

Perceptions of Global and Domestic Agricultural Issues Held by International Agricultural Journalists

Laura Kubitz, Ricky Telg, Tracy Irani and Owen Roberts

Abstract

The purpose of this study was to provide baseline knowledge of the prevalent global and domestic agricultural issues, ways to educate journalists about these issues, and sources of information used when reporting about agricultural issues, according to international agricultural journalists. The executives of the International Federation of Agricultural Journalists served as this study's population. The IFAJ is comprised of a membership of 31 countries that practice freedom of the press. A modified Delphi method with three rounds of data collection was utilized for this study. Qualitative feedback was provided by the executives in Round One. In Rounds Two and Three, quantitative feedback was used with the goal of forming consensus on the most important global issues and methods to educate journalists about these issues. A list of important domestic agricultural issues was supplied for 20 countries. The executives also generated a list of important global agricultural issues and ways to educate journalists about these issues. Important global agricultural issues included feeding a growing global population and water quality/quantity. Face-to-face methods of educating journalists were favored by the executives. The executives identified a wide variety of sources they use to report about global and domestic agricultural issues, including government agencies, farmers, universities, online sources, professional organizations, commodity group websites, and academic journals.

Keywords

issues, agriculture, global, domestic, International Federation of Agricultural Journalists, Delphi method

Introduction

Despite the importance of agriculture and the issues surrounding the industry to the economy, environment, and culture, print media have often ignored agriculture and agricultural issues (Stringer & Thomas, 1999). Whitaker and Dyer (1998) said that "journalists have a responsibility to report news both accurately and fairly. If they fail in their duties, responsible reporting and consumption of agricultural news will not occur and misinformed individuals may make important decisions affecting the food and fiber industry" (p. 445). Possessing a basic knowledge of agriculture is important when it is one of a state's major industries; a lack of knowledge and experience in agriculture can actually impede economic development of the industry (Williams & White, 1991).

Whitaker and Dyer (2000) also expressed that journalists have a responsibility to report on important issues accurately and fairly. They should use a greater variety of sources and explore all facets

of an issue. In contrast, the general public should critically evaluate articles and should exercise caution when forming opinions about issues based upon pictures that are meant to evoke an emotional response. If this is not done, “consumers and agriculturalists are likely to suffer from the commission, or omission, of practices that either positively or negatively affect environmental and food safety issues” (p. 133).

The quality of agricultural news that reaches people involved with the industry and the general public has also been questioned (Reisner & Walter, 1994). Critics have called general-interest media coverage superficial, lacking in comprehensive understanding of agricultural issues, and inclined toward flashy events and folksy feature stories (Reisner & Walter). Hall et al. (1977) stated that continued negative news coverage about agricultural issues could lessen public support for farmers and farming.

Cartmell, Dyer, and Birkenholz (2001) interviewed Arkansas daily newspaper editors to find out their attitude, knowledge, and experience with agriculture, as well as their perceptions of agricultural issues. Editors had a positive attitude toward agriculture, but were “less positive about the image of agriculture or performance in educating the public about the agricultural industry” (p. 455). They had positive attitudes regarding the “technical and scientific nature of agriculture, the ability of agriculturalists to address issues dealing with environment and research, and the belief that agriculture provides a safe and abundant food supply” (p. 455). However, the editors agreed that more education about agriculture was necessary. The study’s authors indicated that it was agricultural communicators and educators’ responsibility to provide a knowledge base for journalists about agriculture. Since journalists cannot receive training in all areas in which they report, the authors encouraged university faculty to keep open relationships with journalists to ensure information could be disseminated about agricultural issues.

The developing world needs reliable information and knowledge on agricultural issues (Ballantyne, 2009). As society becomes more aware of the problems and issues facing agriculture and food production, pressure will increase to create policies that benefit consumers and producers (Frick, Birkenholz, & Machtmes, 1995). Journalists who report on agricultural issues should at least possess an above average knowledge of agriculture (Rogers, 1995). However, journalists cannot be expected to receive training in all areas in which they will be reporting throughout their careers. It is up to agricultural communications professional organizations to provide journalists with the knowledge they need to cover agricultural issues (Cartmell, Dyer, & Birkenholz, 2001).

The International Federation of Agricultural Journalists is an example of an agricultural communications professional organization. The IFAJ is a “non-political, not-for-profit professional association with membership covering 31 countries that embrace freedom of the press” (IFAJ, 2011, A global organization of professional communicators, para.1). The mission of the IFAJ is to give agricultural journalists and communicators a place for professional development and international networking (IFAJ, 2011).

Purpose and Objectives

The purpose of this study was to provide baseline knowledge of the important global and domestic agricultural issues, according to agricultural communicators in an agricultural setting. The specific objectives of the study were to:

- Identify important global agricultural issues, according to IFAJ executives.

- Identify important domestic agricultural issues facing each country of the IFAJ, according to the executives who represent the country.
- Identify resources the executives of the IFAJ use to report on important global and domestic agricultural issues.
- Identify the best ways to educate journalists about important global and domestic agricultural issues, according to IFAJ executives.

Theoretical/Conceptual Framework

The conceptual framework for this study was an adaptation of agenda-setting theory (See Figure 1.) Agenda setting refers to a connection between a series of events: first, news media report on specific issues; second, these reports affect the perceptions of issue importance; finally, these changes in perceptions will influence policy-making decisions (Cook et al., 1983).

Through the day-to-day selection and display of news, editors, journalists, and news directors have a substantial influence on the public attention to issues, problems, and opportunities within a community (McCombs, 1997). Over a period, when a set of issues is continually reflected in the media, the issues can become priorities of the public agenda. McCombs proclaimed that the agenda-setting role of the news media is an “awesome, ethical responsibility” (p. 433).

At any one time, only a small number of issues can command significant attention from the public, the press, or the government, and even the most important issues can quickly disappear from the public’s agenda (McCombs, 1997). Therefore, consensus on the most prevalent issues is imperative. Limitations are in place on the amount of influence the media can have on the public agenda. Even if an issue is prominently covered in the news, it will not be on the public’s agenda if the public does not resonate with the issue. The public and the news media are “joint participants” in the agenda-setting process (McCombs, p. 437). The news items and issues that the media choose to report on have been influenced by the exchanges between news reporters and the sources that give them information for stories, the day-to-day activities of news organizations, and the journalists’ “norms and traditions” (Valenzuela & McCombs, 2009, p. 97), which are the strongest influence in media agenda setting. The reporters and editors are the last sources the stories filter through, so they ultimately decide how stories are told.

When journalists are given the right information and exposure to important issues within a community, they are more inclined to write about important issues that might otherwise go unreported (Thapa, 2005). For example, in 2003 a majority of the people in Nepal did not have access to clean water and sanitation facilities and were unaware of alternatives, causing people to become sick from water borne illnesses. These issues often went unreported in the news. Stories about politics, conflict, and social crimes sold more newspapers (Thapa, 2005).

In 2003, Nepal’s Water, Sanitation and Hygiene for All (WASH) group was formed to find ways to improve sanitation. In order to meet the goal of halving the proportion of people without access to clean water and sanitation by 2015, WASH developed relationships with the media to spread the word about their mission and goal. They organized journalist orientation programs in three areas of Nepal that coincided with National Sanitation Week. Seventy-four journalists participated in the two-day programs, which featured science and policy briefings from experts, field trips, and discussions about the issue of clean water and sanitation. These programs “gave journalists a platform from which to figure out what stories there were to be told about sanitation, hygiene, and water” (Thapa, 2005, p. 2). The journalists were also given resource materials on sanitation, Nepalese facts, policy

documents, lists of websites, and references so they could conduct further research. “Many described how they’d not thought that a community’s sanitation situation could be a news item before they’d had this experience. Having it, they said, helped them realize the role they could play in informing people about these issues” (Thapa, 2005, p. 2).

The conceptual framework for this study started with the set of global and domestic agricultural issues that the industry deals with, such as food safety, obesity, and sustainability. Once those issues are identified and ways to educate journalists about global and domestic agricultural issues are understood and adapted by the media, this knowledge can help enable the media to report about these issues more effectively. Journalists are sometimes unaware of important environmental and agricultural issues unless the issues are specifically identified, and they are given materials and information to help them to effectively cover these issues (Thapa, 2005). According to the conceptual framework, more effective reporting about global and domestic agriculture issues will result in a more knowledgeable public about the global and domestic agricultural issues that affect their food supply. More effective reporting could also create more pressure to pass laws and directives that can address the global and domestic agricultural issues affecting the industry.

When the general population is equipped with knowledge about the agricultural industry, they can help influence policy decisions that are made regarding agricultural issues. Therefore, identifying global and domestic agricultural issues, as well as ways to educate journalists about these issues, can help the public and legislative bodies have a better understanding of agriculture and the issues affecting the industry. Incomplete or inadequate information about agricultural issues can leave parts of the population out of the decision making process (Stringer & Thomson, 1999), or a misinformed public might be involved in making decisions that can harm the food and fiber industry (Whitaker & Dyer, 1998).

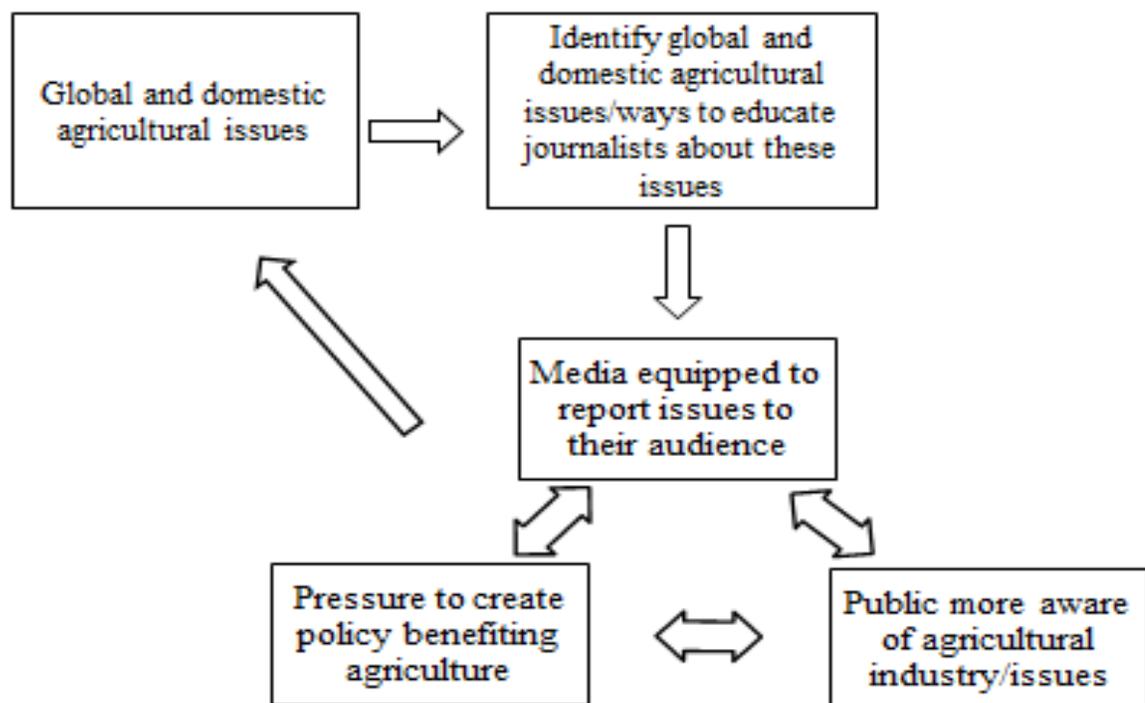


Figure 1. Conceptual framework related to agenda-setting theory based on Valenzuela and McCombs (2009)

Methodology

This study was conducted using a modified Delphi technique. In the 1950s, the RAND Corporation in Santa Monica, California, developed the Delphi research technique. (Dalkey & Helmer, 1963) The Delphi technique is a “group facilitation technique, which is an iterative multistage process, designed to transform opinion into group consensus.” (Hasson, Keeney, & McKenna, 2001, p. 1008).

For this study, the researcher identified agricultural journalists as the target population. For the sample, the researcher decided to use the executive members of the International Federation of Agricultural Journalists. The IFAJ is a “non-political, not-for-profit professional association for agricultural journalists” (IFAJ, 2010, “A global organization of professional communicators,” para.1). The executive members are the elective representative governing body of the organization. Each of the 31 countries in the IFAJ elects one representative. The federation includes countries that are technologically advanced, have a democratic government, and embrace freedom of the press.

The researcher developed the instrumentation used in this study. A panel of experts, consisting of communication professionals with agriculture backgrounds, analyzed the questionnaire to ensure the questions were clear enough for an international audience and related to the objectives of the study. Three rounds of questioning were used. Data for this study was collected from September to November 2011.

Round One

The first round consisted of four open-ended questions in which the respondents were free to give as much feedback as they saw appropriate. The respondents were given 10 boxes in the survey, so they could separately list the issues. The four questions were:

1. What are the most important agricultural issues on a global scale? Please list each issue in a separate box. You are not required to fill in each box or list the issues in order of importance.
2. What are the most important domestic agricultural issues (within your country)? Please list each issue in a separate box. You are not required to fill in each box or list the issues in order of importance.
3. What are the best methods to educate journalists about important global and domestic agricultural issues? Please list each method in a separate box. You are not required to fill in each box or list the methods in order of importance.
4. What sources of information, such as governmental agencies/ministries of agriculture, professional associations, journals, magazines, newspapers, or organizations do you use when seeking information about agricultural issues? Please provide the web address or contact information for the sources as you have listed if available. You are not required to fill in every box or list the sources in order of importance.

Demographic questions were also asked in Round One. The respondents were asked their age, country of residence, and gender. They were also asked to describe their occupation. The respondents could choose from “Journalist/Reporter,” “Editor,” “Publisher,” “Communications professional (government),” “Communication professional (industry),” or “Other.” The choices for occupation were generated from input by an IFAJ officer and the list of occupation descriptions of IFAJ members on the IFAJ website. Only the researcher had access to the demographic information about the re-

spondents. Confidentiality was to be maintained to ensure the respondents were free to express their opinions and knowledge about the subject.

In Rounds Two and Three, questions two and four were eliminated because respondents from one country would not have accurate knowledge of agricultural issues in another country. In regards to question four, group members most likely use different sources of information when they report about agricultural issues and would not be capable of judging the quality of other sources used by other journalists from different countries. Therefore, these questions were dropped after Round One. A 68% response rate was achieved in Round One ($n=21$), a 66% response rate was achieved in Round Two ($n=20$), and a 45% response rate was achieved for Round Three ($n=14$).

Round Two

For Round Two, a list of global agricultural issues and ways to educate journalists about global/domestic agricultural issues was generated from responses from Round One. The list was sent to the respondents, and they were asked to rank on a Likert-type scale whether they “Strongly Disagree”=1, “Disagree”=2, “Neither Agree or Disagree”=3, “Agree”=4, or “Strongly Agree”=5, that the item was a major agricultural issue. The issues were separated into sections of 10 different items in order to make the list easier for the respondents to sort through. The global issues/methods to educate journalists were not listed in any particular order.

Round Three

The global agricultural issues/methods used to educate journalists about agricultural issues that received a consensus of 3.5 or higher in Round Two were included in the survey for Round Three. In the survey, the score the item received was listed next to the global issue or method the respondents indicated to best educate journalists about global and domestic agricultural issues. The issues were listed based on the score they received in Round Two, with the highest items listed first. The respondents were then asked whether they “Agree” or “Disagree” that the item listed in the survey was a major global agricultural issue or the best ways to educate journalists about global/domestic agricultural issues. The items that received “Agree” were carried over to a new question. Finally, the respondents were asked to select what they believed to be the top five global agricultural issues and the top five ways to educate journalists about global/domestic agricultural issues from the items that received an “Agree.” They were not asked to rank the items but simply to choose their top five choices.

Results

Demographics

In Round One of the study, the IFAJ executives ($n=21$) were asked to respond to demographic questions. Approximately 38% ($n=8$) of the respondents were editors, and 28% were reporters/journalists ($n=6$). Therefore, most of the IFAJ executives surveyed were editors or journalists, suggesting they have real-world experience in working in the journalism industry. Thirty-three percent ($n=7$) of the respondents were between the ages of 35-44, 24% ($n=5$) were between the ages of 45-54, and 33% ($n=7$) were between the ages of 55-64. Sixty-one percent of the respondents were male ($n=13$), and 33% of the respondents ($n=7$) were female. The countries the respondents represented were Australia, Belgium, Canada, Czech Republic, Denmark, Finland, Great Britain, Ireland, Japan, Kenya, Madagascar, New Zealand, Serbia, Slovakia, Slovenia, South Africa, Spain, Switzerland, Ukraine, and the United States.

Domestic Agricultural Issues

The results collected for domestic agricultural issues indicated that some issues are prevalent in several countries. (See Table 1.) The price of food was indicated as an issue in Belgium, Canada, the Czech Republic, Denmark, Finland, Great Britain, Slovenia, Spain, Switzerland, and the United States. Issues concerning land, such as loss of farmland to urban sprawl or the lack of hesitation to clear new land, were cited as issues in Madagascar, New Zealand, Slovakia, South Africa, and the United States. Concern over the environment was cited as an important domestic issue in Belgium, Denmark, New Zealand, Slovenia, and the United States.

Table 1.

Domestic agricultural issues by country of International Federation of Agricultural Journalists (IFAJ) executive

Country	Issues
Australia	Biosecurity Free trade Genetically modified organisms Supermarket monopolies/power Food Miles Live animal export trade Animal activism Foreign ownership of farms/businesses Conflict with mining expansion Diseases like henda virus
Belgium	Sustainable production Food prices Food quality Agriculture and environment Waste of food
Canada	Farmers receiving fair prices for food they produce Urban crush Non-organic vs. organic, including Buy Local campaigns Water
Czech Republic	Common Agricultural Policy of the European Union (CAP) Subsidy for agriculture and food sector Food safety and food quality Food prices
Denmark	The new CAP (proposal from the EU commission) New environmental restrictions make the farmers less competitive Speculation hits food prices
Finland	The economic situation for farmers as a consequence of the economic crisis How to provide sufficient income to our farmers while producing in so far north where the productivity is not the highest Common Agricultural Policy of the European Union Animal welfare Organic farming Profitability of pig farming- it is in great trouble now The future of producing furs The legislation of genetically modified organisms The sugar quotas The milk quotas and milk price

Great Britain	<ul style="list-style-type: none"> Retailer domination of the market and control of prices Food security Price volatility High production costs and increasing prices of fuel Diminishing farmer numbers
Ireland	<ul style="list-style-type: none"> Common Agricultural Policy (CAP) reforms Provision of bank credit for expanding farmers Competitiveness EU support for farmers
Japan	<ul style="list-style-type: none"> Low profitability in farming business Frequent changes in agricultural policies Aging in the farm community
Kenya	<ul style="list-style-type: none"> Trade liberalizations Market information Climate change Rising cost of seeds Availability and access to seeds Biotechnology Policy
Madagascar	<ul style="list-style-type: none"> Lack of hesitation to clear new parcels of land Land as a display of wealth Lack of education among all social groups, including women
New Zealand	<ul style="list-style-type: none"> Water quality- rivers, streams, lakes polluted by stock effluent Methane emissions from stock Bio-security: pests, disease brought in by tourists and with imports The loss of prime productive land to urban sprawl Access to international markets for agricultural products Trade barriers Growing international concerns about food miles Environmental footprints
Serbia	<ul style="list-style-type: none"> Lack of money in agrarian budget (only 2.6% of total state budget) Subventions are aimed at number of hectares, not at the type of production or quantity of it Lack of education of producers. We have examples of good production, but also really unrepresentable ones
Slovakia	<ul style="list-style-type: none"> The European Union's CAP (Common Agricultural Policy) Land ownership
Slovenia	<ul style="list-style-type: none"> Short acceptance farmers by society Equal rural development in all regions Development of ecological farming Development of high quality products within or not the frame of EU geographical nomination Improving legislation concerning agriculture (some regulations are too strict and have nothing in common with reality) Working with consumers to make them understand why "short-distance food" means improvement of country's welfare, their own welfare and the environment in the whole Working with children- explaining the process of food production, why respect food and farmers, getting them involved in food production (back to local school gardens) Improving environmental knowledge of all farmers Assuring fair prices for all involved (at the moment the most is "collected" by the traders)

South Africa	<ul style="list-style-type: none"> Land claims Water scarcity Labour costs Production costs Government's bad attitude towards commercial farmers Scarcity of agricultural land Scarcity of good labor Global warming Lack of cooperation between different agricultural unions to form a united front
Spain	<ul style="list-style-type: none"> Prices paid to producers Common Agricultural Policy (CAP) from 2013 Bioenergy
Switzerland	<ul style="list-style-type: none"> Declining prices of products High costs for the state and the taxpayer Lack of solidarity between the farmers Consumer-consciousness
Ukraine	<ul style="list-style-type: none"> Corruption Incompetence of bureaucrats Lack of funding Governmental interference Lack of the state agriculture policy
United States	<ul style="list-style-type: none"> Price volatility Access to credit Resource degradation- soil loss and water pollution Pesticide resistance Trade barriers Loss of prime farmland to development, hunt clubs, and other non-agricultural uses Increasing regulations and the impact of farm competitiveness Level of risk in farming today Lack of young people entering production agriculture Environmental issues- clean water

Data indicated that some issues were specific to certain countries. The respondent representing Finland indicated there are issues in the sugar, milk, and pig industries and with helping farmers obtain high enough incomes despite living in a northern, wintery climate. The respondent representing Japan indicated the rising age of farmers as an issue. In the Ukraine, issues surrounding “corruption,” “lack of funding,” and “governmental interference,” and “lack of state agriculture policy” affected the agriculture industry, according to the respondent. According to the respondent representing Kenya, the price and availability of seeds was an issue. “Methane emissions from stock” was only mentioned to be an issue for New Zealand, according to the respondent representing the country.

Countries that have legislative and economic ties to one another, such as countries within the European Union, also deal with similar issues. The Common Agricultural Policy was cited as an important domestic issue in the Czech Republic, Denmark, Finland, Great Britain, Slovakia, and Spain. Some issues are prevalent in countries in the same region. In Australia and New Zealand, both respondents expressed that issues involved with trade, biosecurity, and food miles, or the distance food travels from where it is grown to where it is bought and consumed (Natural Resource Defense Council, 2007), have affected the agriculture industry. In the United States and Canada, water quality and quantity were cited as important issues.

Global Agricultural Issues

In Round Three, the 57 items pertaining to global issues that received a mean score of 3.5 or higher were listed, and the issues that received a mean score of 3.49 ($n=9$) or below were removed from the questionnaire. Respondents ($n=14$) were given the mean scores from Round Two and were asked to indicate whether they “Agree” or “Disagree” that the issues were important global agricultural issues. The respondents were then asked to pick what they believed to be the top five most important global agricultural issues from the items in which respondents said they “Agree” were important global agricultural issues. “Producing enough food to feed a growing population” received the most selections ($n=9$), followed by “water quantity” ($n=6$), “food safety” ($n=6$), “water management” ($n=5$), and “food security” ($n=4$). Table 2 lists the issues and the number of times they were selected as a “top five most important global agricultural issue.”

Table 2.

Number of times each global agricultural issue was selected as a “top five” issue, according to IFAJ executives

Global Agricultural Issues	n
Producing enough food to feed a growing population	9
Water quantity	6
Food safety	6
Water management	5
Food security	4
Water quality	4
Development of new production methods	4
Sustainable land management	3
Air, water and land pollution	3
Availability of affordable food	2
Maximizing land utilization	2
Prices of agricultural products	2
Quality of food	2
Soil degregation	2
CAP: European Common Agricultural Policy	2
Land grabbing	2
Access to food and inputs in the developing world	1
The attitude and legislation toward genetically modified organisms	1
Helping young people into production agriculture- huge financial commitment bars entry for many	1
Agricultural subsidies	1
Bioenergy	1
Poverty	1
Control of terms of trade- especially the cost of farm inputs	1
Converting productive farmland from food production to biofuels	1
Level of risk in farming today-huge capital outlay, rising expenses (land prices, input costs), volatile markets	1
Supporting women in agriculture, mainly in developing nations	1
International financial markets	1
Speculation by non-agricultural casino-capitalists with agricultural commodities	1

Ways to Educate Journalists about Global and Domestic Agricultural Issues

The 30 techniques identified to educate journalists about global and domestic issues that received a 3.5 or higher mean score in Round Two were carried over to Round Three. The techniques that

received a 3.49 or lower ($n=9$) were removed from the questionnaire. In Round Three, respondents ($n=14$) were given the mean score of the item and then asked whether they “Agree” or “Disagree” that the technique listed was an effective way to educate journalists about global and domestic agricultural issues. From the techniques that the executives “Agree” were the best ways to educate journalists about global and domestic agricultural issues, they were asked to select – in no particular order – what they believed to be the top five techniques to educate journalists about global and domestic agricultural issues. (See Table 3.)

“Professional bodies (like IFAJ)” was the top choice ($n=7$). “Building relationships between farmers and media- farm tours for journalists and providing opportunities- with story angles - for journalists to know farmers,” “excursions, farm visits,” and “explanations by key sources - scientists, policymakers, farmers – of their views on the subject” were the second most popular choices ($n=6$).

Table 3.

Number of times each technique to educate journalists about global/domestic agricultural issues was selected as a “top five” technique, according to IFAJ executives

Technique to Educate Journalists	n
Professional bodies (like IFAJ)	7
Building relationships between farmers and media- farm tours for journalists and providing opportunities- with story angles- for journalists to know farmers	6
Excursions, farm visits	6
Explanations by key sources- scientists, policymakers, farmers -- of their views on a subject	6
Exposing journalists to key players in specific areas	5
Job experience- working intensively on agricultural issues	5
Online resources- makes detailed information available online and easily found via search engine	5
Educational tours	3
Travel options for agricultural journalists	3
Visit foreign countries and visit farmers and processors, talk to key-players	3
Master classes	3
Conferences/workshops addressed by academics and practitioners	3
Increased educational emphasis on agricultural at journalism training at tertiary level	3
Grassroots journalism	3
Tutorship by experienced journalists	3
Regular press information from different agricultural actors (research, university etc.)	2
"Opening their eyes and realizing agriculture is part of a global supply chain"	2
Exchange visits	1
Journalists should be taking more interest in global agricultural news stories	1
Seminars	1

Sources of Information for Journalists

In Round One, respondents ($n=20$) were asked to list sources of information they use when reporting about global and domestic agricultural issues. They could indicate up to 10 sources. Respondents listed a wide variety of sources including farmers, ministries of agriculture, websites, Google searches, universities, and governmental agencies. Many of the sources are relevant to respondents’ country of origin. Table 4 displays the sources, listed by country, provided by the IFAJ executives.

Table 4.

Sources of information used by IFAJ executives when reporting about global and domestic agricultural issues

Country	Sources of information
Australia	Federal and state departments of agriculture Federal and state ministers of agriculture Federal and state governments and other departments - like Environment, Trade etc. Australian Bureau of Agricultural and Resource Economics and Sciences IFAJ Australian Council of Agricultural Journalists Local newspapers Local magazines Newsletters from government departments and statutory bodies
Belgium	European institutions / http://europa.eu www.vilt.be Dailies / Agrafacts / Europe A lot of e-letters
Czech Republic	Professional monitoring of media (Newton) Information from Permanent Representation of Czech Republic in EU Directorate-General for Agriculture and Rural Development Directorate General for Health and Consumer Affairs
Denmark	Google The Ministry of Agriculture, Food and Fisheries: / www.fvm.dk The Agroeconomic Institute / www.foi.life.ku.dk The Danish Agriculture and Food Council / / www.lf.dk Food and Agriculture Organization of the United Nations / www.fao.org
Great Britain	The European Commission / www.scotland.gov.uk www.defra.gov.uk Farmers Weekly (farming and agriculture news site) / www.fwi.co.uk Farmers Guardian (farming and agriculture news site) / www.farmersguardian.com Reuters news feeds from agricultural commodity markets and global farm news
Ireland	Various government departments and agencies in agriculture sector of my own country Various publications and trade websites, often accessed through Google news search or http://www.newsnow.co.uk Various NGOs in agriculture sector of my own country Various commercial firms in different agriculture sectors Rural development agencies in my own country Academic blogs i.e., http://capreform.eu/ Irish parliamentary debates Irish Agriculture and Food Authority / http://www.teagasc.ie
Japan	Subscribed news agencies Phone calls Daily conversations

Kenya	<ul style="list-style-type: none"> Government ministries Journalists' associations Newspapers Internet Fellow journalists Farmers International wire services i.e., BBC, Reuters Professional journals
Madagascar	<ul style="list-style-type: none"> National Office for the Environment – in Madagascar Ministry of Agriculture and Farming Service of Estates and Lands
New Zealand	<ul style="list-style-type: none"> Environmental Protection Agency / www.epa.govt.nz Irrigation New Zealand / www.irrigationnz.co.nz Ministry of Agriculture and Forestry / www.maf.govt.nz AgResearch / www.agresearch.co.nz Horticulture New Zealand / www.hortnz.co.nz Fonterra / www.fonterra.co.nz Federated Farmers of NZ / www.fedfarm.org.nz NIWA / www.niwa.co.nz/ Beef + Lamb New Zealand / www.beeflambnz.com SCION / www.scionresearch.com
Norway	<ul style="list-style-type: none"> The Ministry of Agriculture / www.lmd.no Nationen, the daily Norwegian farming newspaper / www.nationen.no
Serbia	<ul style="list-style-type: none"> Association of Ag Journalists / www.agropress.org.rs Agribusiness magazine / www.agrobiznis.biz Ministry of Agriculture of Serbia / www.mpt.gov.rs Serbian Chamber of Commerce / www.pks.rs
Slovakia	<ul style="list-style-type: none"> www.land.sk www.sppk.sk www.polnoinfo.sk
Slovenia	<ul style="list-style-type: none"> Ministry of Agriculture and Forestry / www.mkgp.gov.si Chamber of Agriculture and Forestry / www.kgzs.si Agency for Rural Development / www.arsktrp.gov.si State Statistical Office www.stat.si/ Eurostat / epp.eurostat.ec.europa.eu European Commission / ec.europa.eu Press conferences, of major state and NGO organizations, direct questions to their PR services Journals, different paper or on-line editions
South Africa	<ul style="list-style-type: none"> Google Department of Agriculture, Forestry and Fisheries (statistics on agricultural matters) Landbouweekblad (the biggest agricultural magazine in South Africa) landbou.com (internet bases farming website) Breeder's societies University of the Free State University of Pretoria Pro-Agri Forum (association for Farmer of the Year recipients) Grain South Africa

Spain	Ministry www.marm.es Agencies: www.efeagro.com Organizations: ASAJA / www.asaja.net ; COAG / www.coag.org ; UPA / www.upa.es Magazines: agricultura: www.editorialagricola.com / Eumedia: www.agronline.es
Switzerland	http://www.landwirtschaft.ch/de/aktuell/ www.blw.admin.ch The people and institutions I follow on Twitter Blogs like mine: / www.adisagroblog.wordpress.com International institutions like FAO, WFP, European Commission D-Agri etc
United States	Magazines and newspapers Farm magazine web sites Government agencies Ag trade/commodity organizations University web sites Google search on topics or names Academic journals Agribusiness web sites and farmers Science organizations such as societies of agronomy, entomology, plant pathology, etc. USDA, NRCS, ERS, EPA land-grant universities

Conclusions

Domestic Agricultural Issues

Some of the domestic agricultural issues identified by the International Federation of Agricultural Journalists executives were specific to their own country. For example, according to the Australian and Madagascar IFAJ executives, respectively, “diseases like the henda virus” is an important domestic agricultural issue in Australia and “land as a display of wealth” is an issue in Madagascar. These issues were not listed as important domestic agricultural issues in any other country. It is important that journalists report about the issues pertaining to their local area and country. These are the issues that have the most relevance to their readers. Since journalists often prefer to only cover issues that are of interest to their readers or viewers (Shoemaker & Reese, 1996), these are the issues that journalists are more likely to cover. However, if journalists only report about issues specific to their country, they are less likely to address global agricultural issues.

Some of the important domestic agricultural issues mentioned by IFAJ executives were linked to the important global agricultural issues identified in the study. For example, issues related to water were listed as important domestic agricultural issues by the IFAJ executives in New Zealand (“Water quality- rivers, streams, lakes polluted by stock effluent”), the United States (“Resource degradation- soil loss and water pollution and “Environmental issues- clean water”), Canada (“water”), and South Africa (“Water scarcity”). “Water quality” and “water quantity” were two of the top five important global agricultural issues. This is an example of a domestic agricultural issue that is related to global agricultural issues.

While it is important that journalists cover how domestic issues affect their own countries, in order to help their readers gain an understanding of global agricultural issues, journalists should explain in their reports how their domestic issues relate to similar global agricultural issues. This would help

to address the gap that the journalists' readers have regarding knowledge about international agriculture and having a holistic understanding of how their country relates to international agriculture and global agricultural issues. It would also give their readers a way to identify with global agricultural issues and understand how these issues could affect them on a daily basis.

Respondents from countries that have legislative and economic ties to one another reported similar domestic agricultural issues. For example, the Common Agricultural Policy was reported as an important domestic agricultural issue for IFAJ member countries in the European Union. However, CAP was not cited as a top 10 global agricultural issue. Although some issues might not have as prominent of a global impact as other issues, to the countries involved and affected by the issues, they are important. Journalists should be educated about and learn to recognize the relationships between different countries and who are affected by similar agricultural issues. It is especially important to report about these relationships if countries have legislative ties to one another. If journalists do not report about these ties, their readers could be uninformed about policy decisions that affect agriculture in their countries.

IFAJ executives representing Australia and New Zealand, countries in the same geographic region, expressed important domestic agricultural issues for their countries, including trade, biosecurity, and food miles. Countries that are geographically close to one another deal with similar domestic agricultural issues, according to IFAJ executives. Journalists should make note of the domestic agricultural issues that affect their country and examine in their reports how these issues might affect countries that are in their same region. Journalists could also examine reports about agriculture coming from nearby countries to help them determine some of the issues and topics that are important in those countries. This could help them uncover domestic issues that are also important within their country and important to their readers.

Global Agricultural Issues

IFAJ executives identified 28 important global agricultural issues. Data for this study was collected from September–November 2011. Issues were ranked based on the number of times they were selected by respondents as a “top five global agricultural issue” in the final round of questioning. The list of global agricultural issues the respondents chose from was generated from previous rounds of surveys.

The top 10 most important global agricultural issues according to IFAJ executives were “producing enough food to feed a growing population,” “water quantity,” “food safety,” “water management,” “food security,” “water quality,” “development of new production methods,” “sustainable land management,” “air, water, and land pollution,” and “availability of affordable food.” These findings indicate the significance of these issues, further confirming the importance that journalists write and report about these issues to their publics.

Educating Journalists about Global Agricultural Issues

The overall consensus among the respondents was that face-to-face interactions were the best ways to educate journalists about global and domestic agricultural issues. This is supported by previous research that shows that face-to-face methods of teaching are usually preferred and can “build capacity, create social networks that enhance leadership, and result in positive actions that strengthen communities” (Sobrero & Craycraft, 2008, “Face-to-Face Learning”, para. 1).

“Excursions, farm visits,” “exposing journalists to key players in specific areas,” “educational tours,”

and “building relationships between farmers and media-farm tours for journalists and providing opportunities-with story angles- for journalists to know farmers” were some of the top techniques identified to educate journalists about the issues. In order to give journalists a platform on which to write about global and domestic agricultural issues, proper steps need to be taken to facilitate opportunities for journalists to learn how to cover these issues. Journalists should not just rely on outreach and educational opportunities provided by organizations in order to learn about global and domestic agricultural issues. Editors and governing boards of newspapers should allocate funds and set aside time for travel opportunities for journalists to visit the people and farms that are directly affected by the agricultural issues they are covering. Journalists should also continuously seek opportunities to uncover new angles to issues and to better understand the issues that affect their audiences.

It is important for agricultural communicators to reach out to general interest reporters instead of only collaborating with other agricultural journalists and media professionals. If agricultural communicators offer story angles and access to credible sources and information, general interest reporters could cover agricultural issues and influence agenda-setting functions related to agricultural issues. General interest reporters have access to and can influence large audiences. By working in partnership with media outside the agricultural industry, agricultural communicators could give them the tools and influence they need to impact policy and opinions related to global and domestic agricultural issues.

In the event of a crisis in the agricultural industry, such as contamination affecting food safety, forging relationships with general interest media could be beneficial. Reporters would be more likely to contact personnel they trust when they are tasked with writing about the crisis. Agricultural communicators could provide journalists with an accurate view of what is going on with the crisis. This could help the agricultural industry maintain a positive image and reputation with the general interest media and their audiences.

Sources of Information

The range of sources of information ($n=107$) provided by IFAJ executives to report about global and domestic agricultural issues was extensive. Each executive who responded to that question in the survey ($n=20$) provided a variety of sources, including government agencies, farmers, universities, online sources, professional organizations, commodity group websites, magazines, and academic journals. This extensive list shows that IFAJ executives use a wide variety of sources when reporting about global and domestic agricultural issues. They do not depend on just one medium of information. Therefore, credible sources of information for reporters should publish their information in a variety of ways to make it as accessible as possible to reporters. If quality information about agricultural issues is widespread and easier to access, then reporters will more likely report information that is correct and unbiased, providing their readers with an accurate view of the agricultural industry.

Limitations of the Study

One of the limitations to this study was that it was conducted with only one respondent representing an entire country. Further research should be conducted where multiple journalists from countries are questioned on their perceptions of global and domestic agricultural issues. This would give a more reliable scope of what journalists perceive to be important domestic agricultural issues within their country. Also, the scope of countries was limited to the 31 countries that represent the IFAJ. The requirements to be admitted into the IFAJ limited the ability of countries to join and

have a chance to be a part of the study. In order to make the study more generalizable, the scope of the study should be expanded to the largest sample of countries possible and with more than one respondent from each of those countries.

Another limitation to the study was that the survey material was only distributed in English. This may not have been the native language of the majority of IFAJ participants. Therefore, in order to ensure that the respondents understand the survey material to the fullest extent, it should be provided in their native language.

The majority of countries that participated in this study were from the European Union. Therefore, the list of global issues may be skewed to reflect the European Union's opinion of what they believe to be the most important global agricultural issues. However, the Common Agricultural Policy of the European Union was listed as an important domestic issue by all the countries in the EU, but it was not a top global issue. This could show that the opinions of other countries in the study balanced out large representation of EU countries.

A final limitation of this study was the inability to use demographic information to examine differences in perceptions of issue importance or the best ways to educate agricultural journalists about important agricultural issues. The respondents were asked to give demographic information in only the first round of questioning in order to keep responses in rounds two and three anonymous. It was important for respondents to be reassured of anonymity in their responses so they could be free to express their opinion on the questions addressed in the survey. Also, demographic questions were used only in round one to keep the round two and three survey questionnaires of manageable length in order to mitigate respondent attrition.

Suggestions for Further Research

This study only identified important global and domestic agricultural issues at the time of the survey. Research should be done to identify important global and domestic agricultural issues at different times over the year, as well as longitudinal studies to identify the most important issues during specific time periods.

Furthermore, a comprehensive analysis of stories covered by news media outlets should be done to determine if the issues identified by the IFAJ executives are being covered in the news. This would help to determine if the most important global and domestic agricultural issues are being reported in the media. By identifying gaps in reporting about global and domestic agricultural issues, it would help guide reporters to cover certain issues that are not being addressed as often as others.

Further research should be conducted in order to identify the relationships that develop between different countries that share similar domestic agricultural issues. Journalists should be surveyed that reside in groups of countries that share financial ties and/or regional ties in order to identify which agricultural issues affect their countries.

About the Author

Laura Kubitz is a graduate of the University of Florida's department of agricultural education and communication. She received her bachelor's in journalism in 2010 and her master's in agricultural education and communication in 2012. Ricky Telg is a professor in the department of agricultural education and communication at the University of Florida and teaches courses related to agricultural communication, specializing in teaching students technological skills. Tracy Irani is a professor in the department of agricultural education and communication. She is also the director of the Center for

Public Issues Education in Agriculture and Natural Resources. Owen Roberts teaches agricultural communications courses at the Ontario Agricultural College. He is also the director of research communications at the University of Guelph and the IFAJ Secretary General.

References

- Ballantyne, P. (2009). Accessing, sharing and communicating agricultural information for development: emerging trends and issues. *Information Development*, 25(4), 260-71.
doi:10.1177/02666666909351634
- Cartmell, D. D., Dyer, J. E., & Birkenholz, R. J. (2001). *Attitudes of Arkansas daily newspaper editors toward agriculture*. Proceedings, 28th Annual National Agricultural Education Research Conference. Retrieved from <http://www.aged.caf.wvu.edu/Research/NAERC-2001/cartmell.pdf>
- Cook, F. L., Tyler, T. R., Goetz, E. G., Gordan, M. T., Protess, D., Leff, D. R., & Molotch, H. L. (1983). Media and agenda setting: effects on the public, interest group leaders, policy makers, and policy. *American Association for Public Opinion Research*, 47(1), 16-35.
- Dalkey, N.C., & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management Science*, 9(3), 458-467.
- Danielian L.H., & Reese, S.D. (1989). A closer look at intermedia influences on agenda setting: the cocaine issue of 1986. In P. Shoemaker, *Communication campaigns about drugs: government, media, and the public*. Hillsdale, NJ: Psychology Press.
- Frick, M. J., Birkenholz, R. J., & Machtmes, K. (1995). Rural and urban adult knowledge and perceptions of agriculture. *Journal of Agricultural Education*, 36(2), 44-53.
- Hall, S., Connell, I., & Curti, L. (1977). The 'unity' of public affairs television. *Working papers in Cultural Studies*, 9, 51-94.
- Hasson, F., Keeney S., & McKenna H. (2001) Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32(4), 1008-15.
- International Federation of Agricultural Journalists. (2010). *IFAJ welcomes you*. Retrieved from <http://www.ifaj.org/>
- International Federation of Agricultural Journalists. (2010). What is the IFAJ? In *Our mission*. Retrieved from <http://www.ifaj.org/about.html>
- McCombs, M. (1997). Building consensus: the news media's agenda-setting roles. *Political Communication*, 14(4), 43-433.
- Natural Resource Defense Council. (2007). *Food miles: how far your food travels has serious consequences for your health and the climate*. Retrieved from <http://food-hub.org/files/resources/Food%20Miles.pdf>

- Reisner, A. & Walter, G. (1994). Agricultural journalists' assessments of print coverage of agricultural news. *Rural Sociology*, 59(3), 525–537. doi:10.1111/j.1549-0831.1994.tb00546.x
- Shoemaker, P.J., & Reese, S.D. (1996) *Mediating the message: theories of influences on mass media content*. 2d ed. New York: Longman.
- Stringer, S., & Thomson, J. (1999). Defining agricultural issues: daily newspapers editors' perspectives. Paper presented at the 1999 Agricultural Communicators in Education Research Special Interest Group. Retrieved from: <http://web.aces.uiuc.edu/agcomdb/view.asp>.
- Thapa, S. (2005). Educating journalists in Nepal about sanitation and water issues. *Nieman Reports*, 49(1), 1-4. Retrieved from <http://www.nieman.harvard.edu/reports/article/101053/Educating-Journalists-in-Nepal-About-Sanitation-and-Water-Issues.aspx>
- Valenzuela, S., & McCombs, M. (2009). The agenda-setting role of the news media. In D. W. Stacks & M. B. Salwen (Eds.), *An Integrated Approach to Communication Theory and Research* (2nd ed., pp. 90-102). New York and London: Routledge. (Original work published 1996).
- Williams, G. & White, J.D. (1991). Agricultural literacy in agriculture's heartland. *The Agricultural Education Magazine*, 63(8), 9-11.
- Whitaker, B.K. & Dyer, J.E. (2000). Identifying sources of bias in agricultural news reporting. *Journal of Agricultural Education*, 41(4), 125-133.