompson, D.B.A.; Young, J.C.; Bunnefeld, N. The impact of uncertainty on cooperation intent in a conservation conflict. *J. Appl. Ecol.* **2019**, *56*, 1278–1288. [[CrossRef](#)]
45. Senapati, A.K. Evaluation of risk preferences and coping strategies to manage with various agricultural risks: Evidence from India. *Heliyon* **2020**, *6*, e03503. [[CrossRef](#)]
46. Wu, S.; Roe, B. Behavioral and Welfare Effects of Tournaments and Fixed Performance Contracts: Some Experimental Evidence. *Am. J. Agric. Econ.* **2005**, *87*, 130–146. [[CrossRef](#)]
47. Yesuf, M.; Bluffstone, R.A. Poverty, risk aversion, and path dependence in low-income countries: Experimental evidence from Ethiopia. *Am. J. Agric. Econ.* **2009**, *91*, 1022–1037. [[CrossRef](#)]
48. Kanter, C.; Messer, K.D.; Kaiser, H.M. Does Production Labeling Stigmatize Conventional Milk? *Am. J. Agric. Econ.* **2009**, *91*, 1097–1109. [[CrossRef](#)]
49. Dillaway, R.; Messer, K.D.; Bernard, J.C.; Kaiser, H.M. Do consumer responses to media food safety information last? *Appl. Econ. Perspect. Policy* **2011**, *33*, 363–383. [[CrossRef](#)]
50. Wu, S.; Fooks, J.R.; Messer, K.D.; Delaney, D. Consumer demand for local honey. *Appl. Econ.* **2015**, *47*, 4377–4394. [[CrossRef](#)]
51. Palm-Forster, L.H.; Ferraro, P.J.; Janusch, N.; Vossler, C.A.; Messer, K.D. Behavioral and Experimental Agri-Environmental Research: Methodological Challenges, Literature Gaps, and Recommendations. *Environ. Resour. Econ.* **2019**, *73*, 719–742. [[CrossRef](#)]
52. Murphy, J.J.; Stevens, T.H. Contingent valuation, hypothetical bias, and experimental economics. *Agric. Res. Econ. Rev.* **2004**, *33*, 182–192. [[CrossRef](#)]
53. Poe, G.L.; Schulze, W.D.; Segerson, K.; Suter, J.F.; Vossler, C.A. Exploring the Performance of Ambient-Based Policy Instruments When Nonpoint Source Polluters Can Cooperate. *Am. J. Agric. Econ.* **2004**, *86*, 1203–1210. [[CrossRef](#)]
54. Lybbert, T.J. Indian farmers' valuation of yield distributions: Will poor farmers value 'pro-poor' seeds? *Food Pol.* **2006**, *31*, 415–441. [[CrossRef](#)]
55. Bougherara, D.; Combris, P. Eco-labelled food products: What are consumers paying for? *Eur. Rev. Agric. Econ.* **2009**, *36*, 321–341. [[CrossRef](#)]

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56. Cecchini, L.; Torquati, B.; Chiorri, M. Sustainable agri-food products: A review of consumer preference studies through experimental economics. *Agric. Econ.* **2018**, *64*, 554–565. [[CrossRef](#)]
 57. Chang, J.B.; Lusk, J.L.; Norwood, F.B. How Closely Do Hypothetical Surveys and Laboratory Experiments Predict Field Behavior? *Am. J. Agric. Econ.* **2009**, *91*, 518–534. [[CrossRef](#)]
 58. Lusk, J.L.; Norwood, F.B. Speciesism, altruism and the economics of animal welfare. *Eur. Rev. Agric. Econ.* **2011**, *39*, 189–212. [[CrossRef](#)]
 59. Abbink, K.; Moller, L.C.; O'Hara, S. Sources of Mistrust: An Experimental Case Study of a Central Asian Water Conflict. *Environ. Resour. Econ.* **2009**, *45*, 283–318. [[CrossRef](#)]