

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Agricultural And Consumer Economics

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	0%		10%	
602	Business Management, Finance, and Taxation	50%		15%	
603	Market Economics	0%		10%	
604	Marketing and Distribution Practices	0%		10%	
605	Natural Resource and Environmental Economics	0%		10%	
606	International Trade and Development	0%		10%	
607	Consumer Economics	30%		15%	
610	Domestic Policy Analysis	0%		10%	
801	Individual and Family Resource Management	20%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	14.0	0.0
Actual Paid Professional	0.0	0.0	2.8	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
120492	0	603140	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
120492	0	603140	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1130773	0	2545197	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Activities included research that explored bioenergy, invasive species, sustainable agriculture and regulatory barriers to small-scale farming, ongoing development of the **Varietal Information Program for Soybeans** [VIPS] website [www.vipsoybeans.org] as well as a series of new reports summarizing VIPS data, continuing research on international and U.S. biotechnology law focused on policy and regulatory measures, work focusing on U.S. and EU conservation policy and U.S. food and agricultural legislation, a review of Dodd-Frank rules issued by the CFTC for potential impacts on agricultural producers, the development of new features for **MarketMaker** [including new profile-to-profile connections that allow farmers to link with others that they do business with, updating of the growing zones of the most common fruits and vegetables grown in field conditions in the U.S. to correspond with the new USDA Plant Hardiness Zone Map, and the development of a working relationship with Feeding America, the nation's leading hunger relief organization and network of food banks to allow growers to communicate information about excess product more easily], a study of the effects of biofuel policies on not only greenhouse gas emissions but also on nitrogen use and pollution, comprehensive analysis of alternative biofuel policies and the implications of biofuel production in India, modeling of the economic and environmental consequences of alternate groundwater management policies, and utilization of spatial econometric methods to analyze the impact of protected areas on deforestation rates in biodiverse areas and on property market impacts of environmental remediation measures.

Additional activities included efforts to explain the role of storage, harvest technology, humidity, rainfall, and temperature on grain quality and loss in tropical grain farms [leading the industry in Mato Grosso, the largest agricultural state in the world, to explore research and outreach activities related to grain quality and grain loss; this in turn led to a collaboration with EMBRAPA, the corn and soybean association of Mato Grosso, and the ADM Institute at the University of Illinois], the development of knowledge regarding how identity preservation and segregation of genetically modified commodities affects prices in world grain markets, the design of an abstract mathematical model of how genetically modified crops have bifurcated world grain markets [creating two physically separate marketing chains, one for genetically modified grains and the other for conventional grains], research that provided important insights into how food price increases impact household welfare in developing countries [these findings have impacted how international NGOs set their policies for conducting food aid], research that impacts the ability of decision makers to understand and quantify the effects of energy infrastructure, land use, soybean disease, and legislative boundary-making on society, efforts focusing on the potential for reducing transaction costs and marketing losses in Africa through new market institutions [including commodities exchanges], and research on agricultural policies and technologies in developing countries that has shown that U.S. access to international markets can be a key for poverty alleviation in developing countries.

Conference presentations included the International Conference on Food Studies, Ecological Society of America, California Low Carbon Fuel Standard Sustainability Workgroup, University of Illinois Organic Farming Field Day, World Congress Unione Mondiale Degli Agraristi Universitari, Weed Science Society of America, Pan American Congress on Plants and Bioenergy, American Society of Plant Biologists, National Value Added Agriculture Conference, Great Lakes Fruit and Vegetable Conference, United Fresh Food Marketing Institute, American Meat Institute, National Association of State Departments of Agriculture Food Show, National Academy of Sciences, USTR-USDA Agricultural Policy Advisory Committee, International Food and Agricultural Trade Policy Council, Center for Advanced Study in International Competitiveness, and the University of Illinois Environmental Sustainability Summit.

Extension specialists conducted the annual **Illinois Tax Schools** in 30 locations throughout the state and five regional **Illinois Farm Economics Summits**. The summit presentations addressed farm profitability outlook and management challenges including direction of prices, government reports and data, estate planning, forecasting returns, crop insurance choices, and changes to farm programs. In addition, four **FAST [Farm Analysis Solution Tools]** training workshops dispersed throughout the state included one-day hands-on experiences using the **Crop Insurance Decisions** and new **Grain Farm Budget and Projection** tools. A corn and soybean margins presentation was also delivered at each of the seven **Corn and Soybean Classics** events held throughout Illinois.

Programs offered by the Extension Educators with consumer economics as their area of expertise included the **Financial Wellness Peer Educator** program and webinars on finances for college students, **All My Money** [a train-the-trainer curriculum for working with limited resources audiences], **Plan Well, Retire Well** e-newsletters sent to 2,200 subscribers, and **America Saves** [a pilot program kicked off during America Saves week that involved over 700 people in a friendly competition format that challenged them to set a savings goal]. Topics on credit/credit reports identifying theft, predatory lending, and taxes were popular with seniors who clearly expressed knowledge gained and actions taken in their responses to an evaluation seeking their input. Staff and volunteers in 29 counties conducted and evaluated knowledge gained by participants in **Welcome to the Real World**, a simulation that gives students [age 12 through young adults] a taste of managing future income and expenses.

2. Brief description of the target audience

Members of the target audience include agricultural producers, individuals and firms that conduct business with agricultural producers, policymakers and other decision makers, the fruit and vegetable industry [with emphasis on those businesses in the supply chain beyond the farm gate], academics and policy makers focusing on environmental concerns, federal and city policy makers focusing on stormwater concerns, water resource managers, government agencies and NGOs working on forest management programs, private conservation agents trying to improve conservation planning under uncertainty, and policy makers, agricultural producers, and individuals concerned about the environment and environmental policy. Extension targeted audiences this past year included livestock producers, land owners, financial advisers, tax consultants, youth, college students, senior citizens, and consumers and families facing financial challenges.

3. How was eXtension used?

Five Extension staff are members of the Financial Security for All eXtension Community of Practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7354	5510	2205	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	49	49

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number Of Completed Hatch Projects

Year	Actual
2012	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Page File Requests Made To Farmdoc [Note That Projections Have Been Significantly Modified Per Request Of PI]
2	Number Of Web Hits On The Varietal Information Program For Soybeans Website
3	Number Making Decisions To Reduce Risk In Agriculture Production
4	Percentage Increase In Post-Farm Gate Business Registrations For MarketMaker
5	Applying Policy Analysis And Behavioral Quantification To Inform Policies For Environmental Conservation, Renewable Energy Production, And Water Management
6	Number Increasing Knowledge Of The Costs Of Independent Living

Outcome #1

1. Outcome Measures

Page File Requests Made To Farmdoc [Note That Projections Have Been Significantly Modified Per Request Of PI]

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	10699752

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The goal of these tools is to provide farmers with expert advice on insurance product selection. These second-generation tools will be part of the iFARM collection of tools that is available in the crop insurance section of farmdoc [www.farmdoc.uiuc.edu]. The tools will include a yield analyzer, an insurance plan selector, and a marketing-crop insurance selector.

What has been done

Since its inception over a decade ago the farmdoc project has consistently delivered unbiased and timely economic information to agricultural producers and businesses. The farmdoc website sets the standard for round-the-clock access to seamless and integrated information and analysis. There is no doubt that agricultural producers and managers will continue to need sound answers to tough economic questions in the future. The goal of the farmdoc project is to be at the forefront of harnessing the power of the Internet to bring those answers right to their desktop.

Results

In 2012 well over 10 million page request were made to farmdoc [<http://www.farmdoc.illinois.edu/>] or to farmdoc daily [<http://www.farmdocdaily.illinois.edu/>]. The goal of the farmdoc project is to provide crop and livestock producers in the U.S. Corn Belt with round-the-clock access to integrated information and expertise to better manage their farm businesses. While the goal has remained constant, the technology available to meet that goal has undergone enormous changes during the last dozen years. Smart phones, iPads, blogs, and social networks are now commonplace but scarcely imagined just a few years ago. The new farmdoc daily site has an eye towards not only the technology people are increasingly using to access information but also the desired form of the information. Information needs to be easily accessible across a variety of platforms [desktops, laptops, and mobile devices] and in a condensed format that fits the needs of busy people with hectic schedules.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Number Of Web Hits On The Varietal Information Program For Soybeans Website

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	309905

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The main goal of this research is to share soybean production research information in a useful and cost-effective manner to enable public institutions to communicate information to growers and the agriculture community about the activities, investments, and outcomes of grower-supported public research. This program includes three phases: Phase I - Investigate communication technologies and information outlets [modes] used by soybean growers and the agricultural community for soybean production and marketing information; Phase II - Select new modes and design applications to create a new, technologically-driven communications environment for growers; and Phase III - Assess the usage and effectiveness of new modes and applications.

What has been done

A newly designed, dynamic, visually appealing interface and template for the VIPS website, www.vipsoybeans.org, was developed. A series of new reports summarizing and highlighting VIPS data were released reporting on yield, protein, oil, disease resistance, and amino acid levels. New search features were added allowing users to search by protein and oil content and find amino acid profiles. PDF capabilities and a flip-book interface to provide another method of interacting with the data were added. We added functionality through the Estimated Processor

calculator. An expanded resource section including newly-released publications on soybean management practices was added. These outputs have been communicated to target groups through online efforts, attendance at grower meetings, and in print media.

Results

The availability of this data and the communications efforts to increase knowledge and usage of that data led to the outcome of Illinois soybean growers using third-party data to manage variety selection. With this data, over 2,500 users are able to search for soybean varieties that will perform well on their farms. Additionally, they have access to reports from University of Illinois staff that summarize the data and provide statistical analysis of the data. Variety management is particularly important when addressing the issue of low composition quality throughout the Midwest. Resources from this project allowed for the creation of these reports and additional mediums through which to explore the data.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Number Making Decisions To Reduce Risk In Agriculture Production

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percentage Increase In Post-Farm Gate Business Registrations For MarketMaker

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	13

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The vision of MarketMaker is to be a national information technology platform that enables all food producers, processors, wholesalers and retailers electronic access to geographically-referenced data, thus enhancing the opportunity for food and agricultural entrepreneurs to identify and develop new and profitable markets and improve the efficiency and profitability of food systems in the United States and eventually globally. Giving farmers easier, more efficient access to emerging markets also impacts policies related to rural economic development, since agriculture is among the potential economic drivers in rural communities. Finally, an electronic medium such as MarketMaker supports and aids the development of new value-added markets for agriculture. The diversification of agriculture is critical for minimizing farmer dependency on commodity crop subsidies.

What has been done

New features developed this year will allow researchers to better study the business interactions of produce growers. First, there are three areas in which the registered member can specify their preferences to receive emails and or text messages generated from the MM system: [1] Buy & Sell Forum; [2] Trade Alerts; and [3] New Members, with the purpose of notifying users of new products, alerts or members with similar characteristics or interests. Secondly, the new profile-to-profile connections allow farmers to link with others that they do business with. As these online linkages develop, MM will build a wealth of data for future research on business relationships of produce farmers. The 2012 USDA Plant Hardiness Zone Map is a recent update that reflects temperature patterns in the U.S. For the first time the information is available as an interactive GIS-based map. The MM team is developing a web-based app that will allow users, based on location, to identify fruit and vegetable products in season for any given location. This information will be integrated with other information on the MM platform. For example, the app will identify the location of the user, enable searches for fresh fruits and vegetables in season, and identify producers that offer selected fruits or vegetables in that area. During 2012 the MM team updated the growing zones of the most common fruits and vegetables grown in field conditions in the U.S. to correspond with the new Plant Hardiness Zone Map. The MM team spent considerable effort researching solutions to the limitations of the MM database in 2012. Currently, each business profile has unique properties with minimum common ones such as name, phone number and address. The improvement requires MarketMaker to have more properties in common across the profiles. During 2012 MM has developed a working relationship with Feeding America, the nation's leading hunger relief organization and network of food banks. In 2013 MM will be launching a pilot project in Georgia in collaboration with Feeding America that allows Georgia produce growers to communicate excess product more effortlessly.

Results

Although there were many farmer-oriented programs and tradeshow attended by the state MarketMaker [MM] program staff, this project focused on downstream food industry players. Overall, traffic to the MM website for the past 12 months average just over 1.23 million hits per month. More specifically, the last 12 months showed an average of 92,056 unique visitors per month, which was a 28% increase over the previous 12 month period. A more critical metric for

this project is that the last 12 months have shown an increase in post-farm gate business registrations of 13%. We will continue to monitor these metrics as we continue with the project and add new features.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
606	International Trade and Development
607	Consumer Economics

Outcome #5

1. Outcome Measures

Applying Policy Analysis And Behavioral Quantification To Inform Policies For Environmental Conservation, Renewable Energy Production, And Water Management

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Public policies affect choices that farmers, conservation groups, and other agents make about the use of land, other natural resources, and investments in housing and other durable goods. This research will reveal the likely effects of selected public policies toward elements of the environment including industrial contamination, biofuel development, groundwater pumping, and stormwater management. Thus, our research will improve policy design. This research will also help private agents make choices regarding the natural environment that make better use of their scarce resources.

What has been done

This project applied tools of policy analysis and behavioral quantification to inform policies for environmental conservation, renewable energy production, and water management. The

applications emphasize environmental attributes of land, water bodies, and innovative products from crops. Activities under this multi-investigator project included: [1] studying the effects of biofuel policies on not only greenhouse gas emissions, but also on nitrogen use and pollution; [2] undertaking a comprehensive analysis of alternative biofuel policies and examining the implications of biofuel production in India; [3] studying the incentives for voluntary environmental management and its effectiveness; [4] illustrating how to use portfolio theory to reduce conservation uncertainty under climate change; [5] analyzing stream flow and habitat impacts of seasonal agricultural groundwater pumping; [6] modeling the economic and environmental consequences of alternate groundwater management policies; [7] utilization of spatial econometric methods to analyze the impact of protected areas on deforestation rates in biodiverse areas and on property market impacts of environmental remediation measures; [8] studying the adequacy of existing large-scale social and environmental data sets to support study of human interactions with water environments; [9] studying how management can reduce honeybee colony mortality; [10] analyzing policies to preserve the Monarch Butterfly in Mexico; [11] exploring the potential for spatial panel data methods in agricultural and environmental economics; [12] estimating the values of improved stormwater management; and [13] estimating the benefits of grassland restoration projects.

Results

Our research yielded the following findings: [1] carbon taxes would cause a significant increase in nitrogen use in association with a shift from petroleum to biofuels, and a second-best carbon pricing policy would stop short of a first-best price in order to moderate the impacts on carbon; [2] the effects of biofuel policies have the following features: [a] the Renewable Fuel Standard [RFS] could reduce greenhouse gas emissions by the U.S. by 5% but this would be considerably offset by indirect land use changes in the rest of the world and by a rebound effect in the fuel market [the net reduction may be as low as 0.5%]; [b] the increase in crop prices under the RFS is likely to be about 20% in most cases; [c] the tax credit for corn ethanol and import tariffs that accompany the RFS can delay the transition to advanced biofuels and worsen the negative impact of the RFS on food prices; and [d] both the RFS and LCFS [low carbon fuel standard] have the potential to lead to economic benefits for the U.S. by lowering the price of fuel imports and raising the price of agricultural exports; [3] pollution prevention methods are effective in reducing toxic releases but their effects are transitory; [4] efficient spatial diversification can significantly reduce uncertainty in overall conservation returns in the future for only a small reduction in expected returns, but analysts should be wary of taking shortcuts in measuring costs and benefits for the analysis; [5] analysis of in-stream flow damages from groundwater pumping shows that to achieve ecological flow requirements, pumping restrictions may need to vary across space and time in complex ways; [6] tradable permit schemes for groundwater pumping should be able to increase farm profitability while achieving stream flow constraints; [7] whereas conventional estimates of avoided forest loss suggest that conservation initiatives do not protect forest cover, we found evidence that the conservation measures are preserving forest cover; [8] the generalized method of moments estimator offers an effective way to integrate property value estimates generated by stated as well as revealed preference strategies; [9] while some underused honey-bee management practices successfully reduced colony loss for low costs, other common methods had costs that exceeded benefits; [10] the combined payment for environmental service and logging ban successfully protected forests in the overwintering region for Monarch Butterflies in Mexico; [11] in a number of areas, the use of formal spatial panel methods in economics would improve estimates; [12] people are willing to pay for improved hydrology in addition to flood reduction and improved water quality as outputs of stormwater management; and [13] people value several different elements of restoration success in grasslands, but the marginal values of some attributes are lower when the levels of others are high.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
602	Business Management, Finance, and Taxation
603	Market Economics
605	Natural Resource and Environmental Economics
606	International Trade and Development
607	Consumer Economics
610	Domestic Policy Analysis

Outcome #6

1. Outcome Measures

Number Increasing Knowledge Of The Costs Of Independent Living

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	913

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Older youth and college students need knowledge and skills to assist them in selecting careers and managing income and expenses in order to live as an independent adult. Between the ages of 18 and 25, young adults transition from making decisions about how much money to spend on entertainment to making life-changing decisions about credit use, whether to buy a house or not, utilizing job benefits such as retirement plans, and much more.

What has been done

Annually Extension field staff members provide Welcome to the Real World training and curriculum materials for teachers and a simulation for their middle and high school students that allow them to explore careers and money management [balancing income and expenses] in adult life. The simulation allows students to start with a monthly income and visit various booths to spend their income on items typically in a family budget [such as housing, utilities, food, transportation, insurance, and child care]. This past year 4,004 youth from 29 counties

participated in Welcome to the Real World.

The University of Illinois Financial Wellness Program targeted young adults with outreach education to help them make informed financial decisions. Students connect with the program through Facebook, Twitter, FourSquare, Google+, and YouTube. Since the Financial Wellness program began in the fall of 2008, 58 college students have been trained as Peer Educators, more than 1,000 young adults have attended presentations that encourage financial planning such as budgeting and using credit wisely, and more than 4,000 students have talked informally with Peer Educators at events and office hours. This past summer Cash at College, a series of webinars, was offered to college students.

Results

At the end of the Welcome to the Real World simulation, evaluation forms were completed and collected from 1,281 youth participants located in eight counties. The evaluation was designed to identify increased knowledge of financial management. Using a scale of 1-4 [4=strongly agree, 1=strongly disagree], students rated the simulation on four factors: [1] interest; [2] useful information; [3] helpful activities; and [4] helpfulness for the future. The ratings results for each of these factors averaged 3.4 or higher for the students who completed the evaluation. The evaluation also asked students to evaluate six money management skills choosing between learned how to do or already knew how to do. Of the 1,281 youth respondents, 880 [68.7%] indicated that they learned at least one of the six skills. Complete evaluation results can be found in the evaluation results section of this planned program.

Using a pre-test and post-test given to 85 Cash at College webinar participants and completed by 33, results indicated an improvement in the confidence level of students when asked 'Please select the phrase that best describes your confidence in managing your money while in college'. With a rating of 5 being confident and 1 being not confident, the score average went from 3.1 to 3.6 [notable for one hour of programming]. The Financial Wellness E-News newsletter has over 800 subscribers and click-through data shows that college students are reaching out to Financial Wellness tools such as budgeting and tracking spending worksheets as well as checking their credit report online.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The **MarketMaker** project is given direction by a Policy Advisory Committee [PAC], an advisory board made up of regional representatives that meets six times per year to set direction for the project. In March 2012, the PAC met and decided upon the following three action steps: [1] marketing to the rest of the market beyond farmers, including businesses, consumers, economic development leaders, chambers of commerce, and non-NGOs; [2] the involvement of a significant private partner to help keep state partners active; and [3] presentations and displays at industry tradeshows and follow-up trade publication articles.

At the end of the **Welcome to the Real World** simulation, evaluation forms were completed and collected in seven counties from 1,281 [32%] of the 4,004 participants in the state. The evaluation was designed to identify increased knowledge of financial management. Using a scale of 1-4 [4=strongly agree, 1=strongly disagree], students rated the simulation on four factors: [1] interest; [2] useful information; [3] helpful activities; and [4] helpfulness for the future. The ratings results for each of these factors averaged 3.4 or higher for the students who completed the survey.

The evaluation also asked students to evaluate six money management skills choosing between 'learned how to do' or 'already knew how to do'. Over one-half of the students responding to the related questions indicated that they already knew how to complete at least five of the six tasks/skills. However, 650 [50.7%] reported learning how to balance income and expenses; 516 [40.3%] gained skill in keeping track of savings; 506 [39.5%] learned how to open a savings account; 484 [37.8%] learned how to balance a checkbook; 427 [33.3%] gained skill in exploring career possibilities; and 319 [24.9%] learned how to write a check.

Key Items of Evaluation

Welcome to the Real World simulations help youth to recognize the challenges of independent living. There is a need to determine the scope of the use of curriculum materials in the schools where the simulation was conducted.