

Needs Assessment for Idaho Beef Programming

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Presented in Partial Fulfillment of the Requirements for the

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Major in Agricultural Education

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University of Idaho

by

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### Authorization to Submit Thesis

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### **Abstract**

The US beef industry has been affected by advancements in technology, policy, and consumer pressures. A needs assessment of Idaho beef producers had not been conducted since 2005, and to effectively serve the Idaho beef industry, the Extension system must stay current in providing appropriate training. The purpose of this study was to identify education needs for Idaho beef producers. A three-round Delphi Method was conducted, using a participant panel of industry professionals, selected from diverse sectors of the Idaho beef industry. The first round of the survey returned 16 topic themes. In Round 2, participants rated the 16 topics on importance to the industry. Round 3 identified the most appropriate agency to develop training and the best programming method for each topic. These findings offer valuable information to those agencies capable of delivering programming, training, and education to beef producers.

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## **Chapter 1:**

### **Introduction**

Since the turn of the century, the United States beef industry has been affected by numerous significant shifts in technology, policy, practice, and consumer pressures. These changes include the introduction of technological assets such as wireless internet and drones; expansion of alternate feed stuffs; increased popularity of alternate feeding and husbandry methods such as organic and grass fed beef; greater emphasis on environment impacts; multiple conflicts over water rights; Right to Farm Legislation; the ongoing issue of animal identification; and the possibility of upcoming antibiotic application control measures. Despite the significant shifts of the past decade, University Extension, tasked as one of the primary agencies of producer education, has not conducted a major needs assessment of Idaho beef producers since 2005 (McCawley, 2009; Petty, 2016). In order to effectively meet the needs of the Idaho beef industry, the University Extension system must stay current in assessing the needs of the industry and provide appropriate training.

The agriculture industry has, and will continue to rely on information and education to remain capable of meeting the demands of an expanding world population. Agriculture is especially sensitive to changes in technology, markets, the global economy, and natural systems (Dahlen, Hadrich, & Lardy, 2014). As a result, identifying necessary education and training requires an understanding of a vast range of information in the fields of research, production, and policy (Cash, 2001).

Since 1862, with the passage of the Morrill Act, the task of research, education, and extension for the advancement of the US agriculture industry has been assigned to the land grant colleges and their associated extension services. The goals of establishing distributed

agricultural education centers, creating colleges accessible to rural areas, and assisting rural communities with less communication access was bolstered in 1887 with funding of the state agricultural experimentation stations (Rasmussen, 1989). The Smith-Lever Act of 1914 further developed the extension system we see today, which serves as a link to producers from the US Department of Agriculture (USDA) and the land grant universities (Rasmussen, 1989). As a Land-Grant Institution, The University of Idaho (UI) Extension assumes this mission for the state of Idaho by first identifying priority needs of targeted audiences and then developing and delivering educational programs to meet those needs (McCawley, 2009).

### **Significance of the Study**

Agriculture and food product manufacturing comprise greater than 7% of Idaho's gross domestic product (GDP), and nearly 8% of Idaho's total workforce is employed in agriculture and food processing. Nationally, Idaho ranks 7th for agricultural goods and food product exports per capita, surpassing \$2 billion annually (Idaho Commerce, 2016). Within the agriculture industry of Idaho, beef production is second only to dairy production, and accounts for 23% of the total sales of agriculture products. (USDA, 2012) The Idaho beef industry is not only vital to the state, Idaho ranks 13<sup>th</sup> in the nation in beef production. Further, in 2015, the production value of the Idaho beef industry rose more than \$1.6 billion (NASS, 2016). Additionally, Idaho beef production hit a record high in 2016 with an estimated 2.4 million head of cattle and calves, which is notable as national cattle numbers are at their lowest since the 1950s (NASS, 2016). This trend places the Idaho beef industry in position to assume an even greater role on the national level, reinforcing the need for

current, quality training that allows Idaho beef producers to keep pace with an ever evolving industry.

Being part of a constantly growing and changing industry, it is necessary for beef producers to remain knowledgeable and proficient with the latest technologies, practices, and policies. Multiple state and local entities have a duty to assist with this task. Those agencies include: the University of Idaho Extension system, “UI Extension provides reliable, research based education and information to help people, businesses and communities solve problems, develop skills and build a better future” (Programs and Workshops, 2016); the Idaho Beef Council; the Idaho Cattle Association, “ (The Idaho Cattle Association’s) principal services are government affairs, public information, issues management, and member education,” (ICA, 2003); and are joined by multiple commercial agencies in the private consulting sector.

The latest needs assessment for the beef industry conducted by the University of Idaho Extension was 2005 (McCawley, 2009). This issue has been confirmed by the University of Idaho Extension Director, Dr. Barbara Petty, “The last major needs assessment for Extension was conducted in 2005. Providing that it has been several years since a needs assessment was conducted and with the change in administrative leadership of the Director of Extension, the Assistant Director of Extension as well as the Eastern District Director, we determined that one of the first steps would be to conduct a needs assessment,” (Petty, 2016). It is recommended that beef producer needs be reassessed by the extension community on a 5 year basis (Gunn & Loy, 2015). An updated assessment that utilizes innovative data collection techniques has the potential to greatly improve the ability of supporting organizations to train and educate the state’s producers.

## **Purpose and Objectives**

The purpose of this study was to identify training and education needs for the Idaho beef producers. The target audience this study is the agencies capable of delivering programming, training, and education to beef producers.

Conclusions and recommendations will be disseminated to stakeholders beyond the University of Idaho Extension, including any other association or organization capable of developing and delivering training. Another benefit of this study was to develop a needs assessment model that could be adapted by UI extension departments for future needs assessments to fit their represented industries own unique needs.

The following objectives guided the study:

1. Identify upcoming changes and potential advancements in the beef production industry as identified by leaders in the research, commercial, policy, and production sectors; these changes might include, but are not limited to technical advancements, procedural innovations, animal wellness, legislation, marketing, and policy.
2. Describe the levels of which these potential changes and advancements are deemed realistic, time sensitive, and are needed for producers.
3. Identify the appropriate organization to develop the program and the most effective vehicle to deliver training on potential changes and advancements.
4. Develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension.

## **Operational Definitions**

This study identified *potential advancements and changes* as both novel and modified practices or events that will affect industry practices that the panel of experts foresees having an effect on the Idaho beef industry. The *panel of experts* made up the participants of this study who represented industry members from diverse of sectors and were identified by others in the industry as current on industry issues and eager to help the ongoing development of programming. This study defined *realistic* as feasible and likely to be implemented by producers. *Time sensitive* was described to participants as having an expected affect in the next two to ten years. For an idea to be considered *in need if training*, the idea is both likely to be implemented, and unfamiliar enough to require formal instruction.

## **Assumptions**

Given the trend of technological evolution and market adaptation, it is assumed that advancements in technology and procedures along with changes in policies and regulations will be introduced to the Idaho beef industry in the next 10 years. These changes and advancements have the potential to significantly impact the industry, (Gordon, 2013). It is assumed that at least some of these potential changes and advancements can be forecast by individuals within the beef industry, and it is possible to identify and describe those issues through this study.

## **Summary**

The beef industry continues to change and adapt; the past decade has followed that pattern, and it can be assumed that the next will continue that evolution. The University Extension system includes the provision of training and education to the state's producers in

order to allow producers to remain competitive within the industry. The findings of this study will aid in the identification of training and education needs for beef producers in the upcoming years, as well as provide a means to explore preferred methods of instruction delivery for those issues that are identified as being in need of training by Idaho beef producers.

## **Chapter 2:**

### **Literature Review**

This review of the literature will include the purpose of and history of needs assessments for extension programs across the country. Additionally, the significance of the Idaho beef industry will be discussed on a local and national level. Finally, the uses and implementation of the Delphi Model will be examined in similar studies, and its capacity to be utilized in a needs assessment.

#### **Purpose and Objectives**

The purpose of this study was to identify training and education needs for the Idaho beef producers. The target audience for the findings of this survey are those agencies capable of delivering programming, training, and education to beef producers. Conclusions and recommendations were disseminated to stakeholders beyond the University of Idaho Extension, as it includes any other association or organization capable of developing and delivering training. Another benefit of this study was to develop a needs assessment model that can be adapted by UI extension departments for future needs assessments to fit their represented industries own unique needs.

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4. Develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension.

Need assessments should be routinely conducted by Extension personnel in order to identify evolving needs of the programming target audience (Etling, 1995). Gunn & Loy (2015), suggest that a formalized needs assessment for beef producers be conducted every five years.

It is critical that extension personnel not only account for their target audience's previous experience and perceptions of current programming, but that they also adapt programming to meet future needs (Adedokun, et al, 2001). An educational need exists in order for producers to remain competitive as the industry evolves, as generally explained by the Diffusion of Innovations Theory which seeks to explain how, why, and at what rate new ideas and technology spread. The mentality of adapting programming to meet technological evolutions is not a new concept to the extension community, studies as early as 1989, up to present day make multiple reference to the necessity of extension programming keeping pace with advancements in technology and practice (Ezell, 1989; Adedokun, et al, 2011; Dahlen, et al, 2015).



## **Program Evaluation**

Program evaluations are conducted regularly within the University of Idaho Extension system (McCawley, 2009), but just as program evaluations are a valuable metric, there are limitations to conducting evaluations only on existing programming, as the need to forecast programming is also essential (Etling, 1995). The University of Idaho conducts annual program reviews as well as other types of program reviews such as Impact Statements, but has not conducted a major needs assessment since 2005.

An array of identification and prioritization methods are available for this type of needs assessment that encompass anything from a brainstorming session, followed by nominal group vote, (Ripley, 2011) to a taped discussion that is later analyzed by the researcher (Gamon, 1992), to individual listing followed by input and group comments (Gunn & Loy, 2015). Regardless of the chosen method, the involvement of industry leaders is paramount in the identification and prioritization of issues facing the industry (Ripley, 2011).

In 2015, Iowa State University conducted seven “listening groups” using a focus group model that brought together a total of 60 producers to discuss opportunities and challenges to the Iowa beef industry. Each of the seven groups started the day by reviewing new and existing programs before moving into an individual listing of challenges and opportunities they saw for their own enterprise. From these listening groups, the study identified eight themes and put them in order by frequency: land access, farm transition, production efficiency, markets, genetics, data, feedstuffs, and herd health (Gunn & Loy, 2015). Although these focus groups did make the effort to avoid group-think within the listening groups by initiating the session with individual listing, the review of current

programming likely built an expectation for the input from each participant. Additionally, the study chose to select samples based on seven different locations rather than on different sectors of the industry as a result, the study misses out on upcoming opportunities and challenges that may have yet to be introduced to producers- the study's primary participants.

Similar to the above mentioned studies the University of Idaho Beef Extension team conducted focus groups which identified three primary goals voiced by members of these focus groups to include: enhance beef efficiency and natural resource utilization, improve marketing and product quality, develop future beef professionals and leaders.

### **Beef Industry**

In addition to collection of prevalent challenges and training opportunities within the beef industry of Idaho, this study paired these ideas with the most appropriate agency to aid in the training and the most effective means of delivering the training. This additional step sought to offset some of the reasons producers elect not to use extension programming while most effectively utilizing the increasing number of programming delivery options. Dahlen et al, (2015), identified a variety of reason producers did not attend extension meetings that included: lack of time, not in area, not interested, quality of information, and prefer other sources. Just as one would expect these reasons to vary from region to region, they may also vary from one program to another.

Producers also exhibit a wide array preferred training resources including, but not limited to, newsletters, extension bulletins, face-to-face meetings, internet programs, interactive videos, teleconferences, and social media (Dahlen et al, 2015). These training modes as well as other training media also have the potential to be tailored in order to meet the programming suggestions collected during the survey.

Extension programming, specifically in regard to the focus of this study, is heavily reliant on andragogy versus pedagogy. Recognizing this difference places an even heavier emphasis on a learner-centered approach that takes into account the target audience's prior knowledge, current abilities, limited time, and motivation to learn (Stolovitch & Keeps, 2011).

This study was conducted in accordance with the UI Extension- six steps in conducting a needs assessment: write objectives, select audience, collect data, select audience sample, pick an instrument, and analyze data (McCawley, 2009).

### **The Delphi Model**

In order to encompass the advantages of a focus group or listening session, while also seeking to overcome the above mentioned shortcomings, this study utilized the Delphi model. Although Etling (1995) neglects to describe Delphi questionnaires in his Needs Assessment Handbook, stating that they are not as effective or popular with Extension agents, Delphi has been applied successfully in various fields such as program planning, needs assessment, policy determination, and resource utilization (Hsu, 2007).

Hsu (2007) identifies five primary objectives of the Delphi technique: to determine or develop a range of possible program alternatives, to explore or expose underlying assumptions or information leading to different judgments, to seek out information which may generate a consensus on the part of the respondent group, to correlate informed judgments on a topic spanning a wide range of disciplines, and to educate the respondent group as to the diverse and interrelated aspects of the topic. Due to the particular purpose and objectives of this study, the modified Delphi method I utilized highlighted three of them: to determine or develop a range of possible program alternatives; to explore or expose

underlying assumptions or information leading to different judgments; and to seek out information which may generate a consensus on the part of the respondent group.

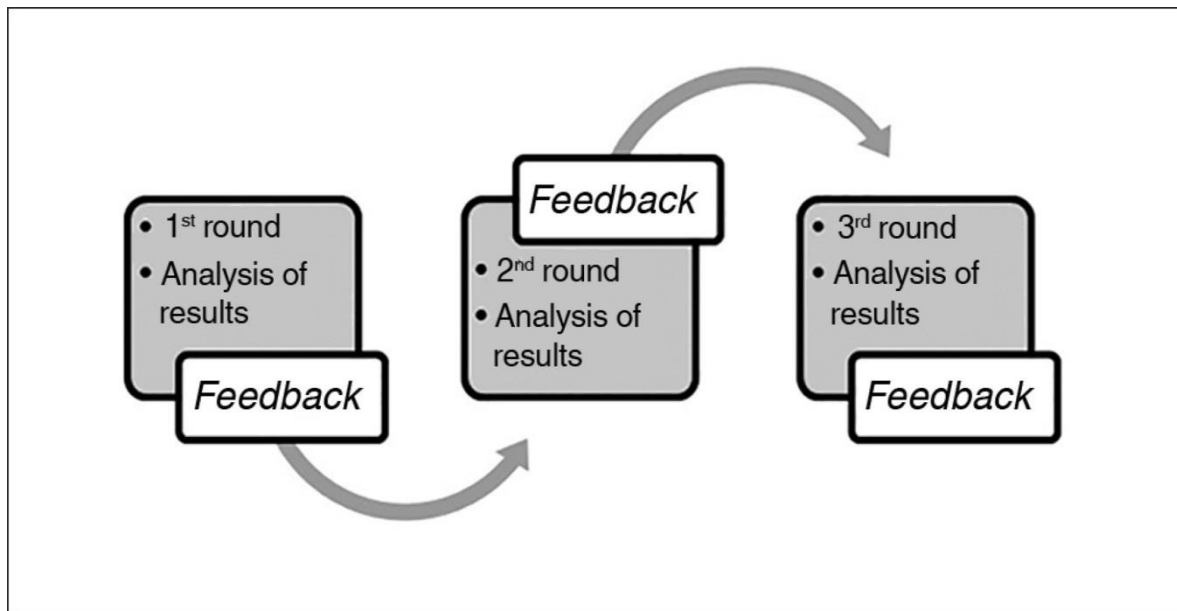


Figure 2-1: Typical Delphi Model. Pereira & Alvim (2015)

The Delphi Model utilizes a limited sized group of subject matter experts and although it reflects a purposeful sample, no sample driven data can be derived from the surveys. The panel of experts selected for this sample were gathered through recommendations from individuals who are knowledgeable and stay well-informed with industry issues, rather than based off geographic region or scope of operation. Illustrated in Figure 2-1 is the process of a typical Delphi Model process. The specific process of the Modified Delphi Model used for this study is described in Figure 2-2.

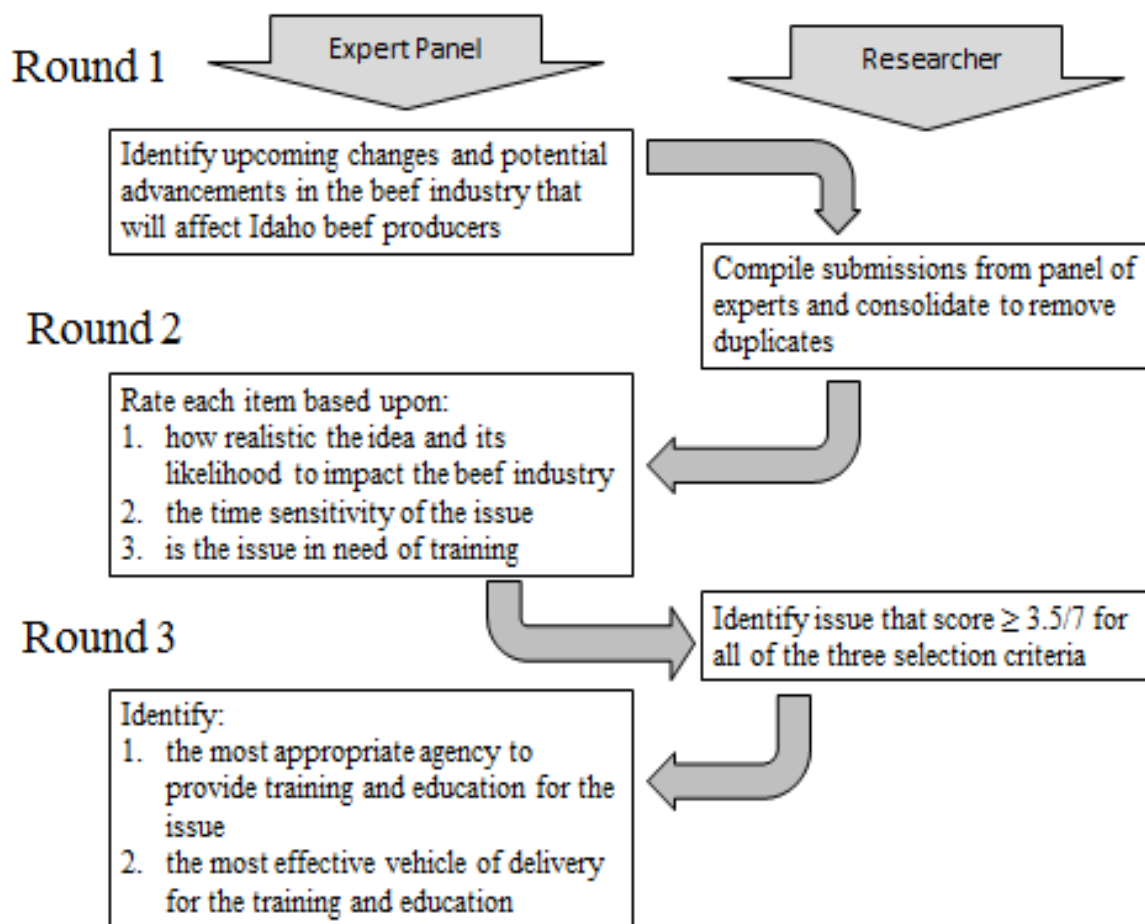


Figure 2-2: Application of Delphi Model for this study

Just as the group of subject matter experts did not reflect a true sample of the population of Idaho beef producers, producers that utilize the resources of extension and other support associations are not necessarily indicative of the entire population. Through adequate producer representation on the panel, objectives 2-4 were adequately addressed, given their heavy emphasis on producer input. Additionally, deconstruction of data by demographics, specifically what sector the participant is representing, allowed the identification of trends but not statistics.

**Summary**

The literature related to this study contains the purpose of and history of needs assessments for extension programs across the country and its value to a strong extension system. The Idaho beef industry has proven to be a key state industry and a significant contributor on the national level. The Delphi Model has been used in similar studies and has the capacity to be utilized in a needs assessment.

## **Chapter 3:**

### **Methods**

The identified population and implementation for this study will be explained in this chapter. The participants for this study were chosen systematically to in order to provide a diverse and purposeful sample from the target population. The Delphi Method was chosen for this study as it offers multiple unique advantages that will contribute the data collection processes. Finally, the methods used to maintain study validity and the details of the survey questionnaires will be described at the end of this chapter.

### **Purpose and Objectives**

The purpose of this study was to identify training and education needs for the Idaho beef producers. The target audience for the findings of this survey are those agencies capable of delivering programing, training, and education to beef producers. Conclusions and recommendations were disseminated to stakeholders beyond the University of Idaho Extension, as it includes any other association or organization capable of developing and delivering training. Another benefit of this study was to develop a needs assessment model that can be adapted by UI extension departments for future needs assessments to fit their represented industries own unique needs.

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3. Identify the appropriate organization to develop the program and the most effective vehicle to deliver training on potential changes and advancements.
4. Develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension.

The Delphi Model was the chosen approach for this project. This model was used to find a convergence of opinions, solicited from experts within certain the chosen topic area. This concept is in line with the objectives of this study.

### **Study Population**

The population of interest for this study were Idaho beef producers, which encompass those in both the reproductive and market sectors. It is important to note that the population of interest is different than the target audiences, which are those organizations who are capable of developing and delivering the identified programming (Extension, Cattlemen's Association, Beef Council, Checkoff, local associations, or private sector services).

Participants were selected, based on of the needs of the study, in order to attain a purposeful sample, as opposed to a random sample, as is typical with a Delphi Study (Stitt-Gohdes and Crews, 2002). While this study did not have a true representative sample of the target population, representatives from different sectors in and around the industry were selected to provide diversity of insight.

Participants selected to represent the following industry sectors:



1. Cow/Calf production
2. Seed stock production
3. Feeders
4. Packing
5. Animal Health
6. Animal Nutrition
7. Veterinary Medicine
8. Policy
9. Research & Extension

Participants identified which sector(s) they represent and report a percentage of their time that is dedicated to each sector.

The study will started with a panel of 54, as attrition of the panel is not uncommon (Lundry, et al, 2015). This number accounted for the necessity to maintain representation from each industry sector. In a tradition focus group style needs assessment, less than 10 participants are acceptable. For this study, the number of initial participants accounted for the ability to ensure the panel of experts maintained representation from each sector.

### **Instrumentation**

Although theoretically a study using the Delphi Model can circulate through as many iterations as deemed necessary, this study included a survey comprised of three rounds of questionnaires to the panel of subject matter experts. Prior to the first round of the survey, the panel of experts were identified and contacted in order to confirm their willingness to participate.

## **Questionnaire Content**

The first round of the survey was the collection of the participants' ideas for upcoming changes and potential advancements. The first round of the survey included an explanation of the purpose of the project, but remained adequately open ended in order to encourage diversity of inputs. Furthermore, the verbiage used in the first round of the survey intentionally avoided the inquisition into what participant believed would be valuable training programs. This was done in order to encourage the generation of ideas based off of current issues rather than programming ideas they have heard or utilized in the past.

The second round of the survey occurred after the participants had returned Round 1, the ideas were organized into training topics, and Round 2 was developed. Round 2 sought to determine which of the potential changes were deemed realistic, time sensitive, and in need of training for producers. Included in Round 2 were each idea collected from participants from the Round 1 survey. During Round 2, the panel of experts were asked to describe each item based on the need of training of producers. The panel of experts described each of the criteria using a 7-point Likert-type Scale. It is preferred, using the Delphi Model, to achieve concurrence among the panel within two standard deviations of the mean as to whether an item is to be recommended to move forward or be removed. Given the data collection objectives of this study, training topics remained in the survey through Round 3. If the topics achieved a mean rating of greater than 3.5/7.0 on the Likert-type scale. This modification is acceptable using a modified Delphi Model, and is fitting given the likelihood of certain issues that receive a diverse level of emphasis, yet maintain their potential value as future programming needs (Hsu, 2007).

The third round of the survey occurred after the participants had returned Round 2 and the ratings of each training topic had been documented. Round 3 returned the training topics back to panel of experts in order to identify the appropriate organization to develop the programming and the most effective vehicle to deliver the training.

### **Timeline**

Finalized panel of experts: 15 November, 2016

Round 1: 18 November, 2016

Round 1 complete; analyze responses: 1 December, 2016

Round 2: 15 December, 2016

Round 2 Complete; analyze responses: 9 January, 2017

Send Round 3: 15 January, 2017

Round 3 Complete; analyze and compile responses: 31 January, 2017

Draft of results: 26 February, 2017

### **Validity**

Significant emphasis was placed on face validity as survey construction for Rounds 2 and 3 were driven by input from the panel of experts. Additionally, content validity was determined by expert judges, as is the case with a Delphi study (Gay, et al, 2006). For this study, each of the three surveys were reviewed and critiqued by peers within the University of Idaho Agriculture Education and Extension department who are post-graduate students, familiar with the study, and trained on survey development.

### **Reliability**

Past studies have shown that the reliability of a Delphi Model study can be greatly improved with a larger expert panel. Reliability with a correlation coefficient of .70 can be accomplished if the panel of experts is greater than 11, .90 if the panel is greater than 13, and .90 if the panel is greater than 16. (Dalkey, et al, 1972). Following this model and in line with the emphasis on the a larger expert panel, this study began with an expert panel of 54, with no less than 3 within each sector of the beef industry, with the intent of keeping the number of participants above 20 total and at least 1 per sector through the conclusion of the study.

### **Data Collection Methods**

Data collection for all three surveys was conducted through Qualtrics online survey, with an option to have a hard copy survey delivered through the mail. Survey preferences were determined during panel participant identification. Each potential participant was contacted via phone and email prior to the commencement of the survey with a video link to an introduction and more information provided.

### **Round 1**

After collection of the panel of experts was complete, all participants received Round 1 of the survey. Round 1 started with an explanation of the process and the contribution the findings of the study would offer to the Idaho beef industry. This part was important for retaining participant support of the study, as it helped participants understand the goals of the study, and to feel included in its potential contributions (Stitt-Gohdes & Crews, 2002).

After the brief introduction, participants were asked to “Describe 5-10 upcoming changes and potential advancements in the beef industry that will affect Idaho beef producers in the next 2 to 10 years. These changes and advancements might include, but are not limited to technical advancements, procedural innovations, animal wellness, legislation, marketing, and policy.

The first round inquiry was designed be open ended enough to encourage participants to share their true thoughts on the topic. The second part of the prompt was added to spur participants to think about issues that originate from any of the above mentioned sectors, which might not be thought of as traditional extension programming. At the conclusion of Round 1, participants’ responses were collected and grouped to remove duplicates.

## **Round 2**

Round 2 consisted of a second questionnaire being returned to the panel of experts. This questionnaire included each of the ideas collected from Round 1. Participants were asked to rate each of the ideas from Round 1 using a 7-point, Likert-type scale based on three aspects: 1. how realistic the idea and its likelihood to impact the beef industry; 2. the time sensitivity of the issue; and 3. is the issue in need of training. Dialogue boxes were placed with each item, in order to allow participants to provide amplifying information if they saw it as important to expand upon their answers.

The purpose of Round 2 was to identify issues that the panel of participants see as not only likely to have an impact, but also sort out issue that might be important, but do not necessarily require additional training.

The responses from Round 2 were collected and sorted in order to identify which issue meet the above mentioned criteria. Issues were selected to move to Round 3 if the topic received a mean rating of 3.5 or greater on a 7.0 scale. The purpose of this selection criteria was to ensure that only items that the panel deemed important to producer training were expanded upon in Round 3.

### **Round 3**

Round 3 of the study was a third questionnaire to the expert panel made up of the issues identified in Round 1 and confirmed in Round 2. For each one of these issues, participants identified two things. First participants identified the most appropriate agency to provide training and education for the issue. Second, participants identified the most effective vehicle of delivery for the training and education. Dialogue boxes were included with each item, in order to allow participants to provide amplifying information if they was it as important to expand upon their answers.

Round 3 took a step further than the focus groups and mixed method designs reviewed previously, in order to accomplish two goals. First, Round 3 identified who participants see as being the best fit to prepare and deliver the training. Second, this round sought to mitigate previously identified reasons producers do not utilize training by identifying the most received method(s) of delivering the information. This final step aided in determining what groups in addition to University Extension should be included in the target audience of the study's findings.

### **Expert Panel Participation and Retention**

Submission of a previous round questionnaire is not required for one of the participants of the Panel of Experts to receive and submit a latter questionnaire. Failure to

submit a latter questionnaire also does not negate the earlier submissions of any participant on the panel of experts.

### **Summary**

The participants for this study made up a purposeful sample from the target population, through systematic selection to in order to provide diverse inputs throughout the beef industry. The Delphi Method offers multiple advantages that contributed the data collection and refinement processes, and had the unique ability of meeting the needs of all four research objectives. The reliability of this study was maintained through the use of an adequately large panel of experts. The validity of this study focused primarily on face validity, which was maintained by regular peer reviews, conducted before each round of questionnaires was released.

## **Chapter 4:**

### **Results**

The finding of this study will be presented and discussed in the following chapter. Response rates are reported and their connection to validity and reliability of a Delphi study is addressed. Results related to objective 1 will cover the responses collected during Round 1 of the survey and grouped into the 16 training topics. Objective 2 results, collected during Round 2, will include both quantitative and qualitative data from the second questionnaire that will help determine the relative priority of each issue. The findings of Round 3 will be used to answer objective 3 with the identification of recommended training agency and training methodology specific to each topic. Finally, findings related to developing a usable model for future needs assessments will be discussed in objective 4. It is important to recognize that the results and findings presented during this chapter offer a description of key metrics and statements, but that the qualitative and quantitative data found in the appendices contain invaluable information to anyone seeking to utilize these findings to develop future programming.

### **Purpose and Objectives**

The purpose of this study was to identify training and education needs for the Idaho beef producers. The target audience for the findings of this survey are those agencies capable of delivering programming, training, and education to beef producers. Conclusions and recommendations will be disseminated to stakeholders beyond University of Idaho Extension, as they include any other associations and organizations capable of developing and delivering training. Another potential benefit of this study is to develop a needs assessment model that can be adapted for future needs assessments.



The following objectives guided the study:

1. Identify upcoming changes and potential advancements in the beef production industry as identified by leaders in the research, commercial, policy, and production sectors.
2. Describe the levels of which these potential changes and advancements are deemed realistic, time sensitive, and needed for producers.
3. Identify the appropriate organization to develop the program and the most effective vehicle to deliver training on potential changes and advancements.
4. Develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension.

### **Response Rates**

Individuals designated for the participant panel were selected based upon their knowledge of the Idaho beef industry and their reputable ability to identify and evaluate issues affecting Idaho beef producers. To ensure the right participants were included on the panel, names of participants were recommended and reviewed by three subject matter experts within the industry. Participants recommended for the study were spread throughout nine industry sectors: Cow/Calf Production, Seed Stock Production, Feeders, Packing Industry, Animal Health, Animal Nutrition, Veterinary Medicine, Policy, and Research & Extension. A total of 54 possible participants were identified and no fewer than three participants were selected within each industry sector. This was done in order to ensure adequate representation throughout industry sectors. Once the recommended list was

completed, participants were contacted via phone for me to introduce myself and the study. To improve study participation an introductory and explanatory video included with the invitation email to participate in the study was included. The video was less than five minutes long and was posted to the YouTube video platform.

A response rate of 23 of the 54 participants was achieved. The response rate was within the expectations for a Delphi model survey. Displayed in table 4.1 are response rates from each of the three rounds. The panel size of 20-23 participants was larger than the expectations for a Delphi model survey which typically utilizes 10-20. More importantly was that each of the nine industry sectors was represented.

Table 4.1

*Response Rates from Three Rounds of Study*

| Survey Round | Number Sent | Number Received | Response Rate |
|--------------|-------------|-----------------|---------------|
| Round 1      | 54          | 23              | 42.6%         |
| Round 2      | 54          | 21              | 38.9%         |
| Round 3      | 54          | 20              | 37.0%         |

*Note: Not all participants in Round 3 responded to each item; the minimum number of responses per item was 16 (29.6%).*

In order to ensure representation for each sector, demographic data was collected during the first survey in order to determine industry experience. As many of the participants are engaged in multiple sectors within the industry, each participant selected the percentage of their identity or role in the Idaho beef industry. Specifically, participants were not asked to select which sector they represented as this would have been an oversimplification of their experiences and industry representation. Instead, participants were given the ability to use a sliding-scale for each of the sectors to describe what percentage of their time and effort was allocated to each sector. For example, one participant responded

that 100% of their time and energy was spent on seed stock production. Another participant described their experience as 50% cow/calf, 20% feeders, and 30% policy, while another described their experience as 75% Extension and 25% Policy. The cumulative proportions of each industries representation were tracked during data collection of Round 1 in order to ensure each sector was represented in the responses. The participants' proportional cumulative representation data collected from the panel is presented in Table 4.2.

Table 4.2

*Representation from Industry Sectors*

| Sector               | Representation (%) |
|----------------------|--------------------|
| Cow/Calf             | 17%                |
| Seed Stock           | 21%                |
| Feeders              | 7%                 |
| Packing              | 4%                 |
| Animal Health        | 9%                 |
| Animal Nutrition     | 6%                 |
| Veterinary Medicine  | 2%                 |
| Policy               | 7%                 |
| Research & Extension | 26%                |

The cumulative proportional representation of Veterinary Medicine participants during Round 1 was the lowest of the nine. I accepted that the veterinary sector was represented because 2 of the 23 respondents who returned responses to Round 1 were Doctors of Veterinary Medicine (DVM), and currently serving in that capacity.

The number of respondents held relatively constant throughout the three rounds with 23 respondents for Round 1, 21 respondents for Round 2, and 20 respondents for Round 3. Special attention was paid to the duration of each round of the survey as well as the

turnaround time between surveys in order to prevent participant loss of interest between rounds of the survey. Survey completion time is displayed in Table 4.2.

Table 4.3

*Time to Complete Survey*

| Survey  | <i>N</i> | Minimum | Maximum | <i>M</i> |
|---------|----------|---------|---------|----------|
| Round 1 | 23       | 2:23    | 31:44   | 11:06    |
| Round 2 | 21       | 2:36    | 1:59:03 | 21:26    |
| Round 3 | 20       | 1:35    | 67:45   | 12:21    |

*Note: One participant's response time was omitted from the calculations for Round 1, and two were omitted from Round 3, as the surveys were left open.*

### **Reliability and Validity**

The response rates discussed previously are the key contributor to study reliability. As it is suggested by Dalkey, et al, (1972), in the case of a Delphi Model, any panel greater than 16 can assume a correlation coefficient of .90. This study maintained a response rate greater than 16 for all of the individual items.

Participant selection was emphasized in order to ensure content validity of the responses for each of the three rounds. Each of the three surveys were reviewed and critiqued by researchers within the University of Idaho Agriculture Education and Extension department who are graduate students, familiar with the study, and trained on survey development in order to maintain face validity of each questionnaire.

The translation of the Round 1 results to the Round 2 questionnaire placed a significant importance on construct validity. Due to the necessity of grouping 103 individual responses into a usable number of themes, it was essential that adequate emphasis was placed on proper grouping of the items. In order to ensure the best possible themes were created, four individuals, from a variety of backgrounds, who are familiar with the industry,

but who were not associated with the study were asked to group the responses. Utilizing the four grouping inputs, I was able to more objectively group the Round 1 responses into a useable number of themes to continue forward with Rounds 2 and 3. The Round 1 responses were grouped and translated into sixteen themes for training recommendations. These sixteen themes were the items returned to the participant panel for Rounds 2 and 3. The qualitative responses gathered in Round 2 were reviewed for statements on concerns indicating that a theme was ineffectively constructed or labeled, or that any participants Round 1 response was not adequately addressed within the sixteen themes. Although there were few statements recommending issues be separated out for stand-alone training, it was decided that these recommendations would serve as helpful to an agency while developing future programming, but did not warrant changing or adding to the sixteen themes.

### **Objective 1**

Study objective 1, to identify upcoming changes and potential advancements in the beef production industry as identified by leaders in the research, was accomplished primarily during Round 1 of the survey. Round 1 was initiated by email invitations to participate being sent to 54 potential participants. The questionnaire associated with Round 1 asked participants to identify list topics that need to be addressed in the Idaho beef industry. It is important to note that participants were asked to identify issues that need to be addressed rather than training that needed to be implemented. This was done intentionally in order to avoid influencing the participants' thought process to start with preexisting training. The intent was to gather issues and challenges from the participants that might not be associated with a training program already in place.

Data for Round 1 was collected between 28 November, 2016 and 14 December 2016. Twenty-three completed responses were returned, distributed throughout the industry sectors. The number of issues contributed from each participant ranged from three to fourteen, with a total of 103 issues compiled. The complete list contained multiple duplicates and similarities. The translation of the Round 1 list of issues to the training topics to be presented consisted of issue groupings by four individuals familiar with the industry, but not part of the participant panel. I used these four theme recommendations to create the final 16 themes that were used for Rounds 2 and 3. Each of the 16 training topics contained between three and eleven individual issues compiled during Round 1. Table 4.2 displays the final 16 themes and the subheadings contained within each theme. A complete list of the issues compiled from Round 1 and how they were grouped can be found in Appendix 4.

Table 4.4

*Suggested Training Topics for Idaho Beef Producers*

| Topic  | Subtopics   |
|--|---|
| 1. Ranching on Public Land                     | -Federal Regulations<br>-State Regulations<br>-Open Range and Fencing Laws<br>-Winter Feeding<br>-Resource Stewardship  |
| 2. Returning young people to the beef industry | -Start-up resources<br>-Costs<br>-Family succession plan<br>-Recruitment  |
| 3. Financial Management for Producers          | -Understanding production costs<br>-Feed and Labor<br>-Monitoring markets<br>-Business management decisions   |
| 4. Marketing Your Commodity                    | -Increasing profitability through marketing decisions<br>-Developing a high value commodity<br>-Consumer preferences<br>-Producing for a niche market<br>-Custom products and alternate feeding practices<br>-Marketing to the consumer |

| Topic  | Subtopics  |
|--|--|
| 5. Animal Nutrition and Welfare                            | <ul style="list-style-type: none"> <li>-Growth Physiology and Nutrition</li> <li>-Modern Feeding Strategies</li> <li>-Effective Mineral Supplementation</li> <li>-Low Stress Cattle Handling</li> </ul>  |
| 6. Grazing and Pasture Management                          | <ul style="list-style-type: none"> <li>-Management Intensive Grazing</li> <li>-Open Range &amp; Fencing Laws</li> <li>-Invasive Species</li> <li>-Winter Forage</li> </ul>   |
| 7. Public perception and education                         | <ul style="list-style-type: none"> <li>-Health &amp; Nutritional attributes of beef</li> <li>-Food sources and safety: antibiotics &amp; GMO</li> <li>-Animal welfare</li> <li>-Industry contribution to the state of Idaho</li> <li>-Other contributions and public benefits such as wildlife habitat stewardship and maintaining rural spaces</li> </ul> |
| 8. Animal Health   | <ul style="list-style-type: none"> <li>-Disease control</li> <li>-Vaccinations</li> <li>-Antibiotic stewardship</li> <li>-Veterinary Feed Directive</li> </ul>   |
| 9. Effective Water Management in Cattle Production         | <ul style="list-style-type: none"> <li>-Water rights</li> <li>-Judicious water use practices for economic production</li> <li>-Climate change impacts on range land</li> </ul>   |
| 10. Reproduction technologies                              | <ul style="list-style-type: none"> <li>-Artificial Insemination</li> <li>-Genetic markers</li> <li>-Phenotype selection</li> <li>-Estimated Progeny Differences (EPDs)</li> <li>-DNA profiling</li> </ul>  |
| 11. Managing Wildfires                                     | <ul style="list-style-type: none"> <li>-Proper grazing techniques to reduce fuel loads and forest health</li> <li>-Wildfire potential awareness and use of public lands</li> </ul>   |
| 12. Understanding Economic Influences on the Beef Industry | <ul style="list-style-type: none"> <li>-Foreign trade agreements</li> <li>-Beef promotion</li> <li>-Market development</li> <li>-Export markets</li> <li>-Global competitiveness</li> </ul>  |

| Topic  | Subtopics  |
|--|--|
| 13. Understanding Public Policy and Legislation affecting your operation | -Environmental policy<br>-Endangered Species considerations<br>-End of Country of Origin Labeling and repercussions      |
| 14. Adapting to a Consolidating Industry                                 | -National Beef Quality audit<br>-Meat packing<br>-Herd consolidation<br>-Packers & Stockyard Act                         |
| 15. Herd construction, selection, and maintenance                        | -Building your herd to reflect resources and region<br>-Improvement through valued phenotypes<br>-Managing age of cattle |
| 16. Utilizing technology for efficient production                        | -Animal Identification & RFID<br>-Applications<br>-Responsible use of technology   |

## Objective 2

Objective 2 sought to describe the level of which of these issues are deemed important and in need of training, was addressed through Round 2 of the survey.

Questionnaire two was sent to participants on 15 December -two days after the completion of Round 1- and data collection continued through 9 January, 2017. Each of the 16 topics and associated subtopics derived from Round 1 were presented to the panel of participants. For each of the training topics, the panel was asked to rate, using a seven point Likert-type scale, the importance of training on the topic would be for Idaho beef producers. In addition to the Likert-type scale rating, participants were given the opportunity to provide qualitative feedback for each topic on why the topic is or is not a priority for training. The rating results of each topic are displayed in Table 4.3. Of the 16 total topics, 15 achieved a mean greater than 4.0 and all topics had a standard deviation between 0.70 and 1.67.



Table 4.5

*Measures of Tendency for the 16 Training Topics*

| Topic (Listed by Mean)                          | n  | <i>M</i> | <i>SD</i> | Min | Max |
|---|----|----------|-----------|-----|-----|
| 1. Ranching on Public Land                      | 21 | 5.762    | 1.342     | 3   | 7   |
| 2. Returning Young People to the Industry       | 17 | 5.706    | 1.015     | 4   | 7   |
| 3. Financial Management                         | 18 | 5.389    | 1.339     | 2   | 7   |
| 4. Marketing your Commodity                     | 19 | 5.368    | 1.086     | 3   | 7   |
| 5. Animal Nutrition and Welfare                 | 19 | 5.158    | 0.933     | 3   | 7   |
| 6. Grazing and Pasture Management               | 21 | 5.095    | 1.191     | 3   | 7   |
| 7. Public Perception and Education              | 18 | 5.056    | 1.223     | 2   | 7   |
| 8. Animal Health                                | 19 | 5.000    | 0.725     | 3   | 7   |
| 9. Water Management                             | 17 | 4.824    | 1.465     | 2   | 7   |
| 10. Reproduction Technologies                   | 20 | 4.800    | 1.661     | 1   | 7   |
| 11. Managing Wildfires                          | 18 | 4.611    | 1.671     | 2   | 7   |
| 12. Understanding Economic Influences           | 18 | 4.556    | 1.383     | 2   | 7   |
| 13. Understanding Public Policy                 | 18 | 4.500    | 1.462     | 1   | 7   |
| 14. Adapting to a Consolidating Industry        | 16 | 4.438    | 1.657     | 1   | 7   |
| 15. Herd Construction, Selection, & Maintenance | 17 | 4.118    | 1.409     | 1   | 6   |
| 16. Utilizing Technology                        | 18 | 3.944    | 1.580     | 1   | 6   |

*Note: Likert type scale, 1-7, 1 = Not Important, 4 = Moderately Important, and 7 = Extremely Important.*

Topic number 1, “Ranching on Public Land” had 17 qualitative responses submitted from the participant panel. Nine responses made noted the importance of training on public land issue for beef producers. Three responses referenced the significant percentage of potential grazing in Idaho comprised of public lands.

Topic number 2, “Returning Young People to the Industry” had 10 qualitative responses submitted from the participant panel. Two of those responses highlighted the need

for planning and family succession plans. Two of the responses noted the increasing average age of Idaho beef producers.

Topic number 3, “Financial Management” had 9 qualitative responses submitted from the participant panel. Five of the responses focused on the issues as a key component of a successful operation. Two of the comments made note of producers’ lack of comprehension on this topic.

Topic number 4, “Marketing your Commodity” had 12 qualitative responses submitted from the participant panel. Three participant responses highlighted the broad scope of the subtopics within this topic and suggested the possibility of specific training for different subtopics. Three participant responses were focused on this issue’s role in the economic success of an operation.

Topic number 5, “Animal Nutrition and Welfare” had 11 qualitative responses submitted from the participant panel. Five of the responses focused on this topic’s effect on product quality and market value. Three of the responses made note of the public perception implications.

Topic number 6, “Grazing and Pasture Management” had 16 qualitative responses submitted from the participant panel. Three of the participant responses noted the need for training on weed management and invasive species control. Seven of the comments focused on cost effectiveness and feeding efficiency. Three of the responses referenced open range and fencing laws.

Topic number 7, “Public Perception and Education” had six qualitative responses submitted from the participant panel. Three of the qualitative responses from the panel

highlighted the need to push industry education outside of the industry to a public that is unfamiliar with beef production practices.

Topic number 8, “Animal Health” had 12 qualitative responses submitted from the participant panel. Three of the responses were centered on the Veterinary Feed Directive. Animal health as a contributor to financial success was the focus of three other responses.

Topic number 9, “Water Management” had seven qualitative responses submitted from the participant panel. Five of the responses highlighted the importance of this issue to beef production. One response focused on the need to avoid water shortage issues affecting other states in the region.

Topic number 10, “Reproduction Technologies” had 13 qualitative responses submitted from the participant panel. Three participant responses highlighted the importance of technology utilization for herd optimization. Two responses focused on the necessity of training for this topic directed at purebred producers.

Topic number 11, “Managing Wildfires” had nine qualitative responses submitted from the participant panel. Four of those responses made reference to this topic having close ties to the issues associated with ranching on public lands.

Topic number 12, “Understanding Economic Influences” had 10 qualitative responses submitted from the participant panel. Five of the responses noted the importance of this issue but recognized the issue as having an indirect application to producers.

Topic number 13, “Understanding Public Policy” had seven qualitative responses submitted from the participant panel. Two of those responses focused on the need for greater producer understanding of key issues. Two of the comments were centered on the repeal of Country of Origin Labeling.

Topic number 14, “Adapting to a Consolidating Industry” had nine qualitative responses submitted from the participant panel. Three of the participant responses referenced this issue’s tangential influence on producers or questioned the effectiveness of designated training.

Topic number 15, “Herd Construction, Selection, & Maintenance” had eight qualitative responses submitted from the participant panel. Four of the participant responses focused on the components of genetic potential utilization on building and maintaining a productive heard.

Topic number 16, “Utilizing Technology” had seven qualitative responses submitted from the participant panel. Two participant responses focused on the economic implication of the topic. Two other responses highlighted the need for training for technological advancement to be used effectively.

### **Objective 3**

Identification of the appropriate organization to develop the program and the most effective vehicle to deliver training was addressed through the third and final round of the survey. Questionnaire three was sent to participants 18 January -nine days after the completion of Round 2- and data collection concluded on 31 January, 2017. The third questionnaire was used to ask each participant to select what organization should develop training for each topic and what would be the most effective means of delivering this training to producers. Participants were given the following list of choices for training organizations: Extension, Cattle Association, Beef Checkoff, Private Company (with a blank to include a recommendation), or Other (with a blank for recommendations). For the means to deliver training, participants were given a list of the following options:

Instructional video, made available to anyone; Online course, self-pace, available to enrolled students; Online course, designated meeting times, available to enrolled students; Multi-day/weekend workshop, replicated regionally; Single-day workshop, replicated regionally; Informational handout; or Other with a blank for recommendations. Twenty respondents participated in Round 3, although not all of them provided feedback for each topic. Each topic had at least 16 responses from the panel. The most selected agency and method for each topic are displayed in Table 4.4. All of the sixteen topics had a methodology recommendation suggesting the use of multiple methods. Concurrently, ten of the sixteen topics had more than one agency recommended by at least 20% of participants.

Table 4.6

*Recommended Agency and Training Method for each of the 16 Training Topics (top 3 for each), (N=20)*

| Topic  | Agency             | (%)  | Method              | (%)  |
|--|--------------------|------|---------------------|------|
| 1. Ranching on Public Land                     | Cattle Association | (40) | Single-day Workshop | (40) |
|  | Extension          | (35) | Multi-day Workshop  | (30) |
|  | Other              | (20) | Online (self-paced) | (10) |
| 2. Returning Young People to the Beef Industry | Extension          | (47) | Single-day Workshop | (47) |
|  | Cattle Association | (29) | Instructional Video | (18) |
|  | Private Company    | (12) | Multi-day Workshop  | (18) |
| 3. Financial Management                        | Extension          | (67) | Online (self-paced) | (28) |
|  | Private Company    | (22) | Single-day Workshop | (28) |
|  | Other              | (11) | Multi-day Workshop  | (22) |
| 4. Marketing your Commodity                    | Extension          | (28) | Single-day Workshop | (56) |
|  | Private Company    | (28) | Online (self-paced) | (28) |
|  | Beef Checkoff      | (22) |                     |      |
| 5. Animal Nutrition and Welfare                | Extension          | (67) | Single-day Workshop | (50) |
|  | Beef Checkoff      | (11) | Instructional Video | (22) |
|  | Private Company    | (11) | Online (set times)  | (11) |
| 6. Grazing and Pasture Management              | Extension          | (88) | Single-day Workshop | (33) |
|  | Cattle Association | (6)  | Instructional Video | (22) |
|  | Other              | (6)  | Multi-day Workshop  | (22) |

| Topic   | Agency             | (%)  | Method                | (%)  |
|---|--------------------|------|-----------------------|------|
| 7. Public Perception and Education              | Beef Checkoff      | (56) | Online (self-paced)   | (39) |
|   | Cattle Association | (22) | Single-day Workshop   | (17) |
|   | Other              | (17) | Informational Handout | (17) |
| 8. Animal Health                                | Extension          | (67) | Single-day Workshop   | (50) |
|   | Other              | (17) | Online (self-paced)   | (28) |
|   | Private Company    | (11) |                       |      |
| 9. Water Management                             | Cattle Association | (41) | Single-day Workshop   | (59) |
|   | Extension          | (35) | Instructional Video   | (12) |
|   | Private Company    | (18) |                       |      |
| 10. Reproduction Technologies                   | Extension          | (56) | Single-day Workshop   | (39) |
|   | Private Company    | (17) | Instructional Video   | (22) |
|   | Other              | (17) | Multi-day Workshop    | (22) |
| 11. Managing Wildfires                          | Extension          | (52) |                       |      |
|   | Cattle Association | (24) | Single-day Workshop   | (69) |
|   | Other              | (24) |                       |      |
| 12. Understanding Economic Influences           | Extension          | (22) | Single-day Workshop   | (50) |
|   | Cattle Association | (22) | Instructional Video   | (17) |
|   | Beef Checkoff      | (22) | Online (self-paced)   | (17) |
| 13. Understanding Public Policy                 | Cattle Association | (72) | Single-day Workshop   | (39) |
|   | Extension          | (17) | Informational Handout | (17) |
|   | Beef Checkoff      | (6)  |                       |      |
| 14. Adapting to a Consolidating Industry        | Cattle Association | (47) |                       |      |
|   | Extension          | (29) | Single-day Workshop   | (41) |
|   | Private Company    | (18) | Instructional Video   | (18) |
| 15. Herd Construction, Selection, & Maintenance | Extension          | (83) | Single-day Workshop   | (33) |
|   | Cattle Association | (6)  | Instructional Video   | (22) |
|   | Private Company    | (6)  | Online (self-paced)   | (17) |
| 16. Utilizing Technology                        | Extension          | (56) | Online (self-paced)   | (33) |
|   | Private Company    | (28) | Instructional Video   | (22) |
|   | Other              | (11) | Single-day Workshop   | (22) |

The training topic “Ranching on Public Land” had two main agencies that were recommended by the participant panel, being “Extension,” and the “Cattle Association.” Additional organizations and people recommended under the option of “Other,” were Idaho Rangelands Resource Commission, Neil Rimbey, Idaho Department of Agriculture, and Extension along with a group of cattle producers. Similarly, two training methods were most often selected, “Single-day” and “Multi-day” workshops. Participants noted that multiple methods would be preferable and highlighted the use of social media as another option to utilize.

Responses for “Returning Young People to the Beef Industry” focused on “Extension” and the “Cattle Association,” with write-in recommendations of banks, insurance companies, and estate planning specialists. “Single-day workshop” was chosen more often than any of the other options. “School visits” were recommended as a non-standard form of delivery.

Training for the issue of “Financial Management” was recommended at a 67% rate to be driven by “Extension.” “Other” options, including private organizations, noted by the participants were Certified Public Accountants, Dave Pratt, Ranching for Profit, Cattle Fax, and Sterling Marketing. Multiple training methodologies received more than one recommendation from the panel.

“Marketing your Commodity” had more than one agency recommended by multiple participants, with “Extension” and “Private Company” receiving the most recommendations. Also listed under “Private Companies” or “Other” were Country Natural Beef, Jim Gerrish, Cattle Association, retailers, Agri Beef, Cattle Fax, and Sterling Marketing. Although the use of multiple methods was identified by the panel, “single-day

workshop” was recommended most often, with “self-paced online course” also receiving multiple recommendations.

For the topic of “Animal Nutrition and Welfare,” “Extension” was selected by participants six times more often than any other option, but one response explicitly stated that others should be brought into the process as necessary. “Single-day workshop” was selected most often for preferred training method. “Instructional videos” were also recommended by multiple participants. The suggestion of workshops conducted at company feeding and supplement facilities was written in.

University Extension was recommended to take the lead on the topic of “Grazing and Pasture Management” by almost 90% of participants. Alternatively, training method recommendations were spread between four options with the recommendation of “a combination of methods” being stated explicitly.

The issue of “Public Perception and Education” was recommend to the “Beef Checkoff” by the majority of participants. “Other” organization recommendations were the Idaho Rangeland Resource Commission and Idaho Fish & Game. The “self-paced online” course was chosen most often as the preferred training method, with three other methods receiving multiple recommendations. Methods written in by participants were mass media presentations and the use of social media.

In the case of “Animal Health,” “Extension” was chosen most often. “Other” organizations written in by the panel were local veterinarians, pharmaceutical representatives, animal health companies, and the Idaho State Department of Agriculture. Preference for training method was for “single-day workshops” or “self-paced online courses.”



On the topic of “Water Management,” the “Cattle Association” and “Extension” were identified most often as the agency to drive training. The Idaho Department of Agriculture was also written in. Although “single-day workshop” was identified most often as the preferred training methodology, every available option was selected at least once.

Training development for “Reproduction Technologies” was recommended to be led by University Extension, with all other organization receiving at least one recommendation. Also suggested were Artificial Insemination Companies and Breed Organizations.

On the subject of “Managing Wildfires” the panel highlighted “Extension” and the “Cattle Association” to develop training, and included the University of Idaho Rangeland Center and the Bureau of Land Management as other options. “Single-day workshops” were recommended most often as the preferred training methodology.

The panel’s opinion on the appropriate agency to lead training on “Understanding Economic Influences” was highly distributed, as all given agencies received at least four recommendations. “Private companies” and “Other” organization also received multiple recommendations and included Cattle Fax, regional exporter, Sterling Marketing, U.S. Meat Export Federation, National Cattlemen's Beef Association, and The Idaho Department of Agriculture. The recommendations for preferred training methodology were less divisive and focused primarily on the “single-day workshop” format.

The issue of “Understanding Public Policy” was suggested to be led most often by the “Cattle Association” with other choices receiving multiple recommendations, and write-in options of Beef Council Representative and Political Representative. The highest selected training methodology was “single-day workshop,” but five other options received at least two recommendations from the panel.

Addressing the issue of “Adapting to a Consolidating Industry” was recommended to the “Cattle Association” and “Extension” with multiple recommendations going to “Private Companies” which were Cattle Fax or Cattle Buyers Weekly. All offered training methods received at least one recommendation with “single-day workshops” being selected most often.

The topic of “Herd Construction, Selection, & Maintenance” was recommended to be led by “Extension” by the majority of the panel with Breed Associations also being written in. The suggested training methodology had a more diverse response, with all options recommended at least once.

Although “Extension” was recommended by over half of the panel to lead training on “Utilizing Technology,” “Other” organizations and “Private Companies” combined for nearly 40% of the remaining recommendations. Those organizations suggested were Allflex, individual product representatives, the Idaho Department of Agriculture, and Idaho Brand [Board]. The panel was again split on the chosen training methodology, with four of the options receiving at least three recommendations and another response suggesting the use of multiple methods.

## **Summary**

The results and findings through the participant panel, Rounds 1, 2 and 3, and how instrument reliability and validity were maintained throughout were described in this chapter. Sixteen themes were identified from the finding of Round 1 and all sixteen of those topics were deemed to be training priorities by the panel during Round 2 based off of the Likert-type scale means and standard deviations of each. Round 3 collected the panel’s recommendations for the agency to develop the training, and how they recommend the

training be delivered to producers. Finally, observations key to the reproduction of this model for future needs assessments were presented. Given the aforementioned findings, four conclusions were made. These conclusions will be further discussed in chapter five along with recommendations for implementation of each.

## **Chapter 5:**

### **Conclusions, Discussion, and Recommendations**

Given the finding discussed in chapter four, the following conclusions were made:

1. The 16 aforementioned issues facing the Idaho beef industry warrant serious considerations from University Extension and other support organization for development as training programs targeting beef producers.
2. The development and distribution of key training and education should not be the sole responsibility of University Extension. Multiple relationships should be built to allow for cooperative development of the identified issues.
3. Those cooperative teams should seek to employ multiple vehicles of training delivery in order to most effectively distribute needed information and skills.
4. Given the appropriate situation and modifications, a modified Delphi model offers an effective needs assessment model.

Further exploration of these four conclusions will be discussed in chapter five.

Recommendations regarding the preferred training provider, recommended training method, and recommendations for future research will be discussed for each of the issues. Finally, future research potential using the modified Delphi Model for Extension needs assessments will be presented.

#### **Purpose and Objectives**

The purpose of this study is to identify training and education needs for the Idaho beef producers. The target audience for the findings of this survey are those agencies

capable of delivering programing, training, and education to beef producers. Conclusions and recommendations will be disseminated to stakeholders beyond University of Idaho Extension, as other associations and organizations are capable of developing and delivering training. Another potential benefit of this study is to develop a needs assessment model that can be adapted by UI extension departments for future needs assessments to fit their represented industries own unique needs.

The following objectives guided the study:

1. Identify upcoming changes and potential advancements in the beef production industry as identified by leaders in the research, commercial, policy, and production sectors.
2. Describe the levels of which these potential changes and advancements are deemed realistic, time sensitive, and needed for producers.
3. Identify the appropriate organization to develop the program and the most effective vehicle to deliver training on potential changes and advancements.
4. Develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension.

### **Objective 1: Conclusions**

Through the collection, consolidation, and rating of the panel's ideas through Rounds 1 and 2, 16 programming recommendations were identified. Associated means and standard deviations from the ratings of each topic during Round 2 have the potential to be considered when evaluating priority of each issue, but should not be the sole consideration. In comparison of the topics as they are ranked by mean Likert-type scale rating, there are a

few trends that emerged that potential programming coordinator should consider. The first two topics from the mean rankings “Ranching on Public Lands” and “Returning Young People to the Industry” have the commonality of being very emotion evoking issues. This observation is reinforced the qualitative responses associated with these two issues.

“Ranching on public lands” had the highest mean score, which was expected as it was mentioned the most times during Round 1. Participants had diverse inputs on this topic, ranging from, “Should be a priority as a large percentage of Idaho producers rely on public lands,” to a less urgent response that, “Most ranchers are aware of these regulations. Ways to impact change may be more appropriate.” The number of qualitative responses for this topic further emphasizes its weight as a major issue to the majority of beef producers in the state.

“Returning young people to the industry” had the second highest mean rating scores, and had the highest minimum rating, with no participant rating it lower than 4 on a scale of 7. The participant responses for this topic demonstrate its passion provoking response within the industry as it is, “critical in today’s environment.”

It is important to recognize that although these topics received the highest rating for importance by the panel, an understanding of how passionate industry people are about such issues, would suggest that these topics should not necessarily take priority for the development of training programs.

The next two topics as listed by mean rating are “Financial Management” and “Marketing Your Commodity,” both money-centered issues. It is notable that the two financial topics were rated as crucial issues. “Financial Management” was called, “a weakness of most ranchers, [who are] too busy working and do not take the time to manage

the business.” In response to “Marketing Your Commodity,” feedback was blunt, stating that, “ranchers are historically poor marketers of their product,” and “ranching families must look at their operations as businesses first.” Issues in this category, and these topics specifically should be given their due attention; the qualitative inputs from the panel justify this recommendation.

The next four issues on the list of topics by mean rating “Animal Nutrition and Welfare,” “Grazing and Pasture Management,” “Public Perception and Education,” and “Animal Health” have the most balanced combination of mean score (5.00-5.16), and standard deviation (.073-1.22) indicating their potential to effect the widest range of producers. Although not necessarily related to each other, their scores, supported by participant feedback indicate the generalized relevance of these topics. Animal nutrition and welfare was called, “important to the industry and we could do much better in this area.” Concurrently, comments associated with its lower scores did not indicate a lack of importance, but rather that this topic could be more heavily emphasized in pre-existing programs. Responses to grazing and pasture management contained concerns over invasive species, fencing laws, and production costs, while negative responses toward the topic focused primarily on the need to break these subtopics out as their own topics. The issue of public perception and education had comments that went in two different directions- internal and external focus. For example, “this topic is extremely important for those outside of the beef industry,” as opposed to, “it is important [that we are] informed to defend and protect our products.” The range of scores and comments for animal health followed a similar trend to nutrition and welfare. Comments related to the importance of safety and Veterinary Feed Directive were most common, with lower scores associated with comments suggesting the

need to include these issues in pre-existing programs. Each of these topics has its own variety of nuances and recommendations within the qualitative data collected during Rounds 2 and 3. It is vital that these responses be referenced for anyone developing training for any or all of these issues. Specifically, “Grazing and Pasture Management” was one issue in which the panel recommended either splitting the topic or at least having specific training modules within the program.

Three topics, “Water Management,” “Reproduction Technologies,” and “Managing Wildfires,” ranked in the middle of the mean-rating list, but were distinctive by their high standard deviations. Quantitative responses were evaluated and we found a high level of emphasis by some panel members for these topics, and less interest from others. The qualitative responses for each of these aided the researchers in the understanding of the disparity in scores. With water management, the differences in value are not surprisingly geographic and depend on the conditions in the area from which the respondent has experience. Respondent value of wildfire management appears to be tied to the participants’ level of dependency on use of public land. In the case of reproduction technologies, many participants recognized this issue as, “needed to remain competitive in the business.” Alternatively, some of lower scores indicated the applicability of this training to only “purebred and seedstock producers.” It is likely that these topics are only applicable in certain geographic regions in the case of water management and managing wildfires, and only in certain industry sectors in the case of reproduction technologies. More study into the desired audience should be conducted by any organization which seeks to develop and implement training for any of these topics.



The topics of “Understanding Economic Influences,” “Understanding public policy,” and “Adapting to a consolidating industry” are another set of issue displaying similarities, but were rated near the low end of the issues. It is notable that these three topics grouped themselves together, as all three share the common theme of an emphasis on information rather than a focus on training. The qualitative responses to these issues relay the importance of understanding the issues but the associated scores do not suggest them as top priorities for future programming. One reason for this might be the disconnection between the information associated with these three concerns and the ability for producers to take action to remedy them. This theory is in line with many of the statements such as, “These are areas we have little or no control over,” or, “Important information that most don’t see effecting them on a daily basis,” or, “not much that ranchers have control or influence over.”

The issue of a disparity between what was identified as a concern during Round 1 to what is important training as evaluated by Round 2 is a product of the way the question was framed in Round 1. Round 1 sought issues and concerns rather than programming ideas. It is due to this distinction that challenges such as these three would have been unlikely to have been brought up in Round 1. Just because these may not be top priority training items for producers, does not negate them as concerns for the industry. Instead, issues such as these three must be recognized by industry supporting agencies as challenges that are in need of either novel training concepts or other external action.

The final two topics, “Herd construction, selection, and maintenance” along with “Utilizing technology” had the lowest mean scores, above average standard deviations, and a similarly low rate of qualitative input from respondents. In the case of “Herd management,” the issue appears to be a decisive split between those that place significant

value on phenotype selection and age management, and those who believe it to be a secondary issue. The feeling of the group in terms of both scores and responses for utilizing technology was summed up appropriately by one participant who noted, “This topic is very interesting however, it is not as critical of [a] management issue as the others.” It was noted that “Utilizing technologies” was the only topic that fell below the desired mean score of 4.00, with a score of 3.94. Due to the proximity of the pre-established threshold along with a few compelling qualitative comments submitted during Round 2, it was decided to leave the topic in for Round 3 as the potential to collect information from Round 3 may be valuable for any agency that may or may not decide to develop training on this, or a similar topic.

### **Objective 1: Recommendations**

The 16 issues facing the Idaho beef industry should receive serious considerations from University of Idaho Extension and other support organizations to develop training programs that serve beef producers. The preceding discussion should be use to aid in the prioritization of program development. Furthermore, the qualitative responses collected during Round 2 should be consulted in detail during the construction of programming for any of these issues as they offer vital insight to potential areas of emphasis for producers.

### **Objective 2: Conclusions and Recommendations**

The development and distribution of key training and education should not be the sole responsibility of University Extension. Other education and awareness organizations such as the Cattle Association and Beef Checkoff were identified as the best organization to lead the development of training and education in several instances. Furthermore, multiple organizations, companies, and even specific individuals were cited as quality options to provide the highest level of support to producers. Even in the multiple cases where UI

Extension was overwhelmingly recommended to take the lead on program development, qualitative responses represented our panel and they suggested the inclusion of other organization to improve both development and distribution. I recommend that any organization taking primary control of program development for any of these issues develop multiple relationships with associated organizations and utilize their ability to contribute knowledge or resources to training program development.

Although not a new concept, utilizing connections within the industry, outside of the academic community, was repeatedly recommended by the participant panel. This recommendation should not be ignored as these programming recommendation are put into action. Although individual organizations, be it the Extension System, the Cattle Association, or Beef Checkoff, may have the ability to develop programming autonomously, the input from other organizations offers the potential for improved information, greater industry buy-in, and the wider dissemination. This trend for diversification of inputs should carry over into dissemination.

### **Objective 3: Conclusions and Recommendations**

Just like greater inclusion during the program development process offers a significant advantage, cooperative teams should seek to employ multiple vehicles of training delivery in order to most effectively distribute needed information and skills. Each of the recommended training topics had at least five different recommendations for methods of delivery.

Due to probable cost and production means, program development utilizing up to five platforms of delivery is unlikely to be feasible for each of these topics. Even so, with

the diversity of recommendations, multiple delivery methods should be utilized to the fullest extent possible. Furthermore, unique delivery ideas, tailored to the individual topic were recommended for multiple topics. As the industry continues to embrace alternate forms of training and education media, multiple modes of training delivery will have the potential to become more time and cost efficient.

I recommend that an organization developing training for any of these training topics utilize more than one training methodology in order to disseminate information and training. The quantitative and qualitative data collected in Round 3 should be utilized in order to identify the training methods that offer the most potential for effectiveness. Finally, the unique ideas for training methods offered by the panel in their Round 3 responses should be carefully considered whenever possible.

#### **Objective 4: Conclusions and Recommendations**

Unlike the first three objectives, which were nested into each of the three rounds of the survey, Objective 4 - develop a needs assessment model capable of being replicated for use in other sectors of agricultural extension- was imbedded into the entire process. There were multiple observations made throughout the conduct of this study that would lend to successful replication of this process for other sectors within the extension community.

Starting with the initial construction of the survey, panel selection was deemed to be of the utmost importance. The purposeful sample for this study included knowledgeable and informed representative from each of the industry sectors. Those parameters may need to be adjusted depending on the industry or area for which this model is being adapted. I found it was invaluable to consult multiple advisors, who are familiar with different sectors of the industry, throughout the panel construction process.

Framing of the initial question in Round 1 of the survey was also a significant contributor to the development of this process. Asking the panel problems and issues instead of programming ideas aids in the prevention of regurgitation of programs they have already heard of. This distinction adds to the benefit of the Delphi Model over the focus group model to generate novel ideas.

Maintaining construct validity during the creation of Questionnaire 2 is vital to the utilization of this model. The open ended framing of Questionnaire 1 lends to the collection of a substantial number of responses that need to be consolidated in order to collect data with subsequent rounds. This is another step where trusted advisors, and even just industry savvy individuals not otherwise associated with the study, should be utilized to explore coding options for the Round 1 responses. The ability of participants to provide qualitative feedback in Round 2 helps confirm that the consolidation of ideas from Round 1 into programming options for Round 2 properly reflected the panel's contributions.

Finally, utilizing the final round of the Delphi Model to glean information for recommended agency to lead training development and methodology to deliver that training to producers, makes this model specifically helpful to the Extension community. Extension coordinators can use the quantitative and qualitative responses of the panel to determine the most areas in which they have the ability to be the most effective and work with other agencies on issues where outside coordination has the potential to be most effective. Furthermore, the information the responses for the recommended methodology for training in combination with the qualitative data collected during Round 2 provides invaluable information to the department or individual tasked with program development.

Given the appropriate situation and modifications, a modified Delphi model offers an effective needs assessment model. Although the Delphi Model has not been assessed to be as effective or popular with Extension agents (Etlings, 1995), the findings of this study demonstrate its potential to be used in an Extension needs assessment capacity. When compared to a focus group, a modified Delphi Model alleviates the potential of groupthink—an issue especially concerning with a panel comprised of individuals with strong opinions and individual interests. Alternatively, the use of a larger random sample is resource intensive and is likely to produce similar findings given the expanse of experience provided by the participant panel of a Delphi Model. The use of a stratified sample does have the potential to lessen the necessary resources to conduct a study however, with a population as complex as a statewide beef industry, deciding how to stratify the sample is challenging. For example, should the participants be selected based upon operation size, operation type, or geography? Although each of these alternative methods offer their own advantages, the additional benefits of a modified Delphi Model should be seriously considered when planning a needs assessment for any Extension department.

The required alterations and distinctions needed to apply the modified Delphi Model for a needs assessment are critical to the collection of data that meets the needs of Extension programming. When properly adjusted and applied, the modified Delphi Method offers a base of methodology that removes a great deal of the “group think” that plagues a focus group, while providing a platform to collect valuable qualitative data that has the potential to help shape the development and delivery of future programming.

**Summary**

In conclusion, considering the findings and discussions of this study, the 16 aforementioned issues facing the Idaho beef industry warrant serious considerations from University Extension and other support organization for development as training programs targeting beef producers. With regard to these 16 topics, it is crucial to recognize that the development and distribution of key training and education should not be the sole responsibility of University Extension. Multiple relationships should be built to allow for cooperative development of the identified issues and those cooperative teams should seek to employ multiple vehicles of training delivery in order to most effectively distribute needed information and skills. Finally, given the appropriate situation and modifications, a modified Delphi model offers an effective needs assessment model.

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## Appendix 1:

### University of Idaho Institutional Review Board Exemption Certificate

#### University of Idaho

Office of Research Assurances  
Institutional Review Board

875 Perimeter Drive, MS 3010

Moscow ID 83844-3010

Phone: 208-885-6162

Fax: 208-885-5752

[irb@uidaho.edu](mailto:irb@uidaho.edu)

To: Jeremy Falk  
Cc: Anthony Roubal  
From: Jennifer Walker, IRB Coordinator

Approval Date: November 21, 2016

Title: NEEDS ASSESSMENT FOR IDAHO BEEF PROGRAMMING

Project: 16-127

Certified: Certified as exempt under category 2 at 45 CFR 46.101(b)(2).

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for the research project NEEDS ASSESSMENT FOR IDAHO BEEF PROGRAMMING has been certified as exempt under the category and reference number listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through [VERAS](#) for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc. If you have any additional questions, please contact me through the VERAS messaging system by clicking the 'Reply' button.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement.

You are required to timely notify the IRB if any unanticipated or adverse events occur during the study, if you experience and increased risk to the participants, or if you have participants withdraw or register complaints about the study.

## Appendix 2:

### Participant Email Transcripts

Initial email – Sent 28 November, 2016 to 53 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment

**Body:**

Hello,

My name is Tony Roubal and I am a graduate student at the University of Idaho, working on a needs assessment for **Idaho beef producers**.

I received your name and information from one of your peers in the industry who felt that you were someone who had **valuable insight to contribute** to this effort.

Below is some information describing why this needs assessment is so important to our state's beef industry. If you'd rather hear about this project from me rather than just reading an email, here's a link to a quick video where I introduce myself and explain everything that I have drawn out below.

<https://youtu.be/Isyekgrp18w>

I sincerely appreciate your support with this project; I think we have an opportunity to **identify some exceptional programming needs** for this state's beef industry.

**Here is the link to Part 1 of this project:**

`${1://SurveyLink?d=Take the survey}`

Or copy and paste the URL below into your internet browser:

`${1://SurveyURL}`

If you have any questions, comments, or concerns, please do not hesitate to call or email.

Very Respectfully,

Tony Roubal

c: 402-720-9299

Here is more information that explains the project:

*Did you know...*

- Agriculture and food product manufacturing comprise greater than 7% of Idaho's gross domestic product (GDP)
- On a national scale, Idaho ranks 7th nationally for agricultural goods and food product exports per capita, surpassing \$2 billion annually
- Within the agriculture industry of Idaho, beef production is second only to dairy production, as it accounts for 23% of the total sales of agriculture products sold
- Idaho ranks 13th nationally in beef production as of 2012
- Idaho beef production hit a record high in 2016 with an estimated 2.4 million head of cattle and calves
- National cattle numbers are at their lowest since the 1950s, which puts Idaho in a position to take on a more prominent role in the National Beef Industry

*Since the last time the University of Idaho Extension conducted a needs assessment...*

- Numerous significant shifts in technology, policy, practice, and consumer pressures
- Introduction of technological assets such as wireless internet and drones
- Expansion of alternate feed stuffs
- Increased popularity of alternate feeding and husbandry methods such as organic and grass fed beef
- Greater emphasis on environmental issues
- Multiple conflicts over water rights and Right to Farm Legislation
- Animal identification
- The possibility of upcoming anti-biotic application control measures

*With that in mind...*

The purpose of this study is to identify training and education needs for the Idaho beef producers.

Conclusions and recommendations will be disseminated to stakeholders beyond the University of Idaho Extension, as it includes any other association or organization capable of developing and delivering training.

*How do we get there...*

3 VERY SHORT questionnaires that accomplish the following tasks:

Part 1: Identify upcoming changes and potential advancements in the beef production industry as identified by leaders in the research, commercial, policy, and production sectors; *these changes might include, but are not limited to technical advancements, procedural innovations, animal wellness, legislation, marketing, and policy.*

Part 2: Describe the levels of which of these potential changes and advancements are deemed realistic, time sensitive, and in need of training for producers.

Part 3: Find a consensus among the group for the highest priority issues. Identify the appropriate organization to develop the program and the most effective vehicle to deliver training on potential changes and advancements.

For each part, the survey will be open for about 2 weeks with a week in between to allow me time to compile the responses and generate the next questionnaire.

*Here is where you come in...*

When you get a survey link, please take a moment to provide your input. Specific instruction for each questionnaire will be included at the beginning of each. I've allocated two weeks for each survey to be open, but if everyone responds sooner we can move forward to the next portion.

Thanks again, for your support of this project and the Idaho beef industry,  
Tony

Round 1, 1<sup>st</sup> reminder email – Sent 6 December, 2016 to 39 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment

**Body:**

Hello again,

Last week you received an email asking for your opinions on training and education needs for Idaho beef producers.

Your contribution to this effort is incredibly important. Only a few key individuals were selected from different industry sectors based off of your experience and insight within the Idaho beef community. We need your opinion to help guide the development of crucial training and education programs for the next generation of beef producers.

Here is the link to the first questionnaire; this response should take less than 10 minutes of your time:

[\\${1://SurveyLink?d=Take the survey}](#)

I sincerely appreciate your support with this project as we have an opportunity to identify some exceptional programming needs for this state's beef industry. If you have any questions, comments, or concerns, please do not hesitate to call or email.

Very Respectfully,

Tony Roubal

c: 402-720-9299

Round 1, final reminder – Sent 12 December, 2016 to 33 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment

**Body:**

Good morning,

Hopefully, you have had a chance to take a look at my previous email asking for your opinions on training and education needs for Idaho beef producers.

This email is just a reminder that today is the last day that I will be collecting submissions for part 1 of this project.

Your contribution to this effort is incredibly important, as only a few key individuals were selected from different industry sectors based off of your experience and insight within the Idaho beef community.

Here is the link to the first questionnaire; this response should take less than 10 minutes of your time:

[\\${1://SurveyLink?d=Take the survey}](#)

I sincerely appreciate your support with this project, and if you have any questions, comments, or concerns, please do not hesitate to call or email.

Very Respectfully,

Tony Roubal

c: 402-720- 9299

Round 2, Initial invitation– Sent 15 December, 2016 to 53 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment – Round 2

**Body:**

Good afternoon,

Thank you to everyone who provided input for Round 1, the ideas presented were excellent. Here is your opportunity to see the compiled list of issues, and provide essential feedback on the prioritization these issues.

For this round of the survey, I have compiled everyone's feedback and translated each issue into a prospective programming topic. You will be asked to rate each issue on how important you feel that training topic is to the ongoing success of Idaho beef producers.

I would like to restate how incredibly valuable your opinion is to this project. Being selected to help with prioritizing these training needs is a testament to your reputation as a leader in the industry.

Here is the link to part 2; like part 1, it should take no more than 10 minutes of your time:  
\${1://SurveyLink?d=Take the survey}

Thank you again with your support with this project, and the Idaho beef industry. As always, do not hesitate to call or email with questions, comments, or concerns.

Very Respectfully,  
Tony Roubal  
C: 402.720.9299



Round 2, 1<sup>st</sup> Reminder – Sent 20 December, 2016 to 40 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment – Round 2

**Body:**

Good morning,

Hopefully, you have had a chance to take a look at my previous email inviting you to contribute to the second round of the Idaho Beef Needs Assessment Study. This email is just a reminder that the second questionnaire is now available.

This part of the study is incredibly important, as it will help us to prioritize the issues and ideas that were submitted in Round 1. Your contribution to this effort is incredibly important, and I want to thank you again for your ongoing contributions to the industry.

Here is the link to the second questionnaire; this response should take less than 10 minutes of your time:

[\\${1://SurveyLink?d=Take the survey}](#)

I sincerely appreciate your support with this project, and if you have any questions, comments, or concerns, please do not hesitate to call or email.

Very Respectfully,

Tony Roubal

c: 402-720- 9299

Round 2, Final Reminder – Sent 28 December, 2016 to 29 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment – Round 2

**Body:**

Good morning,

This email is just a reminder that today is the last day for submissions for part 2 of the Idaho Beef Producers Needs Assessment. Your contribution to the second part of this study is incredibly important, as only a few key individuals were selected from different industry sectors based off of your experience and insight within the Idaho beef community.

Here is the link to the second questionnaire; this response should take less than 10 minutes of your time:

[\\${1://SurveyLink?d=Take the survey}](#)

I sincerely appreciate your support with this project, and if you have any questions, comments, or concerns, please do not hesitate to call or email.

Very Respectfully,

Tony Roubal

c: 402-720- 9299

Round 3, Initial Invitation – Sent 18 January, 2017 to 53 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment – FINAL ROUND

**Body:**

Good morning everyone,

Thank you again to everyone who has contributed invaluable time and insight to this project so far.

**This is the final survey of this project, and possibly the most important.**

For this round of the survey, you will see each of the training ideas we have developed over the last two rounds, listed by their average score. For this last step, I am asking you to identify what is the best organization to develop training for each topic, and what is the best way to deliver that training.

This important step will allow me to ensure everyone who can help with these issues sees the valuable ideas we have come up with so far. Additionally, your recommendations for training methods will help ensure that we build these programs in the most effective and efficient way possible.

Here is the link to part 3; it should take even less time than parts 1 or 2.

[\\${1://SurveyLink?d=Take the survey}](#)

Thank you again with your support with this project, and the Idaho beef industry. As always, do not hesitate to call or email with questions, comments, or concerns.

Very Respectfully,

Tony Roubal

C: 402.720.9299

Round 3, Final Reminder – Sent 27 January, 2017 to 35 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment – FINAL ROUND

**Body:**

Good morning,

This email is just a reminder that today will be the last day for the final round the Idaho Beef Needs Assessment. This final portion is incredibly important, as it will make sure that all of your valuable input gets put to use effectively, and not left on a shelf.

If you have just a few minutes to give your advice on the best means of putting these training topics into action, it would be greatly appreciated.

`#{!://SurveyLink?d=Take the survey}`

I cannot say it enough, but thank you for your contribution to this project, and to the Idaho beef industry.

Very Respectfully,

Tony Roubal

c: 402-720- 9299

Thank you – Sent 23 February 2017, 2017 to 53 contacts

**To:** [Email]

**From:** Tony Roubal (ajroubal@uidaho.edu)

**Subject Line:** Idaho Beef Programming Needs Assessment

**Body:**

Good afternoon,

I would just like to take a moment to say a sincere Thank You to everyone who provided invaluable insight and input into this project.

Data collection has been completed, and the initial results appear to show some really outstanding information. If you selected the option to receive a copy of the results on the last survey, you will be sure to get them, once I have the data consolidated. Furthermore, any of the agencies identified during Round 3 should expect to see the results and recommendation you all made in the coming weeks.

I cannot say thank you enough for your support with this project, and the Idaho beef industry.

As always, do not hesitate to contact me if you have any questions or comments as we wrap up the project.

Very Respectfully,

Tony Roubal

C: 402.720.9299

## Appendix 3:

### Survey Questionnaire One

The logo for the University of Idaho, featuring the words "University" and "of Idaho" in a stylized, brown, serif font. "University" is on the top line, "of" is smaller and positioned between "University" and "Idaho", and "Idaho" is on the bottom line.

Thank you for your assistance with this project, I sincerely appreciate your support.

This questionnaire is part 1 for the study, or the "*brainstorming*" portion. The purpose of this part is to identify upcoming changes and potential advancements in the beef production industry.

*Your ideas might include, but are not limited to technical advancements, procedural innovations, animal wellness, legislation, marketing, and policy.*

*This part of the survey has only 1 primary question: What issues do you see impacting the Idaho beef industry that we should start developing programming in order to support our producers?*

This questionnaire will be available until December 9th, so please take a moment of your time to provide feedback when you have a moment. This should only take about 10 minutes.

Again, thank you so much for your support of the Idaho beef industry.

If you agree to take part in this research study, you will be asked to complete a series of three questionnaires that will collect information issue you believe are important for the development of future beef industry programming. At the end of the survey are multiple demographic questions. Each questionnaire will occur about three weeks apart.

Your records will be kept confidential and will not be released without your consent except as required by law. Your name will not be linked to your responses, the data will be coded with a number, and names of participants will not be published with the findings of the study.

You can choose whether to complete this survey or not. If you volunteer to complete this study, you may withdraw at any time without any consequences of any kind.

If you have any questions or concerns about the research, please feel free to contact Tony Roubal at [ajroubal@uidaho.edu](mailto:ajroubal@uidaho.edu) or 208-885-2176.

Please check the box below to continue.

I agree to participate in this study.

What upcoming changes and potential advancements do you foresee effecting the Idaho beef industry? Feel free to add as many ideas as you can think of.

This is the major question of the study. Please list topics that we need to address in the beef industry. These topics will be compiled, categorized and sorted in future rounds of this study.

Topic:

Topic:

Topic:

Topic:

Topic:

Topic:

Topic:

Topic:

Additional topics:

Which portion(s) of the beef industry do you allocate your time and energy toward?  
(Drag the bar to indicate percentage of all applicable areas.)

|                       | 0                    | 50                   | 100                  |
|-----------------------|----------------------|----------------------|----------------------|
| Cow/Calf prduction    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Seed stock production | <input type="text"/> | <input type="text"/> | <input type="text"/> |

|                     |  |  |
|---------------------|--|--|
| Feeders             |  |  |
| Packing             |  |  |
| Animal Health       |  |  |
| Animal Nutrition    |  |  |
| Veterinary Medicine |  |  |
| Policy              |  |  |
| Research/extension  |  |  |
| Total:              |  |  |

**If the above identification table does not allow you to adequately or appropriately describe your place in the Idaho beef industry, please describe your profession and relevant experience here:**



# University of Idaho

**Thank you again for your participation in this survey and your ongoing support of the Idaho beef industry.**

**You can expect to see part 2 of this survey soon, with the consolidated list of ideas from your colleagues across the industry, on or about 13 December.**

## Appendix 4:

### Results of Round 1, Sorted by Topic

|  |   |   |   |  |
|--|---|---|---|--|
| <b>Ranching on Public Land</b><br>-Federal Regulations<br>-State Regulations<br>-Open Range and Fencing Laws<br>-Winter Feeding<br>-Resource Stewardship   | Public lands ranching/federal land management and ranching  | Lack of available grazing land                                      | Federal and State Land issues   | Federal land allotment renewal   |
|  | Public land use and regulations   | Private and state land lease rates                                  | Access to and use of BLM for beef production  |  |
|  | more access to public lands grazing - Forest Service, BLM, State Lands, etc., quit locking up and burning up productive land assets | Public Grazing and winter feeding                                   | Availability of ranches and land to purchase at a cost that would enable success to young producers |  |
| <b>Grazing and Pasture Management</b><br>-Management Intensive Grazing<br>-Open Range & Fencing Laws<br>-Invasive Species<br>-Winter Forage  | Invasive species  | Winter forage   | rural beef industry vs. more suburban encroachment - ie open range & fencing laws                   | Land prices and land use - more profitable for enterprises other than cattle |
|  | Resource stewardship and management   |   |   |  |
| <b>Marketing Your Commodity</b><br>-Increasing profitability through marketing decisions<br>-Developing a high value commodity<br>-Consumer preferences<br>-Producing for a niche market<br>-Custom products and alternate feeding practices<br>-Marketing to the consumer | Consumer taste preferences  | Development of a high-value beef commodity that is linked to Idaho. | open wider markets to Idaho beef and beef products  | Custom beef products through natural production and feeding practices.       |
|  | Marketing   | Marketing   | Producing for niche markets   | Marketing and market accessibility   |
| <b>Animal Nutrition and Welfare</b><br>-Growth Physiology and Nutrition<br>-Modern Feeding Strategies<br>-Effective Mineral Supplementation<br>-Low Stress Cattle Handling   | Low Stress Cattle Handling  | Animal Nutrition and Welfare  | Growth physiology as determined by nutrition and modern production strategies                       | Effective mineral supplementation  |
| <b>Animal Health</b><br>-Disease control<br>-Vaccinations<br>-Antibiotic stewardship<br>-Veterinary Feed Directive   | Antibiotic Stewardship  | VFD - Antibiotic use  | veterinary feed directive   | changes in uses of antibiotics   |
| <b>Reproduction technologies</b>   | Genetic Advancements  | Advances in genetics  | DNA profiles on all animals   |  |

|   |   |  |   |  |
|---|---|--|---|--|
| <b>-Artificial Insemination</b><br><b>-Genetic markers</b><br><b>-Phenotype selection</b><br><b>-Estimated Progeny Differences (EPDs)</b><br><b>-DNA profiling</b>  | Use of genetic markers in cattle selection  | how to best use dna/genomic information in beef industry   | Continued development of technology in beef production - ie AI, genetic markers,                                  |  |
|   | Reproductive technologies to improve and grow industry                              | Genetics - keeping current with technology   | Feed efficiency research and development (validated EPD's)  |  |
| <b>Understanding Economic Influences on the Beef Industry</b><br><b>-Foreign trade agreements</b><br><b>-Beef promotion</b><br><b>-Market development</b><br><b>-Export markets</b><br><b>-Global competitiveness</b> | Trade agreements with foreign countries   | Beef promotion and market development - both domestically and worldwide  | Public Policy - Trade agreements  | Understanding the global food and agriculture industry   |
|   | Volatile markets  | Foreign Trade Policy   | What are the true economic drivers of the beef industry?  | Stability of export markets, global competitiveness  |
| <b>Returning young people to the beef industry</b><br><b>-Start-up resources</b><br><b>-Costs</b><br><b>-Family succession plan</b><br><b>-Recruitment</b>  | Aging Ag sector   | Ability for Idaho's beef industry to keep our "best and brightest" younger generation involved in farming and ranching | Difficulty getting started in cattle business for young producers - costs too high                                | Cost of young producers getting into Cattle business and support for their entry into business |
| <b>Effective Water Management in Cattle Production</b><br><b>-Water rights</b><br><b>-Judicious water use practices for economic production</b><br><b>-Climate change impacts on range land</b>                       | Water availability  | Climate change impacts on rangeland  |   |  |
| <b>Utilizing technology for efficient production</b><br><b>-Animal Identification &amp; RFID</b><br><b>-Applications</b><br><b>-Responsible use of technology</b>   | Appropriate use of technology   | Advances in technology   | New technologies - apps   |  |
|   | Communication   | Individual Animal ID - need an efficient system  | RFID technology   |  |
|   | Technology in operations  | Opening of new harvest facility  | Technical Advancements  |  |
| <b>Managing Wildfires</b><br><b>-Proper grazing techniques to reduce fuel loads and forest health</b><br><b>-Wildfire potential awareness and use of public lands</b>   | benefits of proper grazing in reducing fire fuel loads and increasing forest health | Dealing with fire  | Wildfire  |  |
| <b>Understanding Public Policy and Legislation affecting your operation</b><br><b>-Environmental policy</b><br><b>-Endangered Species considerations</b><br><b>-End of Country of Origin Labeling and</b>             | maintain Idaho's beef industry in environmental/ policy/ regulation arena           | responding to national beef quality audit results  | ending of country of origin labeling for meats (increased potential for animal health & food born illness crisis) | Regulatory pressure from both FDA and EPA  |
|   | Endangered species act and its affect on ranching                                   | Endangered species   | Sage Grouse guidelines for  |  |

|  |  |   |  |  |
|--|--|---|--|--|
| <b>repercussions</b><br><b>-National Beef Quality audit</b>  |  | conservation  | grazing on public land   |  |
|  | Environmental restrictions; dust, water etcetera   | Equal Access to Justice Act also needs reform to quit benefitting frivolous "enviro lawsuits"                     | Endangered species act - needs reform  | Public Policy - Endangered Species   |
| <b>Adapting to a Consolidating Industry</b><br><b>-Meat packing</b><br><b>-Herd consolidation</b><br><b>-Packers &amp; Stockyard Act</b>   | continued consolidation of the meat packing industry (hurts small producers market)  | congressional failure to fund and back Packers & Stockyard Act revisions (hurts price discovery)                  | Consolidation of herds in each sector of the beef business   |  |
| <b>Public perception and education-Health &amp; Nutritional attributes of beef-Food sources and safety: antibiotics &amp; GMO-Animal welfare-Industry contribution to the state of Idaho-Other contributions and public benefits such as wildlife habitat stewardship and maintaining rural spaces</b> | Healthy attributes of beef   | public education on importance of Idaho's beef industry to state economics and human health/quality protein diets | Continuing education from industry, universities, allied industries, etc.                              | Public concern about animal welfare  |
|  | Enhanced publication and marketing relating to the safety, sustainability and effectiveness of the Idaho beef production system. | Antibiotic education to the public  | Animal Welfare   |  |
|  | Teaching American's where their food really comes from   | Animal Health ,Food Safety and Animal Welfare   | ranching's contribution to providing wildlife habitat and hunting/fishing opportunities for the public | GMO involvement  |
| <b>Financial Management for Producers</b><br><b>-Understanding production costs</b><br><b>-Feed and Labor</b><br><b>-Monitoring markets</b><br><b>-Business management decisions</b>   | Producing the best quality beef in the most efficient and sustainable manner.  | Financial management for production agriculture   | how to economically feed/maintain beef cattle  | Costs of production, especially of pastures, feeds and labor   |
|  | maintaining profitable/sustainable ranches to keep open spaces without development   | Reducing feed cost  | Decrease in cattle prices  | Markets  |
| <b>Herd construction, selection, and maintenance</b><br><b>-Building your herd to reflect resources and region</b><br><b>-Improvement through valued phenotypes</b><br><b>-Managing age of cattle</b>  | adapt cow herd to Idaho's diverse environments   | Livestock improvement through genetic selection of valued phenotypes.   | Managing age of cattle in operation  | Custom selection of cattle based on diverse production environments across the State and improved assessment and records of valuable phenotypes associated with health and performance in these regions. |

## Appendix 5:

### Survey Questionnaire Two

Thank you again for your assistance with this project, I sincerely appreciate your support.

The purpose of this part is to prioritize the training and education needs for Idaho beef producers.

#### \*\*\*INSTRUCTIONS\*\*\*

Based on topics that you and your peers identified over the past weeks, the following items are potential training and education programs to address those concerns. Each item will have a title and a short list describing the issues included in that topic.

For each topic, keep in mind its relevance to Idaho beef producers, the urgency of the issue, and the potential value that the added programming could contribute.

This questionnaire will be *available until December 27th*, so please take a moment of your time to provide feedback when you have a moment. This should only take about 10 minutes.

Again, thank you so much for your support of the Idaho beef industry.

#### Ranching on Public Land

- Federal Regulations
- State Regulations
- Open Range and Fencing Laws
- Winter Feeding
- Resource Stewardship

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

|  |
|--|
|  |
|--|

### Grazing and Pasture Management

- Management Intensive Grazing
- Open Range & Fencing Laws
- Invasive Species
- Winter Forage

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

|  |
|--|
|  |
|--|

### Marketing Your Commodity

- Increasing profitability through marketing decisions
- Developing a high value commodity
- Consumer preferences
- Producing for a niche market
- Custom products and alternate feeding practices
- Marketing to the consumer

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |









Why is or isn't this issue a priority for training?

**Utilizing technology for efficient production**

-Animal Identification & RFID

-Applications

-Responsible use of technology

Not important

Moderately Important

Extremely Important

1

2

3

4

5

6

7

How important is training for this topic:

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Why is or isn't this issue a priority for training?

**Managing Wildfires**

-Proper grazing techniques to reduce fuel loads and forest health

-Wildfire potential awareness and use of public lands

Not important

Moderately Important

Extremely Important

1

2

3

4

5

6

7

How important is training for this topic:

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Why is or isn't this issue a priority for training?

**Understanding Public Policy and Legislation affecting your operation**

- Environmental policy
- Endangered Species considerations
- End of Country of Origin Labeling and repercussions
- National Beef Quality audit

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

**Adapting to a Consolidating Industry**

- Meat packing
- Herd consolidation
- Packers & Stockyard Act

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

**Public perception and education**

- Health & Nutritional attributes of beef
- Food sources and safety: antibiotics & GMO
- Animal welfare
- Industry contribution to the state of Idaho
- Other contributions and public benefits such as wildlife habitat stewardship and maintaining rural spaces

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

**Financial Management for Producers**

- Understanding production costs
- Feed and Labor
- Monitoring markets
- Business management decisions

|   | Not important |   | Moderately Important |   |   | Extremely Important |   |
|---|---------------|---|----------------------|---|---|---------------------|---|
|   | 1             | 2 | 3                    | 4 | 5 | 6                   | 7 |
| How important is training for this topic: |               |   |                      |   |   |                     |   |

Why is or isn't this issue a priority for training?

**Herd construction, selection, and maintenance**

-Building your herd to reflect resources and region

-Improvement through valued phenotypes

-Managing age of cattle

Not important

Moderately Important

Extremely Important

1

2

3

4

5

6

7

How important is  
training for this topic:

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Why is or isn't this issue a priority for training?

If one of these topic titles did not cover one of the issues you submitted, or if you thought of something new that should be added to the list, please include it here:

**Is there anything else that you feel is important to this round of the study?**

**Thank you again for your participation in this survey and your ongoing support of the Idaho beef industry.**

**You can expect to see part 3 of this survey soon, with the rankings of ideas from your colleagues across the industry, on or about 3 January.**

## Appendix 6:

### Qualitative Response Results of Round 2

| Ranching on Public Land |   |
|-------------------------|---|
| 7                       | Idaho 64 percent public   |
| 3                       | Only a select few are able to graze the very limited public grazing areas   |
| 7                       | Should be a priority as a large percentage of Idaho producers rely on public lands.   |
| 6                       | 2/3 of Idaho lands are public lands, and Idaho's ranching and cattle industries, as well as rural communities across the state, rely on leasing these resources.  |
| 6                       | Majority of the ranchers in Idaho are dependant on federal grazing during a majority of the calender year.  |
| 7                       | Public lands ranching can be so easily misunderstood. It is of utmost importance that we educate the public on the cost of production and the benefit to the consumer of public lands ranching. Idle preservation of public lands would render them useless and a fire hazard. "Non use" of public grazing would increase the cost of protein to the consumer.                      |
| 7                       | 93 % of Lemhi County is under federal management!!!!  |
| 6                       | This topic is extremely vital for many cattle operations in Idaho.  |
| 7                       | A major issue in Idaho as most ranching involves a public land component. We have found out that working WITH those agencies reaps more benefits for the ranchers involved.   |
| 7                       | With Idaho being approx. 2/3 public lands and with the significant loss of grazing AUM's and onerous regulations - both limiting sustainable business and resource management - over the past 40 years, this has to be a primary topic that our land grant institution and research people address and educate the general public on as to the longterm benefits of proper grazing. |
| 7                       | Grazing on public land is a critical component of ranching. Without it, ranchers couldn't afford to raise calves.   |
| 6                       | It is close to impossible to be involved in the Cattle business in Idaho with any amount of cows and not have to deal with Federal and State Lands  |
| 7                       | Most Idaho ranches are dependent on access to public land to stay in business.  |
| 4                       | Most ranchers are intimately aware of these regulations. Ways to impact change may be more appropriate.   |
| 3                       | important for those public land users, but they probably are well versed already on the issues. Winter Feeding should be included as a issue elsewhere.   |
| 4                       | While there is potential for use of BLM land to change, I do not believe that Federal and State legislation will change soon. That said this is an area where Idaho can particularly, if well managed, increase it's livestock production.  |
| 4                       | These are important topics that impact producers each and every day. Training to keep producers abreast of policies, regulations, etc. would be valuable. Training otherwise may not be as valuable since many policies and regulations are set and producers have little input/impact on their outcome.  |

| Grazing and Pasture Management |  |
|--------------------------------|--|
| 4                              | To many issues here you could hold weeklong workshops on all be more specific  |
| 4                              | We need to handle invasive species. But that topic is used a lot   |
| 7                              | Feed cost is the number one expense in raising cattle. MiG and winter forage training would address that along with weeds. Not sure how important training is on open range and fencing laws...  |
| 3                              | Those are really split issues. Intensive grazing is something that may interest some, but not the majority. Open Range and Fencing Laws is an educational issue. Invasive species is site specific, and winter forage may/may not be of interest to many.  |
| 3                              |  |
| 7                              | Grazing is a very important component of ranch viability, and cost of production. Open range laws in Idaho are mostly misunderstood by the general public, and there is a vital need to help preserve and protect its integrity. Invasive species are a threat to the habitat of endangered species. Education is the first step to eradication. |
| 6                              | Winter Forage options are a beef producers biggest expense. We need to have "cutting edge" information and options   |
| 5                              | Producers need information on this topic to keep production costs low.   |
| 5                              | A big part of ranching. Many think of our job as range management by utilizing livestock as the management tool of choice.   |
| 5                              | Productivity issues are important if they can be achieved economically to ranching production. Open range is important and will be more of a public education topic.   |
| 6                              | A must have to remain sustainable in the business.   |
| 4                              | Because of the limited amount of private grazing a viable need information on managing resources available   |
| 6                              | Private and irrigated pastures are also an important part of the mix. Open range/fencing laws impact public and private lands. The potential for lawsuit to change how these laws are enforced is high.  |
| 5                              | good focus on production   |
| 4                              | recent seminars have done a good job addressing these issues. Open range and fencing laws doesn't fit the topic and is included as an issue above.   |
| 5                              | This is an area where proper management strategies can ensure the sustainability and growth of Idaho livestock production.   |
| 6                              | Feeding beef cattle directly affects an operation's bottom line. Training in these areas helps producers use them more effectively and efficiently.  |



| Marketing your Commodity |  |
|--------------------------|--|
| 4                        |  |
| 6                        | Absolute. Making money is what we are trying to accomplish. It is sometimes hard to see other markets and look outside the box.  |
| 3                        |  |
| 7                        | Cattle ranching families must look at their operations as businesses first. If we do not know what our consumers want, we will be continually challenged.  |
| 5                        | Ranchers are historically poor marketers of their product.   |
| 6                        | "Sustainability" is the buzz word of our current society. A business (ranch) that is not profitable is not sustainable. Marketing strategies are crucial to ranch profitability. Education is the first step to market strategy.   |
| 5                        |  |
| 6                        | Producers need to market their cattle, not just sell them so that they can get paid for the quality of cattle they produce.  |
| 4                        | An important topic, but there is no right way to market our product. Touch on the topic and talk about the differences between bullet points.  |
| 4                        | Marketing is important, but you must have a system with adequate grazing lands and public acceptance of the benefits of grazing in Idaho to efficiently produce nutritious beef to meet consumer demands. Niche markets are a good example of American Capitalism - but they will remain niche markets filled by a small percentage of beef producers. |
| 5                        | Ranchers are price takers. They need to work on better marketing plans. Producing niche markets and custom products often do no work with our ranch systems in Idaho. I would focus more on marketing and risk management.   |
| 7                        | This is the end game   |
|                          |  |
| 5                        | economically relevant  |
| 5                        |  |
| 6                        | This is a real opportunity for Idaho producers to increase the "branding" and thus profitability of their safe, high-quality product.  |
| 6                        | Producers must be able to sell what they produce and training helps them to identify the best avenues to do so.  |

| Animal Nutrition and Welfare |   |
|------------------------------|---|
| 4                            |   |
| 4                            | I always strive to produce a healthier better animal and would like to learn from other practices.  |
| 5                            |   |
| 3                            | Again, many in Idaho are working with nutritionists and keep relatively current on nutritional needs, IMO. Low stress handling is being worked on through BQA.  |
| 4                            |   |
| 7                            | Healthy, happy cattle have a greater ability to meet their genetic potential. Learning how to feed/supplement is a major step in creating healthy happy cattle.   |
| 5                            |   |
| 5                            | Nutrition is always an important topic.   |
| 5                            | Most ranchers have a better understanding than they think. Good topic and worth the discussion.   |
| 6                            | Proper feeding, supplementation, reducing stress, promoting animal health and growth are very important in any beef production system. Also presents another good opportunity to tell our positive story to the general public.   |
| 5                            | Always a critical component to ranching.  |
| 5                            | This is an issue because of consumer perceptions and the availability of negative information   |
|                              |   |
| 6                            | important for industry and we could do much better in this area   |
| 6                            |   |
| 6                            | This area both optimizes the efficiency and profitability of our livestock production but also will facilitate the positive image of animal production in Idaho. The reduction of environmental impact, the diversified use of varied and alternate feed sources in ruminants and the reduction of antibiotic use are all favorable outcomes of this subject. |
| 6                            | Feeding beef cattle directly affects an operation's bottom line. Training in these areas helps producers use feedstuffs more effectively and efficiently.   |

| Animal Health |   |
|---------------|---|
| 5             |   |
| 5             | There is always something new on this front.  |
| 5             |   |
| 5             | Again, perception is reality in our consumers eye. Beef safety and consumer confidence is key. Producers must stay ahead and current of this information.   |
| 3             | This is important but I feel this subject is fairly well covered already.   |
| 7             | Ranchers MUST know the law as it relates to VFD. Most livestock producers can avoid conflicts with VFD, and other antibiotic uses by educating themselves on the rules, and preventing cattle illness through proper vaccination and environmental practices. |
| 5             |   |
| 5             | Keeping cattle healthy keeps the bottom line healthy.   |
| 5             | It is always good to stay informed on all animal health topics.   |
| 5             | Animal health is always important to production and sustainability, the remaining issues are a topic of informing the general public with good info.  |
| 5             | A favorite with producers although most are well-versed in this area. The VFD is something new to educate producers about.  |
| 5             | VFD will cause some consternation because of the change in management and lack of producer training.  |
| 6             | we need these tools and need to use them effectively  |
| 5             | The beef Quality Audit issue would fit better under this topic.   |
| 4             | It is always important to maintain herd health, that said Idaho does an exemplary job of this already.  |
| 5             |   |

| Reproduction Technologies |   |
|---------------------------|---|
| 2                         |   |
| 7                         | This is how you improve your herd or try into some niche market.  |
| 5                         |   |
| 3                         | Your purebred and seedstock producers, in general, may find this helpful.   |
| 4                         | There is already quite a few articles and seminars in place to cover these topics.  |
| 7                         | If we expect cattle to reach their genetic potential, we must educate ourselves as to what that potential is. What are they capable of?   |
| 7                         | Priority as this is new technology and we need to know about it and help producers utilize it   |
| 4                         | Need to be able to identify and produce quality beef.   |
| 4                         | 4.5 Great topic but most don't use or understand these. They are discouraged because of immediate cost and don't weigh the benefits to their herd and how advancements to the herd can happen much quicker. |
| 6                         | Time for more beef producers to use this production technology that is proven and available.  |
| 6                         | Needed to remain competitive in the business.   |
| 3                         | This information would not be as much of an interest to th majority of producers, more beneficial to the seed stock producers.  |
|                           |   |
| 4                         | there are other good sources of this information  |
| 6                         | Very important for purebred producers to understand and be able to utilize new technologies.  |
| 6                         | Advancement and optimization of our herds is critical, and training will facilitate use and development of this important technology.   |
| 6                         |   |

| Understanding Economic Influences |  |
|-----------------------------------|--|
| 4                                 |  |
| 3                                 | It is nice to look at but there isn't much we can do about it.   |
| 4                                 |  |
| 4                                 | Our beef checkoff dollars do a good job of keeping us informed in these areas.   |
| 2                                 | These are areas that we have little or no control over.  |
| 7                                 | All beef is marketed in some fashion. Some beef that is undesirable in one market may be utilized in another. It is vitally important that the industry finds and maintains a balance in the import/export arena.                    |
| 4                                 |  |
| 4                                 |  |
| 4                                 | Important information that most don't see effecting them on a daily basis.   |
| 5                                 | Exports are economically significant, but we have to have the right environment domestically to efficiently raise beef first.  |
| 3                                 | This topic has more of an indirect affect on ranchers.   |
| 5                                 | As in the marketing this is important to understand global marketing and influences. Some of these can be very boring to listen to, important that understand audience   |
|                                   |  |
| 4                                 | interesting, but may not have day to day impacts   |
| 6                                 | Producers need to get the facts and well understand these issues without the information being first filtered through a particular political test . The Packers and Stockyard Act revision issue should be included under this topic |
| 4                                 |  |
|                                   |  |

| Returning Young people to the industry |   |
|--|---|
|  |   |
| 6                                      | As a young person myself I understand it is a incredibly difficult business to get into without help  |
| 6                                      |   |
| 5                                      |   |
| 4                                      | Fairly important and family succession plan is something most rancher need to become more aware of.   |
| 7                                      | Education is vital in succession planning. It is a very complicated process that often involves legal advice. Feeding a hungry world is not possible without a younger generation who is willing to work hard and provide for others.                         |
| 6                                      | The average age of the rancher is 60+ We need young producers if the beef industry is going to stay strong. How do we recruit them?   |
| 6                                      | We need young people to enter the cattle industry. The average age of cattle producers across the country continues to rise.  |
| 7                                      | The average age of ranchers is increasing and without young people returning/starting, our business will turn to larger or corporate structures to fill the void of the individuals.  |
| 6                                      | We have lost too many bright young people from this industry over the last generation - but with the required high capital requirements and no 8 to 5 job hours - this industry has to be profitable and respected socially to attract talented young people. |
| 4                                      | Succession planning is a must. Some of the other topics are not effective.  |
| 7                                      | This is our future. Not everyone will inherit a ranch or feedlot.   |
|  |   |
| 6                                      | Critical in todays environment  |
| 5                                      |   |
| 4                                      |   |
|  |   |

| Returning Young people to the industry |   |
|--|---|
|  |   |
| 6                                      | As a young person myself I understand it is a incredibly difficult business to get into without help  |
| 6                                      |   |
| 5                                      |   |
| 4                                      | Fairly important and family succession plan is something most rancher need to become more aware of.   |
| 7                                      | Education is vital in succession planning. It is a very complicated process that often involves legal advice. Feeding a hungry world is not possible without a younger generation who is willing to work hard and provide for others.                         |
| 6                                      | The average age of the rancher is 60+ We need young producers if the beef industry is going to stay strong. How do we recruit them?   |
| 6                                      | We need young people to enter the cattle industry. The average age of cattle producers across the country continues to rise.  |
| 7                                      | The average age of ranchers is increasing and without young people returning/starting, our business will turn to larger or corporate structures to fill the void of the individuals.  |
| 6                                      | We have lost too many bright young people from this industry over the last generation - but with the required high capital requirements and no 8 to 5 job hours - this industry has to be profitable and respected socially to attract talented young people. |
| 4                                      | Succession planning is a must. Some of the other topics are not effective.  |
| 7                                      | This is our future. Not everyone will inherit a ranch or feedlot.   |
|  |   |
| 6                                      | Critical in todays environment  |
| 5                                      |   |
| 4                                      |   |
|  |   |

|   | Utilizing Technology   |
|---|--|
|   |  |
| 3 |  |
| 2 |  |
| 5 | This is the future. To compete globally, Idaho ranchers must look at a voluntary system of animal identification and its applications.   |
| 2 |  |
| 6 | The world is more efficient because of technology. All use of new technology requires training by someone.   |
| 4 |  |
| 4 |  |
| 5 | A way to make livestock management more efficient. Producers need to see the benefits not just the cost.   |
| 4 | Technology must be efficient and tied to production increases/economic returns to be totally viable.   |
| 1 | Not applicable.  |
| 4 | This topic is interesting, however it is not as critical of management issue as the others   |
|   |  |
| 5 |  |
| 6 | Importance of animal identification in relation to animal disease control and potentially food borne illness control. And it's relation to market protection. The issue of country of origin labelling would mesh with this topic. |
| 5 |  |
|   |  |



|   | Managing Wildfires   |
|---|--|
| 2 | We have little control over blm stocking rates   |
| 4 |  |
| 7 |  |
| 3 | This is a topic that will be managed from the federal level, unless we are able to change NEPA and ESA languages.  |
| 2 |  |
| 6 | Critically important, and ranchers have done a fine job in the past managing the resources allotted to them.   |
| 4 | Federal land managers need to be trained on these topics so they can utilize the benefits of them! Until they can use them, ranchers won't be able to, so lower on the training priority.  |
| 6 |  |
| 6 | Once again most ranching occurs on public lands in Idaho.  |
| 7 | Again, too much public land being locked up and not used, just to burn up where our society spends too much money "pretending to fight wildfires" that could have been prevented with proper fuels management (grazing and logging) at less cost and an overall economic benefit to society and the environment. |
| 7 | Critical...fire is always on the forefront.  |
| 5 | This depends on your operation   |
|   |  |
| 5 |  |
| 2 | would fit better under the Public Land Grazing Topic.  |
| 3 |  |
|   |  |

| Understanding Public Policy          |   |
|--------------------------------------|---|
| 3                                    |   |
| 2                                    |   |
| 5                                    |   |
| 6                                    | We have an opportunity now to influence changes to the over-burdensome regulatory environment in many capacities including WOTUS, NEPA, ESA, EAJA, etc. COOL repeal was a good thing, albeit controversial. Consumers tell you they want COOL, and many branded products do that, however their expenditures showed us differently. |
| 1                                    |   |
| 7                                    | Of utmost importance. Understanding is critical, executing is essential.  |
| 5                                    |   |
| 5                                    |   |
| 4                                    | Need to get more ranchers involved in leadership in their respective cattlemens organizations on a county and state level. Leadership in organizations like Idaho Cattle Association tackle these issues constantly.  |
| 4                                    | Public policy issues - again beef production must figure out how to positively promote our industry to the public. Too much infighting among different beef producer groups in the USA.   |
| 4                                    | Producers must be aware of these issues.  |
| 5                                    | Important because of the control of the Federal Lands in the State of Idaho.  |
|                                      |   |
| 6                                    |   |
| 4                                    | The loss of COOL for meat products would mesh well under the Market Topic, and Effective use of Technology .  |
| 4                                    |   |
|                                      |   |
| Adapting to a consolidating industry |   |

|   |   |
|---|---|
|   |   |
| 6 | Understanding where the market is heading   |
| 2 |   |
| 1 | I do not believe that consolidation is an issue.  |
| 2 | Not much ranchers can control or have influence over.   |
| 6 | It will happen, how we adapt will depend on our understanding.  |
| 5 |   |
| 5 |   |
| 3 | A result of many of the previous questions. Technology, young ranchers, marketing   |
| 4 | Markets will dictate industry consolidation as the profitable producers will survive.   |
|   | Not necessary.  |
| 4 | Important topic that would go with marketing.   |
|   |   |
| 4 |   |
| 6 | The issue with meat packing is it's consolidation and how it can affect markets especially if a food borne illness scare arises and there is little or no effective animal ID or country of origin labeling requirements. |
| 5 |   |
|   |   |

|   | Public Perception and Edu   |
|---|---|
| 7 |   |
| 2 |   |
| 4 |   |
| 6 | We have to tell our story.  |
| 5 |   |
| 6 |   |
| 4 |   |
| 5 |   |
| 6 | Something we don't do a good enough job on is educating the public. We don't understand them and usually try to avoid them. They are the ultimate customer of our product |
| 5 | Good topics to again tell our positive story to the public.   |
| 3 | Somewhat important.   |
| 5 | It is important to understand and be informed to defend and protect our products. Understanding our role as the producer is crucial                                       |
|   |   |
| 5 |   |
| 6 | "This topic is extremely important for those outside the beef industry more than preaching to the choir.  |
|   |   |
| 5 |   |

|   | Financial Management   |
|---|--|
| 7 | Need to understand your numbers  |
| 5 | It is a boring but necessary subject. Book keeping is one of the most important things we do                     |
| 4 |  |
| 6 | How many ranchers know what their production costs are, or what it costs to run a cow or a yearling? Not many!!! |
| 6 | Something that can be of benefit for more producers to be aware of.  |
| 6 |  |
| 6 |  |
| 6 |  |
| 5 | A weakness of most ranchers. To busy working and do not take the time to manage the business.                    |
| 4 | Important metrics for running a successful business.   |
| 7 | Critical...  |
| 7 | Need to be able to stay in business  |
|   |  |
| 4 |  |
| 5 |  |
| 2 | Most producers are quite knowledgeable already.  |
|   |  |

|   | Herd construct, select, & maint   |
|---|---|
| 1 |   |
| 6 | if you do not manage the age of your herd it will be a detriment for sure. But you must keep a cow long enough to pay for itself. Same for bulls. |
| 2 |   |
| 2 |   |
| 5 | Something often overlooked is fitting cattle to your environment.   |
| 6 |   |
| 4 |   |
| 5 |   |
| 4 | Good for those starting new. If it is a generational rancher they will have some knowledge on the topics  |
| 3 | A secondary production measure to review.   |
|   | Not an issue.   |
| 5 | Good topic! Nice to understand developing the best potential from your available resources  |
|   |   |
| 5 |   |
| 5 | This topic would mesh with the Reproductive Technologies topic.   |
| 5 | Phenotypes can influence custom products and their marketing and can also optimize our herds for Idaho's varied production areas.                 |
|   |   |

## Appendix 7:

### Survey Questionnaire Three

#### THANK YOU & PURPOSE

Thank you again for your assistance with this project, I sincerely appreciate your support.

The purpose of this part is to identify the most appropriate agency to develop training for each topic and recommend the most effective method of delivering that training.

#### \*\*\*INSTRUCTIONS\*\*\*

Please help us identify who you would like to see develop each training topic, and what would be the most effective method to deliver it. A short list of options are provided, but do not hesitate to write in another option if it is not on the list.

This questionnaire will be *available until January 25th*, so please take a moment of you time to provide feedback when you have a moment. This should only take about 10 minutes.

Again, thank you so much for you support of the Idaho beef industry.

#### Ranching on Public Land

- Federal Regulations
- State Regulations
- Open Range and Fencing Laws
- Winter Feeding
- Resource Stewardship

#### What organization should develop training on this topic?

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Returning young people to the beef industry**

- Start-up resources
- Costs
- Family succession plan
- Recruitment

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:
- Other:



**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Returning young people to the beef industry**

- Start-up resources
- Costs
- Family succession plan
- Recruitment

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Financial Management for Producers**

- Understanding production costs
- Feed and Labor
- Monitoring markets
- Business management decisions

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Marketing Your Commodity**

- Increasing profitability through marketing decisions
- Developing a high value commodity
- Consumer preferences
- Producing for a niche market
- Custom products and alternate feeding practices
- Marketing to the consumer

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Animal Nutrition and Welfare**  
**-Growth Physiology and Nutrition**  
**-Modern Feeding Strategies**  
**-Effective Mineral Supplementation**  
**-Low Stress Cattle Handling**

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Grazing and Pasture Management**  
**-Management Intensive Grazing**  
**-Open Range & Fencing Laws**  
**-Invasive Species**  
**-Winter Forage**

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Public perception and education**

- Health & Nutritional attributes of beef
- Food sources and safety: antibiotics & GMO
- Animal welfare
- Industry contribution to the state of Idaho
- Other contributions and public benefits such as wildlife habitat stewardship and maintaining rural spaces

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:
- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Animal Health**

- Disease control
- Vaccinations
- Antibiotic stewardship
- Veterinary Feed Directive

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Effective Water Management in Cattle Production**

- Water rights
- Judicious water use practices for economic production
- Climate change impacts on range land

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Reproduction technologies**

- Artificial Insemination
- Genetic markers
- Phenotype selection
- Estimated Progeny Differences (EPDs)
- DNA profiling

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Managing Wildfires**

- Proper grazing techniques to reduce fuel loads and forest health
- Wildfire potential awareness and use of public lands

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:



**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Understanding Economic Influences on the Beef Industry**

- Foreign trade agreements
- Beef promotion
- Market development
- Export markets
- Global competitiveness

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Understanding Public Policy and Legislation affecting your operation**

- Environmental policy
- Endangered Species considerations
- End of Country of Origin Labeling and repercussions
- National Beef Quality audit

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Adapting to a Consolidating Industry**

- Meat packing
- Herd consolidation
- Packers & Stockyard Act

### What organization should develop training on this topic?

Extension

Cattle Association

Beef Check-off

Private company:

Other:

### What would be the most effective means for delivering this training to producers?

Instructional Video – made available online to anyone

Online course – (self-paced) available to enrolled students

Online course – designated meeting times available to enrolled students

Multi-day (weekend) workshop – replicated regionally

Single-day workshop – replicated regionally

Informational hand-out

- Other:

### Herd construction, selection, and maintenance

-Building your herd to reflect resources and region

-Improvement through valued phenotypes

-Managing age of cattle

### What organization should develop training on this topic?

Extension

Cattle Association

Beef Check-off

Private company:

Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Utilizing technology for efficient production**

- Animal Identification & RFID
- Applications
- Responsible use of technology

**What organization should develop training on this topic?**

- Extension
- Cattle Association
- Beef Check-off
- Private company:

- Other:

**What would be the most effective means for delivering this training to producers?**

- Instructional Video – made available online to anyone
- Online course – (self-paced) available to enrolled students
- Online course – designated meeting times available to enrolled students
- Multi-day (weekend) workshop – replicated regionally
- Single-day workshop – replicated regionally
- Informational hand-out
- Other:

**Is there anything else that you feel is important to add as we complete this study?**

**Thank you again for your participation in this survey and your ongoing support of the Idaho beef industry.**

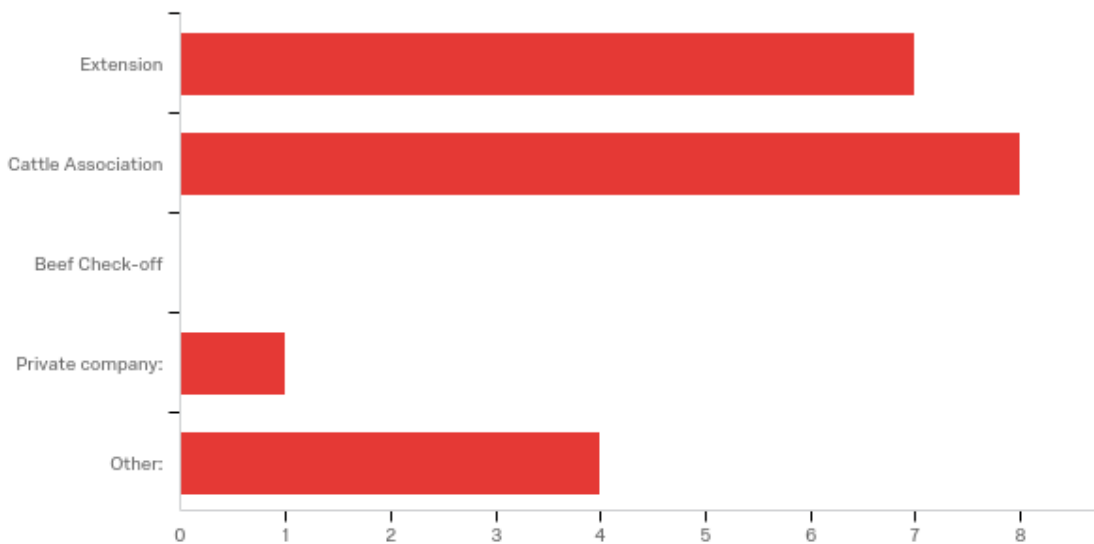
**Results of this study will be compiled over the next few weeks. If you would like a copy of the results of this project, click here, and I will send them once finalized.**

**Send me the results when finished**

**Appendix 8:**

**Results of Round 3**

Ranching on Public Land - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 35.00% | 7     |
| 5 | Cattle Association | 40.00% | 8     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 5.00%  | 1     |
| 8 | Other:             | 20.00% | 4     |
|   | Total              | 100%   | 20    |

Private company:

Other:

---

I like extension taking the lead on these types of programs. However, I would include other agencies on the team to include specifically, the Idaho Department of Agriculture.

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Idaho Rangelands Resource Commission

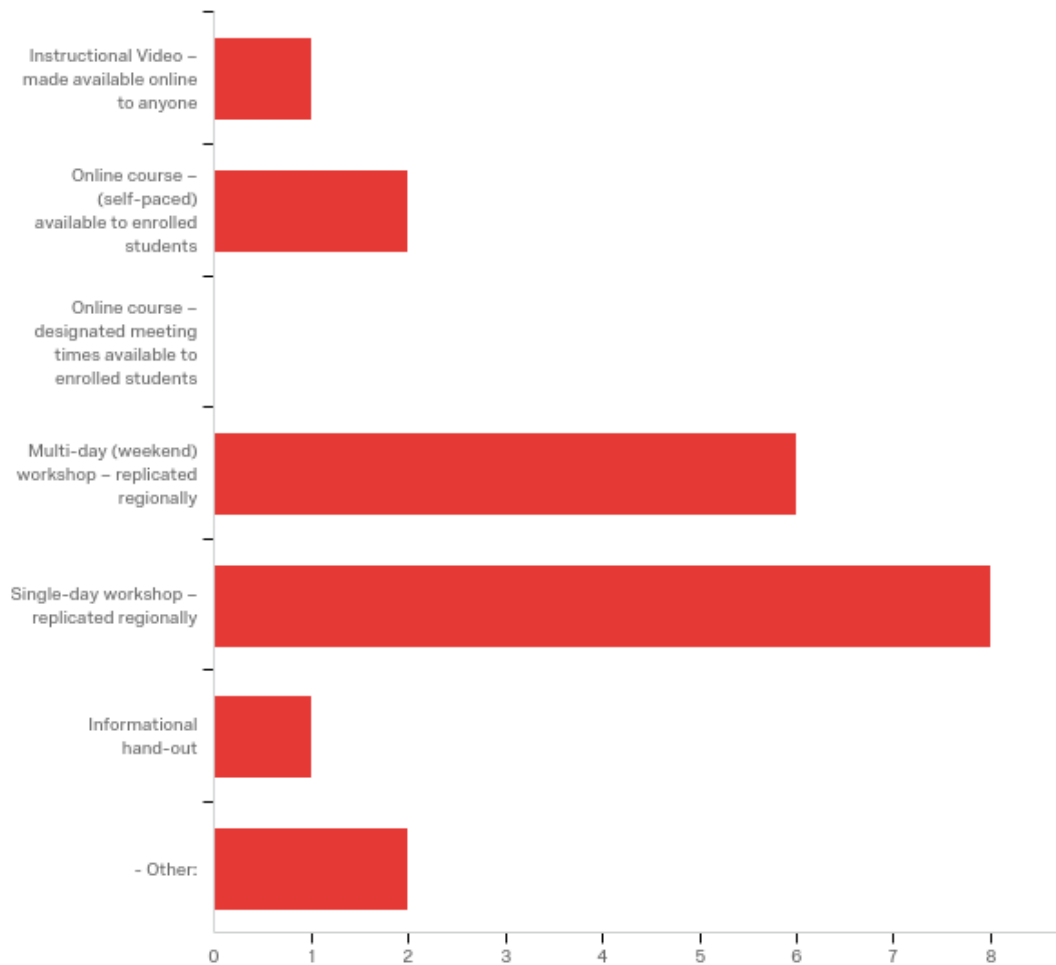
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Neil Rimbey

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extension with a group of cattle producers

Ranching on Public Land - What would be the most effective means for delivering this training?

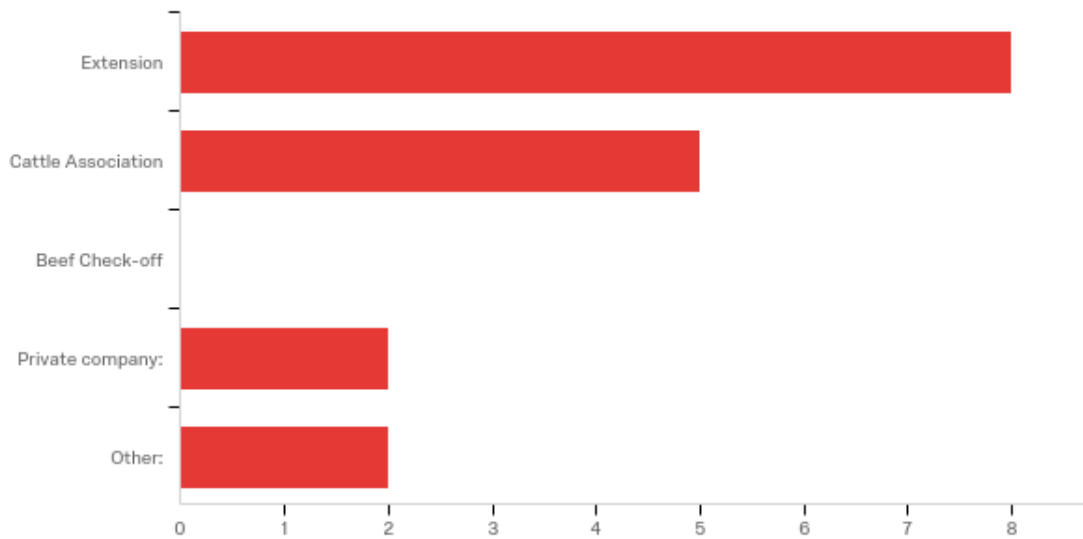


| #  | Answer   | %      | Count |
|----|--|--------|-------|
| 10 | Instructional Video – made available online to anyone          | 5.00%  | 1     |
| 11 | Online course – (self-paced) available to enrolled students    | 10.00% | 2     |
| 12 | Online course – designated meeting times available to students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally           | 30.00% | 6     |
| 5  | Single-day workshop – replicated regionally                    | 40.00% | 8     |
| 6  | Informational hand-out   | 5.00%  | 1     |
| 9  | - Other:   | 10.00% | 2     |
|    | Total  | 100%   | 20    |

I don't think there is one method that is going to take this forward at the expense of other methods. There will need to be an effort to bring people this information, but it will be a combination of all of these methods to include social media.

two day workshop with round table discussions to gather ideas and improve the climate -rules etc. in which we find ourselves operating .

Returning Young People to the Beef Industry - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 47.06% | 8     |
| 5 | Cattle Association | 29.41% | 5     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 11.76% | 2     |
| 8 | Other:             | 11.76% | 2     |
|   | Total              | 100%   | 17    |

Private company:

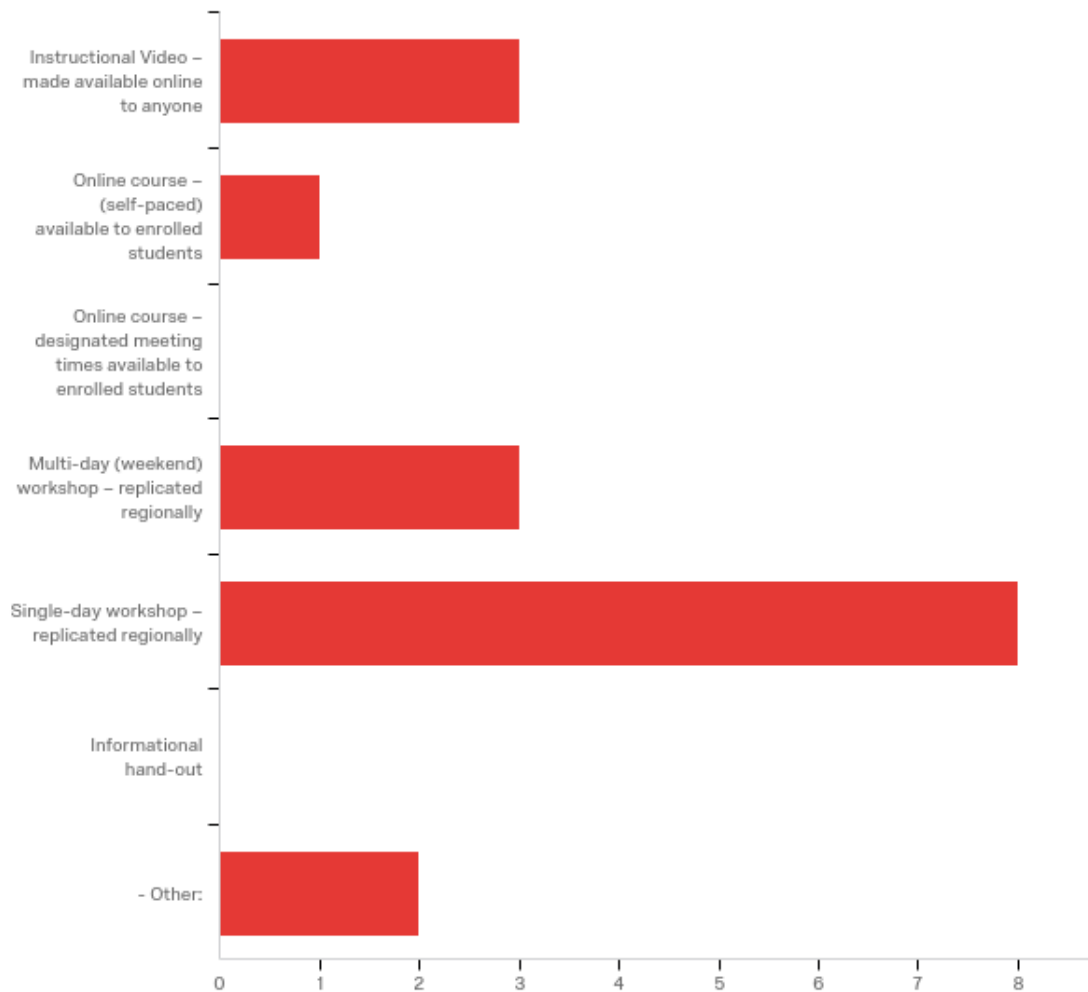
Bank/Insurance Co.

Again, I think Extension should be the lead using other groups to help with the content. This is an area where estate planning specialist can be of great help.

combination of the first three



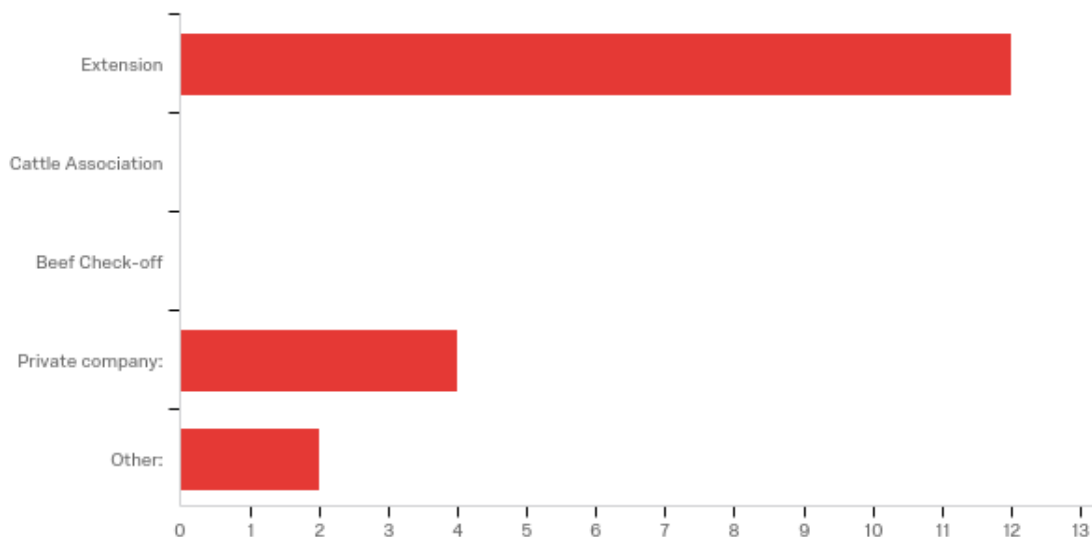
Returning Young People to the Beef Industry - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 17.65% | 3     |
| 11 | Online course – (self-paced) available to enrolled students             | 5.88%  | 1     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 17.65% | 3     |
| 5  | Single-day workshop – replicated regionally                             | 47.06% | 8     |
| 6  | Informational hand-out  | 0.00%  | 0     |
| 9  | - Other:  | 11.76% | 2     |
|    | Total   | 100%   | 17    |

Combination of all or the above and more!  
school visits

Financial Management for Producers - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 66.67% | 12    |
| 5 | Cattle Association | 0.00%  | 0     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 22.22% | 4     |
| 8 | Other:             | 11.11% | 2     |
|   | Total              | 100%   | 18    |

Private company:

---

CPA or bank

---

Dave Pratt and Ranching for Profit

Other:

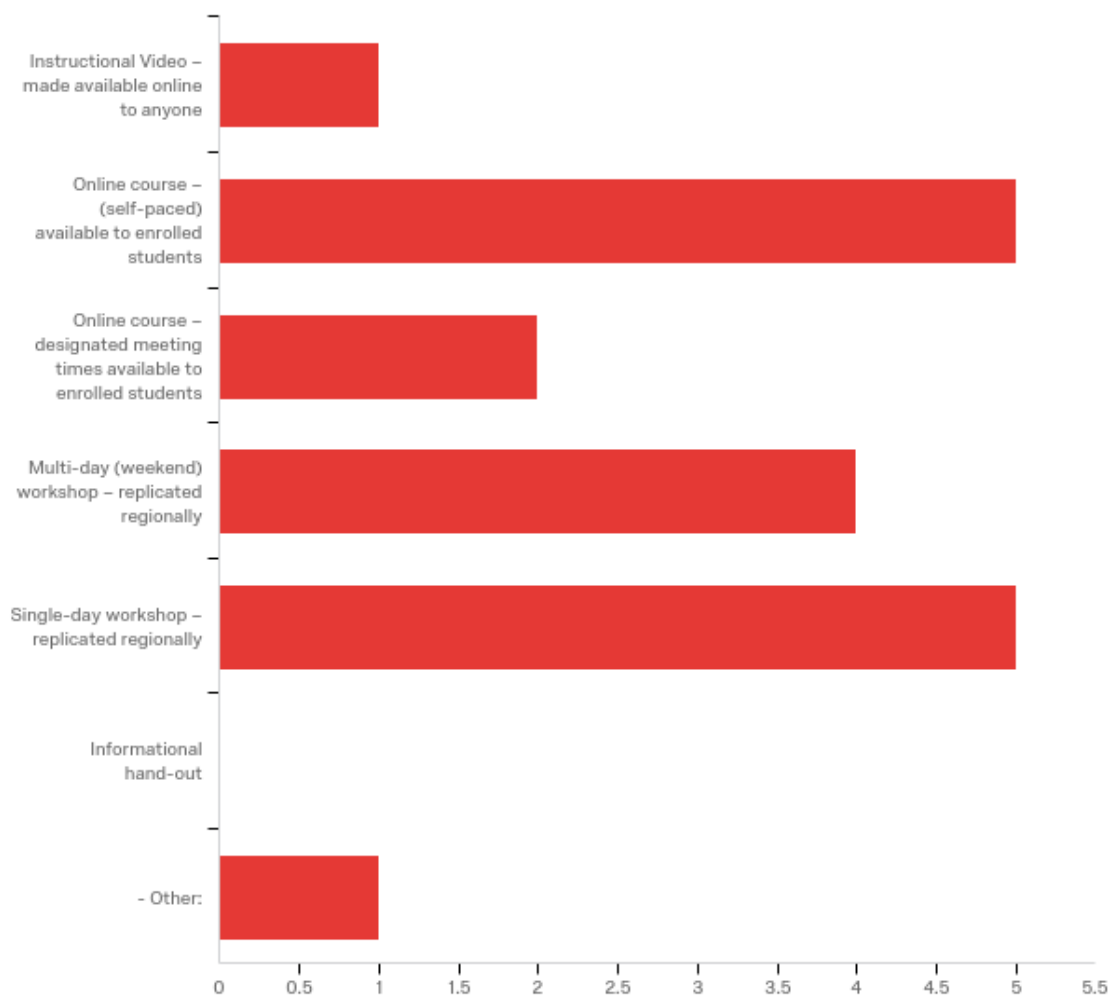
---

Extension to lead, use other resources as necessary. The university has a ton of resources for this section.

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Cattle Fax; Sterling Marketing; etc.

Financial Management for Producers - What would be the most effective means for delivering this training to producers?

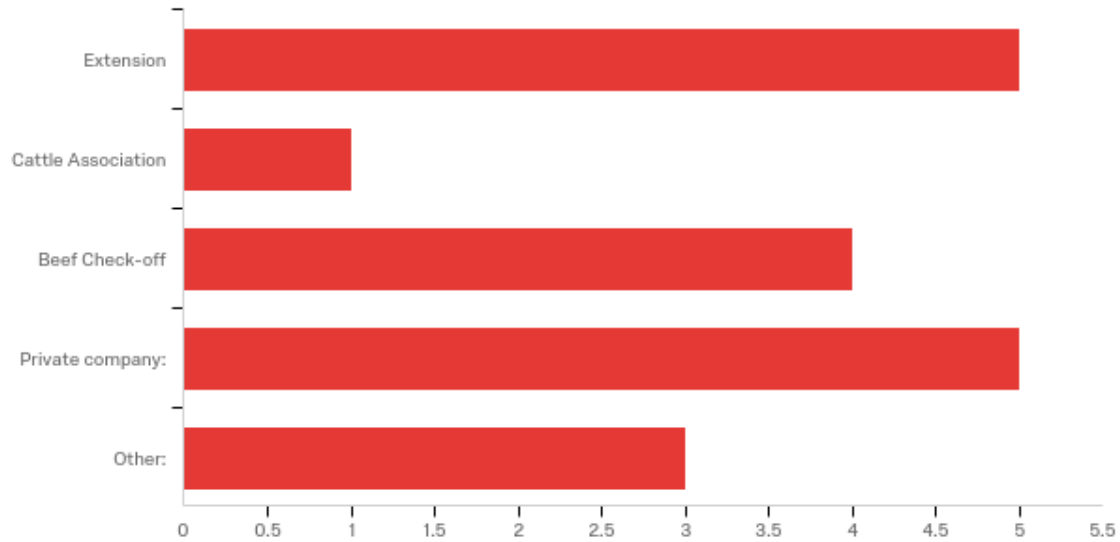


| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 5.56%  | 1     |
| 11 | Online course – (self-paced) available to enrolled students             | 27.78% | 5     |
| 12 | Online course – designated meeting times available to enrolled students | 11.11% | 2     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 22.22% | 4     |
| 5  | Single-day workshop – replicated regionally                             | 27.78% | 5     |
| 6  | Informational hand-out  | 0.00%  | 0     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:

Combination of methods.

## Marketing your Commodity - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 27.78% | 5     |
| 5 | Cattle Association | 5.56%  | 1     |
| 6 | Beef Checkoff      | 22.22% | 4     |
| 7 | Private company:   | 27.78% | 5     |
| 8 | Other:             | 16.67% | 3     |
|   | Total              | 100%   | 18    |

## Private company:

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Country Natural Beef, Agri Beef

---

Auction Co.

## Other:

---

Extension to lead, using other resources as necessary. Private organizations could have a lot to offer in this area.

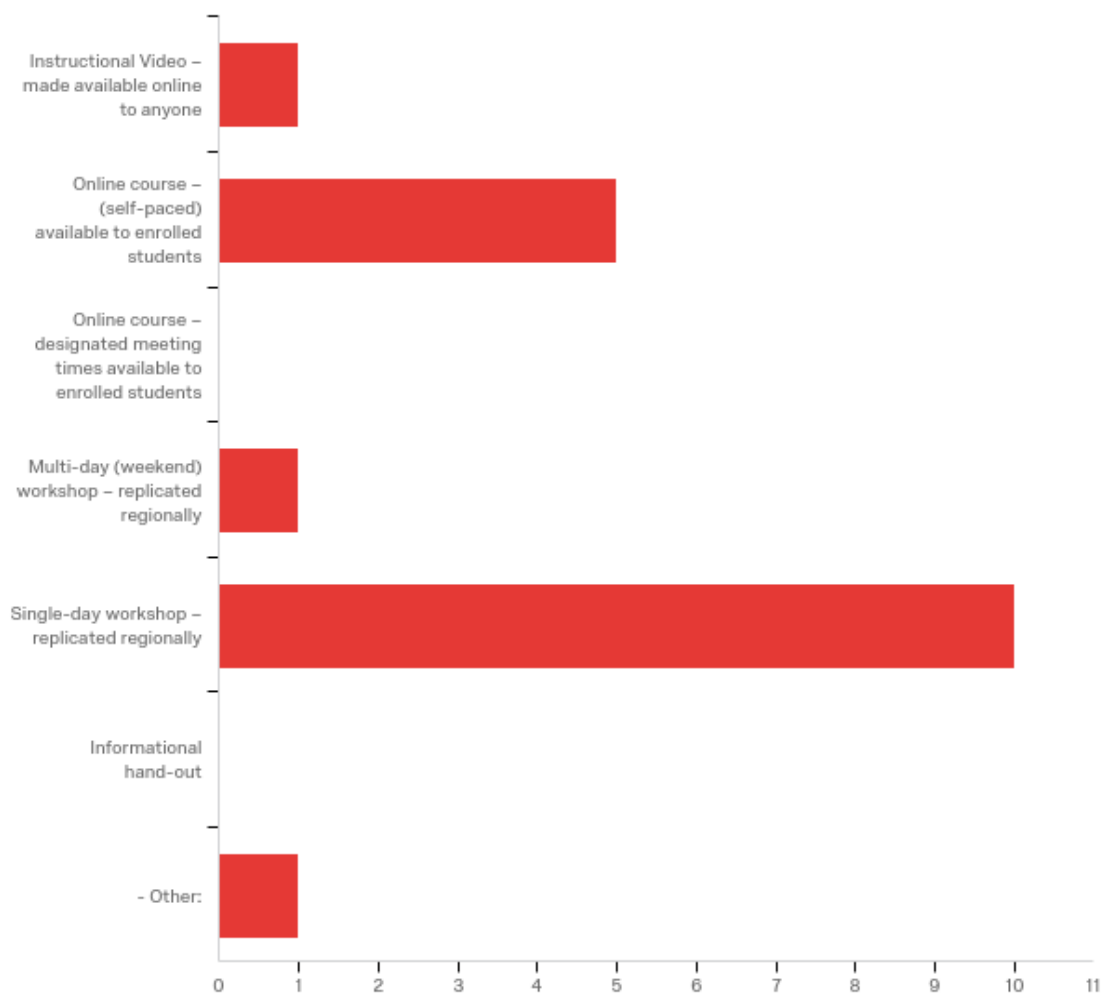
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Bring together a diverse group of individuals ie. Jim Gerrish, Country Natural Beef, Cattle Association, Retailers, Agri Beef etc. to create the curriculum

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Cattle Fax; Sterling Marketing; etc.

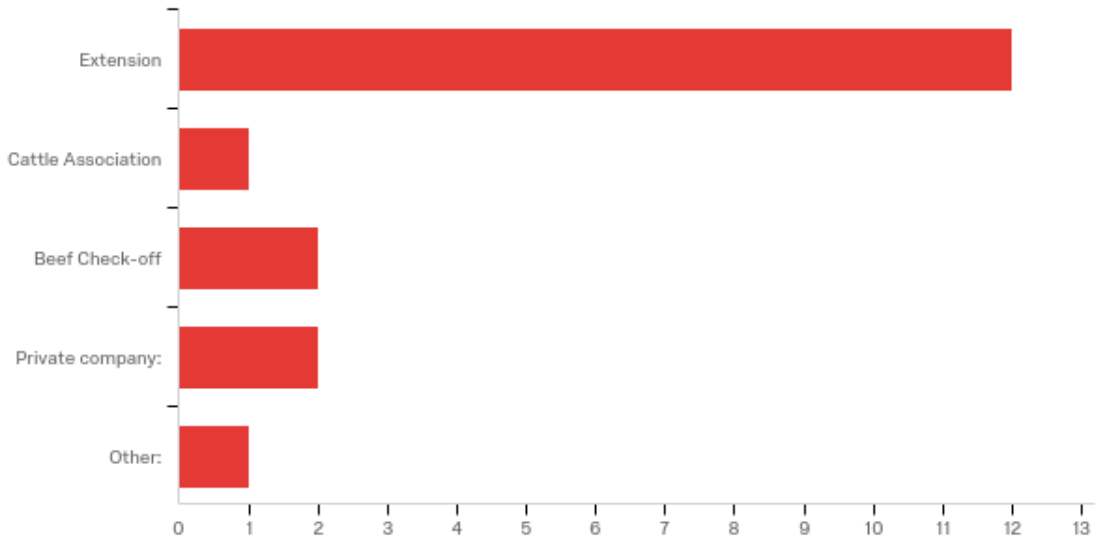
Marketing you Commodity - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 5.56%  | 1     |
| 11 | Online course – (self-paced) available to enrolled students             | 27.78% | 5     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 5.56%  | 1     |
| 5  | Single-day workshop – replicated regionally                             | 55.56% | 10    |
| 6  | Informational hand-out  | 0.00%  | 0     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:  
Combination.

Animal Nutrition and Welfare - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 66.67% | 12    |
| 5 | Cattle Association | 5.56%  | 1     |
| 6 | Beef Checkoff      | 11.11% | 2     |
| 7 | Private company:   | 11.11% | 2     |
| 8 | Other:             | 5.56%  | 1     |
|   | Total              | 100%   | 18    |

Private company:

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Agri Beef, Simplot

---

Maybe some suppliers

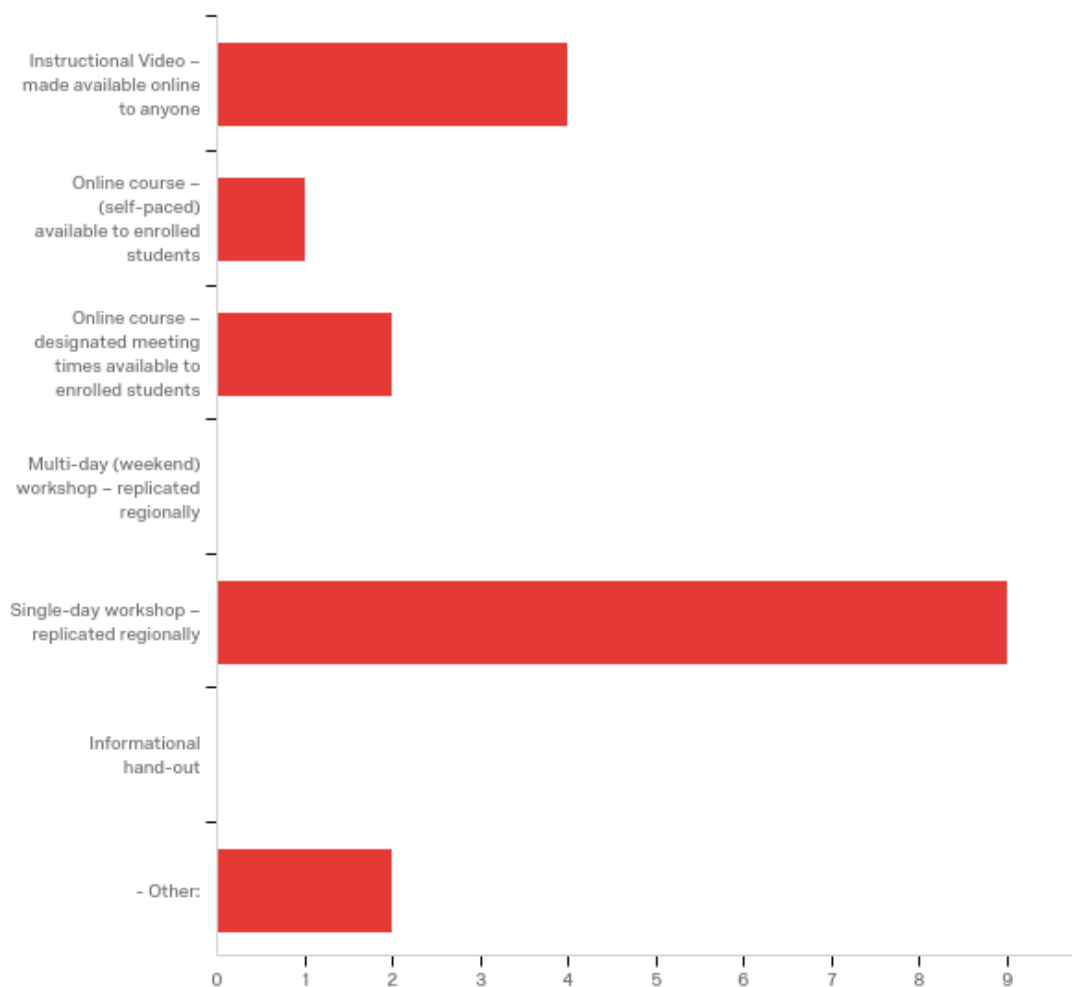
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Other:

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Broken Record for me--Extension to lead, others as necessary.

Animal Nutrition and Welfare - What would be the most effective means for delivering this training to producers?



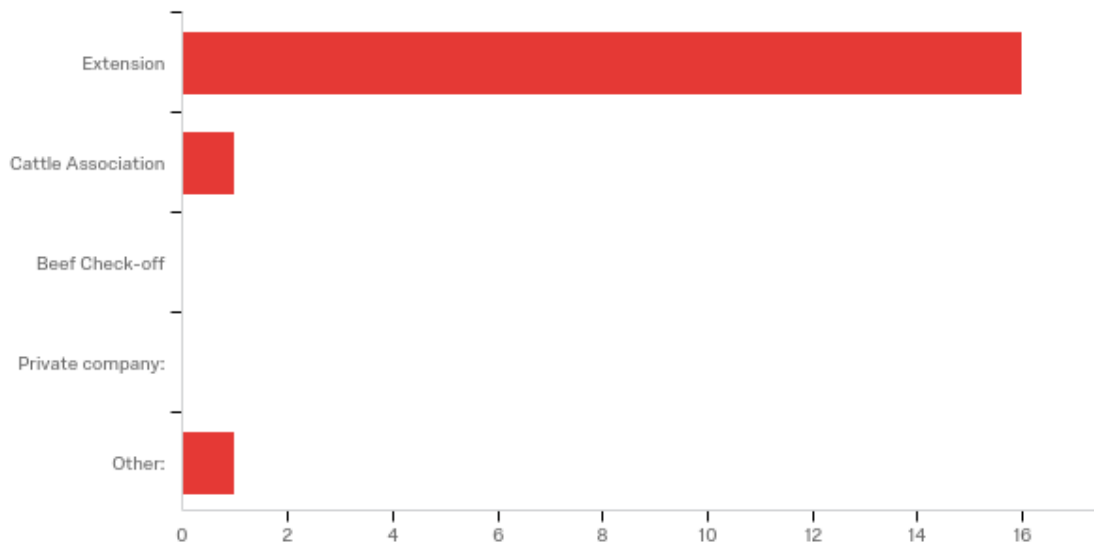
| #  | Answer  | %      |    |
|----|---|--------|----|
| 10 | Instructional Video – made available online to anyone                   | 22.22% | 4  |
| 11 | Online course – (self-paced) available to enrolled students             | 5.56%  | 1  |
| 12 | Online course – designated meeting times available to enrolled students | 11.11% | 2  |
| 1  | Multi-day (weekend) workshop – replicated regionally                    | 0.00%  | 0  |
| 5  | Single-day workshop – replicated regionally                             | 50.00% | 9  |
| 6  | Informational hand-out  | 0.00%  | 0  |
| 9  | - Other:  | 11.11% | 2  |
|    | Total   | 100%   | 18 |

- Other:

Combination

multiple workshops at company feeding and supplement facilities

Grazing and Pasture Management - What organization should develop training on this topic?



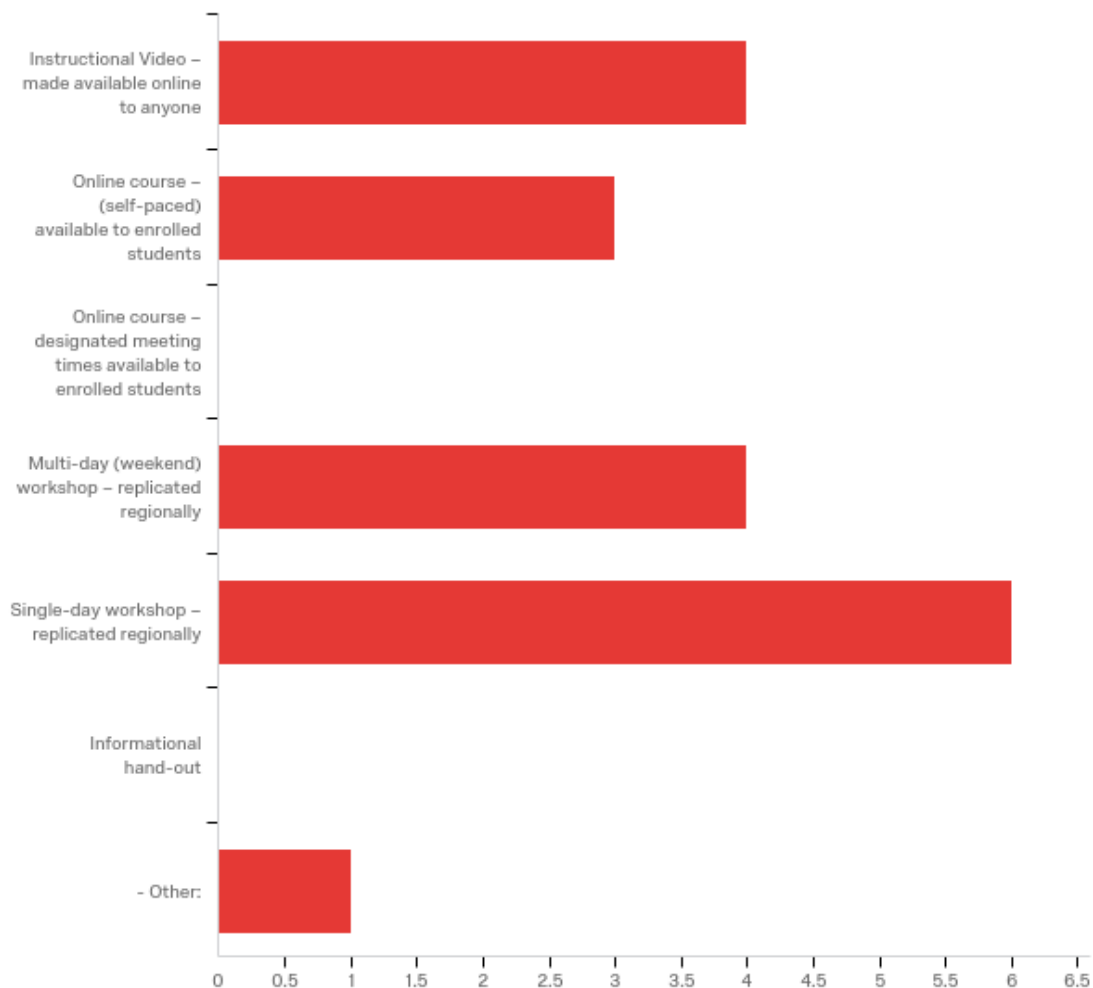
| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 88.89% | 16    |
| 5 | Cattle Association | 5.56%  | 1     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 0.00%  | 0     |
| 8 | Other:             | 5.56%  | 1     |
|   | Total              | 100%   | 18    |

Other:

Same as before! Extension with other help as needed. University has a great program for this.



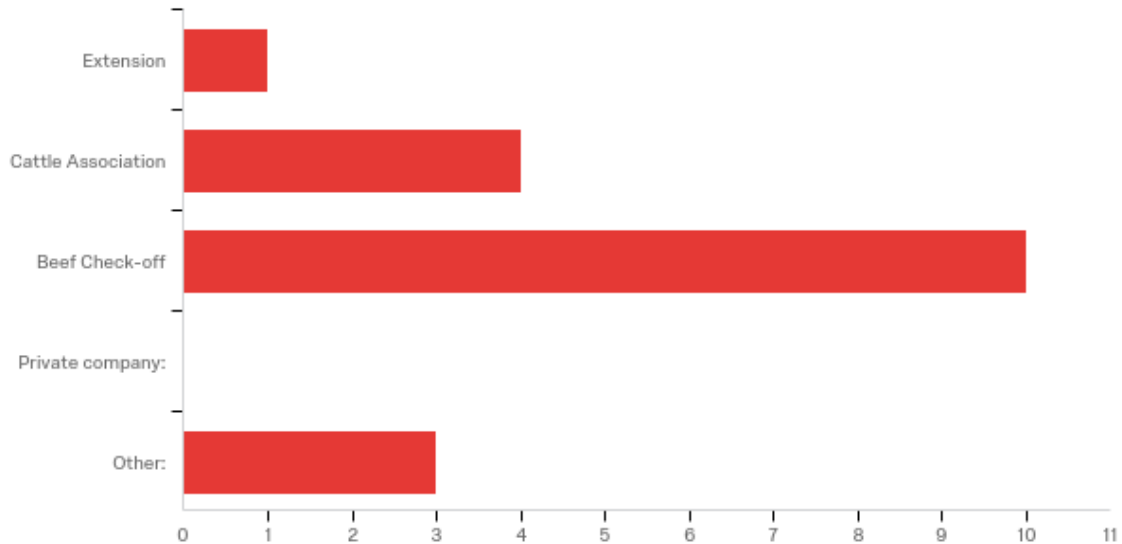
Grazing and Pasture Management - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 22.22% | 4     |
| 11 | Online course – (self-paced) available to enrolled students             | 16.67% | 3     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 22.22% | 4     |
| 5  | Single-day workshop – replicated regionally                             | 33.33% | 6     |
| 6  | Informational hand-out  | 0.00%  | 0     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

Other:  
combination.

## Public Perception and Education - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 5.56%  | 1     |
| 5 | Cattle Association | 22.22% | 4     |
| 6 | Beef Checkoff      | 55.56% | 10    |
| 7 | Private company:   | 0.00%  | 0     |
| 8 | Other:             | 16.67% | 3     |
|   | Total              | 100%   | 18    |

Private company:

Other:

---

Extension to lead to keep it science based--many others to help.

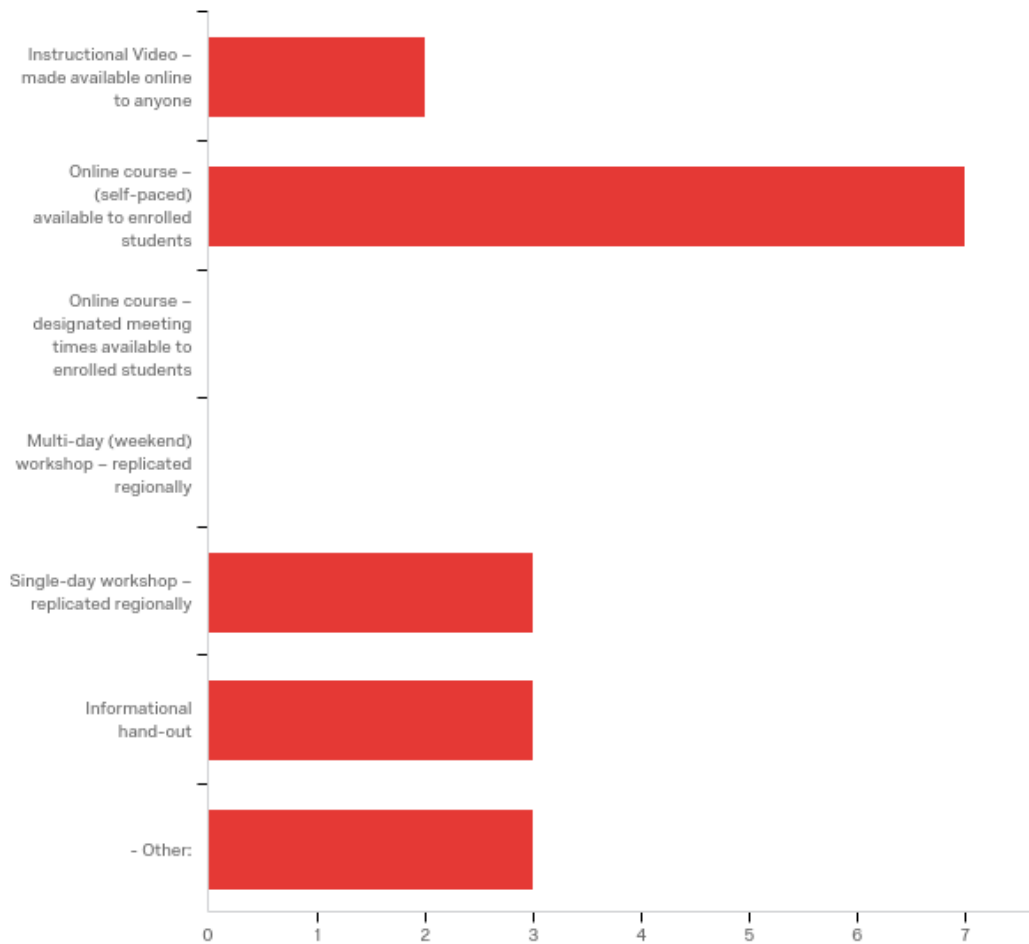
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Combination of the above three, the IRRC and the IF&G

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a combination of extension; cattle assn., and beef checknoff

Public Perception and Education - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 11.11% | 2     |
| 11 | Online course – (self-paced) available to enrolled students             | 38.89% | 7     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 0.00%  | 0     |
| 5  | Single-day workshop – replicated regionally                             | 16.67% | 3     |
| 6  | Informational hand-out  | 16.67% | 3     |
| 9  | - Other:  | 16.67% | 3     |
|    | Total   | 100%   | 18    |

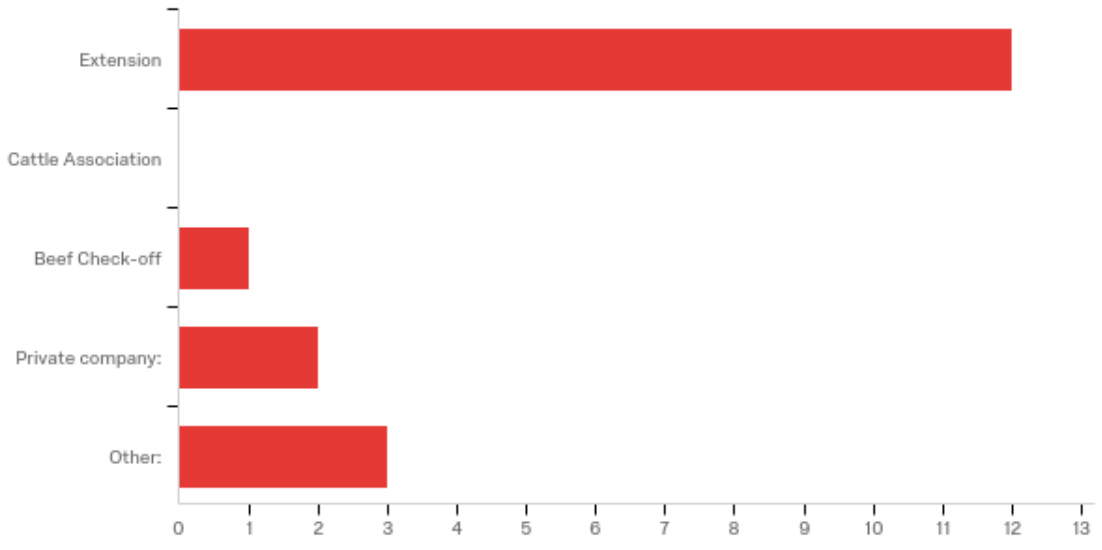
- Other:

Combination

mass media professional presentation

teach our industry and get info out to the public through media

Animal Health - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 66.67% | 12    |
| 5 | Cattle Association | 0.00%  | 0     |
| 6 | Beef Checkoff      | 5.56%  | 1     |
| 7 | Private company:   | 11.11% | 2     |
| 8 | Other:             | 16.67% | 3     |
|   | Total              | 100%   | 18    |

:

Private company:

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Local vets are a good resource here. Or pharm. company reps

Other:

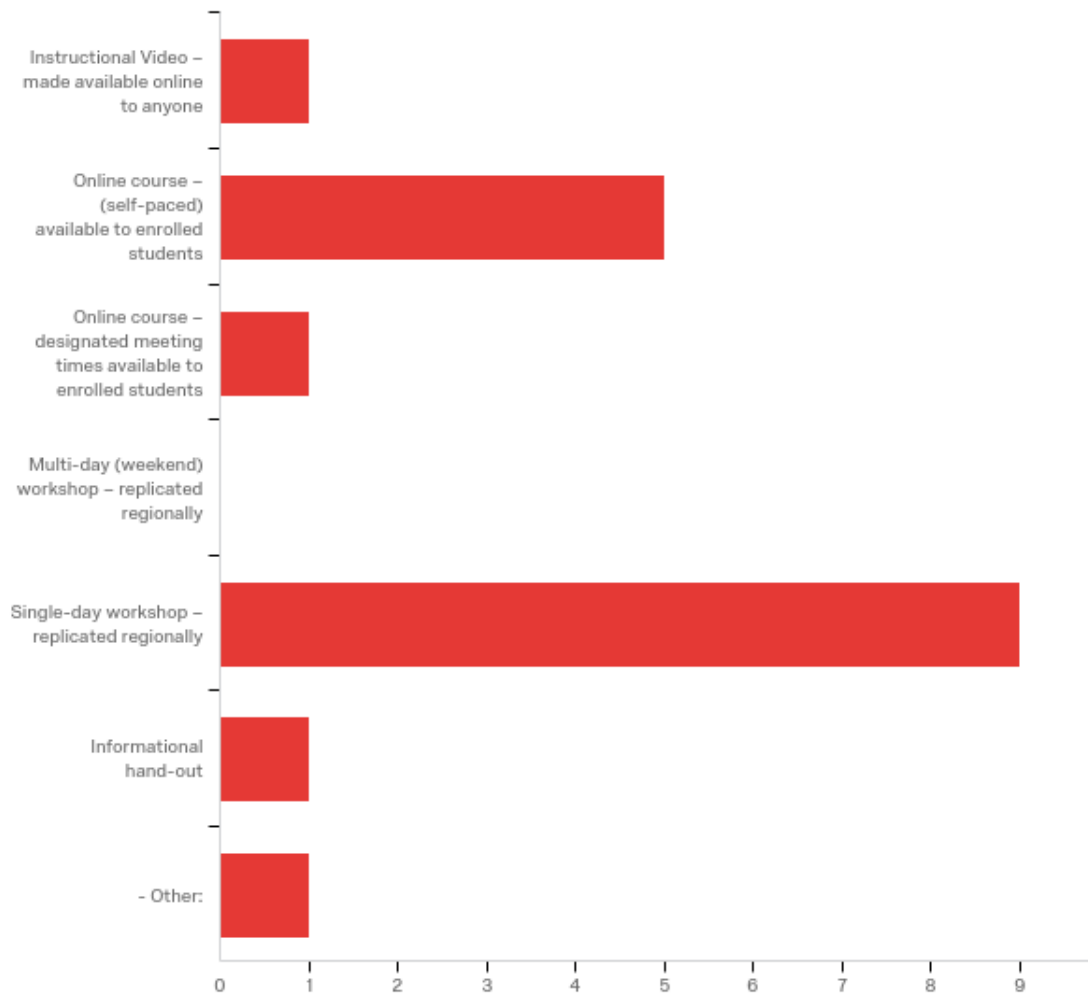
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Extension to lead--others to help.

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ISDA; Animal Health Companies

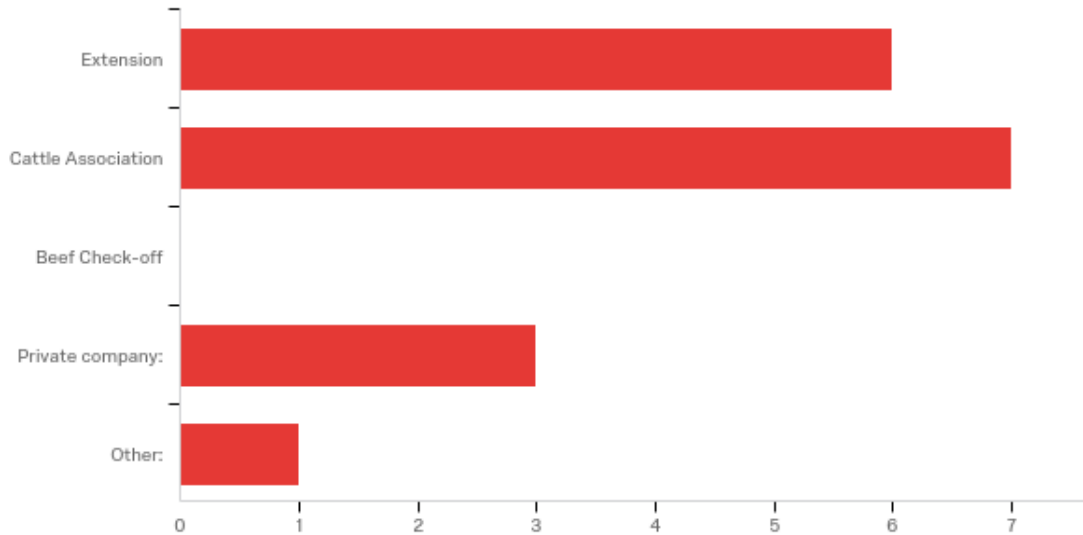
Animal Health - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 5.56%  | 1     |
| 11 | Online course – (self-paced) available to enrolled students             | 27.78% | 5     |
| 12 | Online course – designated meeting times available to enrolled students | 5.56%  | 1     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 0.00%  | 0     |
| 5  | Single-day workshop – replicated regionally                             | 50.00% | 9     |
| 6  | Informational hand-out  | 5.56%  | 1     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:  
Combination

Effective Water Management - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 35.29% | 6     |
| 5 | Cattle Association | 41.18% | 7     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 17.65% | 3     |
| 8 | Other:             | 5.88%  | 1     |
|   | Total              | 100%   | 17    |

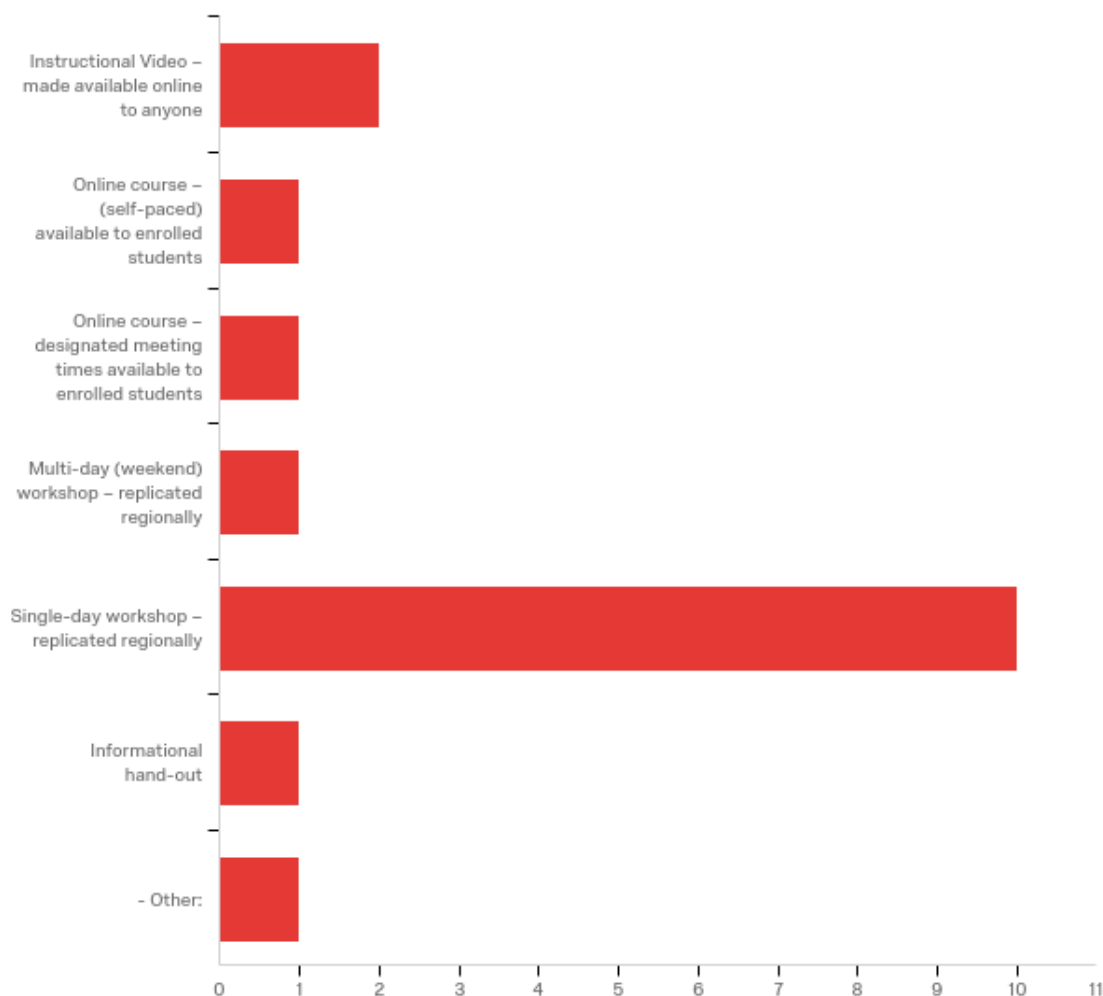
Private company:

Law firm

Other:

Extension to lead--other partners as necessary, Idaho Department of Ag would be key here.

Effective Water Management - What would be the most effective means for delivering this training to producers?

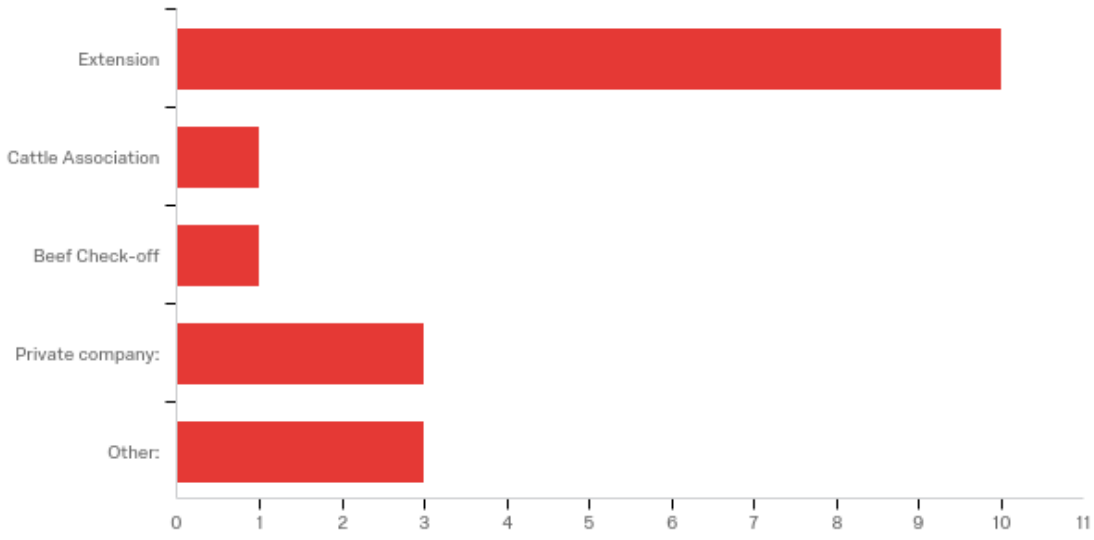


| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 11.76% | 2     |
| 11 | Online course – (self-paced) available to enrolled students             | 5.88%  | 1     |
| 12 | Online course – designated meeting times available to enrolled students | 5.88%  | 1     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 5.88%  | 1     |
| 5  | Single-day workshop – replicated regionally                             | 58.82% | 10    |
| 6  | Informational hand-out  | 5.88%  | 1     |
| 9  | - Other:  | 5.88%  | 1     |
|    | Total   | 100%   | 17    |

- Other:

all methods

Reproduction Technologies - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 55.56% | 10    |
| 5 | Cattle Association | 5.56%  | 1     |
| 6 | Beef Checkoff      | 5.56%  | 1     |
| 7 | Private company:   | 16.67% | 3     |
| 8 | Other:             | 16.67% | 3     |
|   | Total              | 100%   | 18    |

Private company:

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AI & DNA companies

Other:

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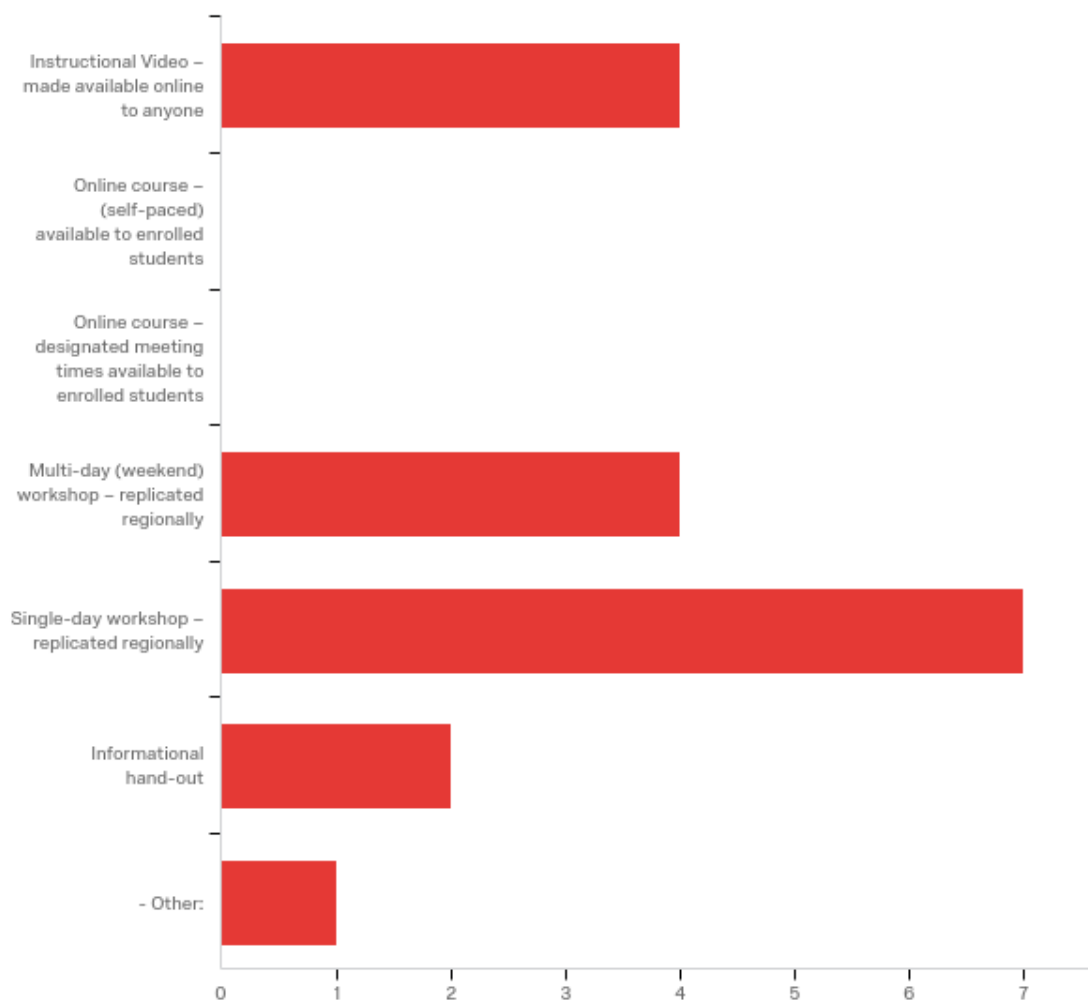
Same as above--university has a ton of resources for this, but private companies could also help greatly.

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Breed Organizations



Reproduction Technologies - What would be the most effective means for delivering this training to producers?

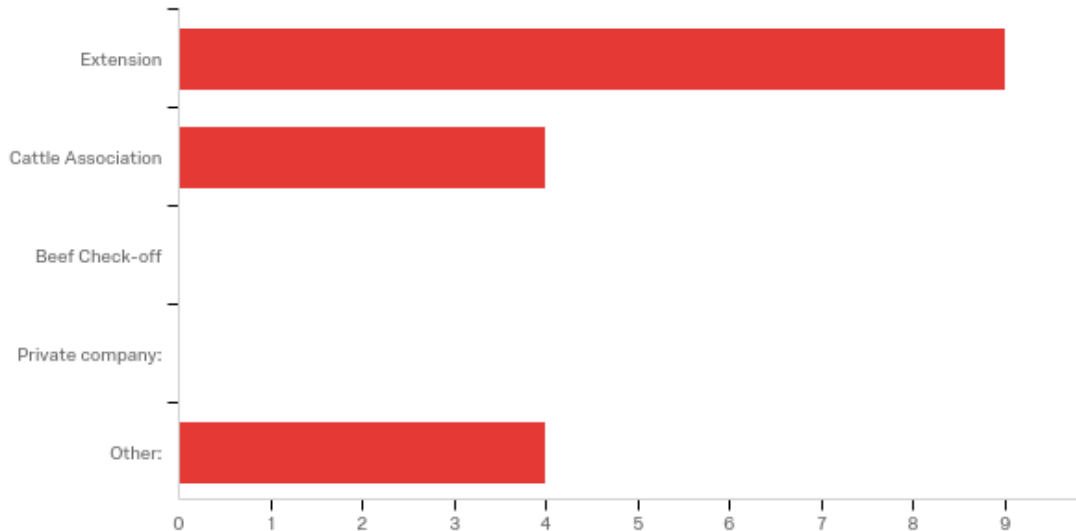


| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 22.22% | 4     |
| 11 | Online course – (self-paced) available to enrolled students             | 0.00%  | 0     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 22.22% | 4     |
| 5  | Single-day workshop – replicated regionally                             | 38.89% | 7     |
| 6  | Informational hand-out  | 11.11% | 2     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:

All

### Managing Wildfires - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 52.94% | 9     |
| 5 | Cattle Association | 23.53% | 4     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 0.00%  | 0     |
| 8 | Other:             | 23.53% | 4     |
|   | Total              | 100%   | 17    |

#### Other:

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Rangeland Center from the university would be the best with help from others.

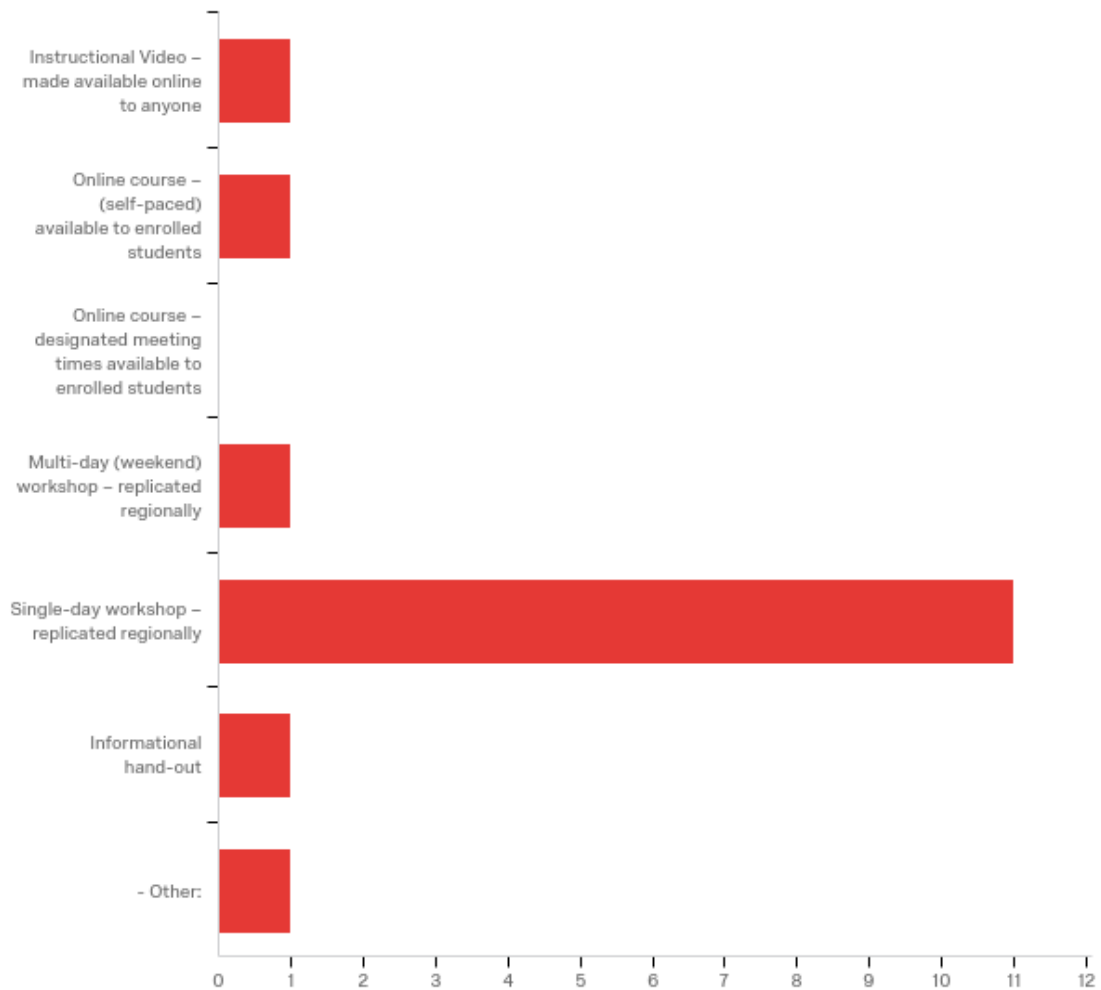
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U of I Rangeland Center

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BLM

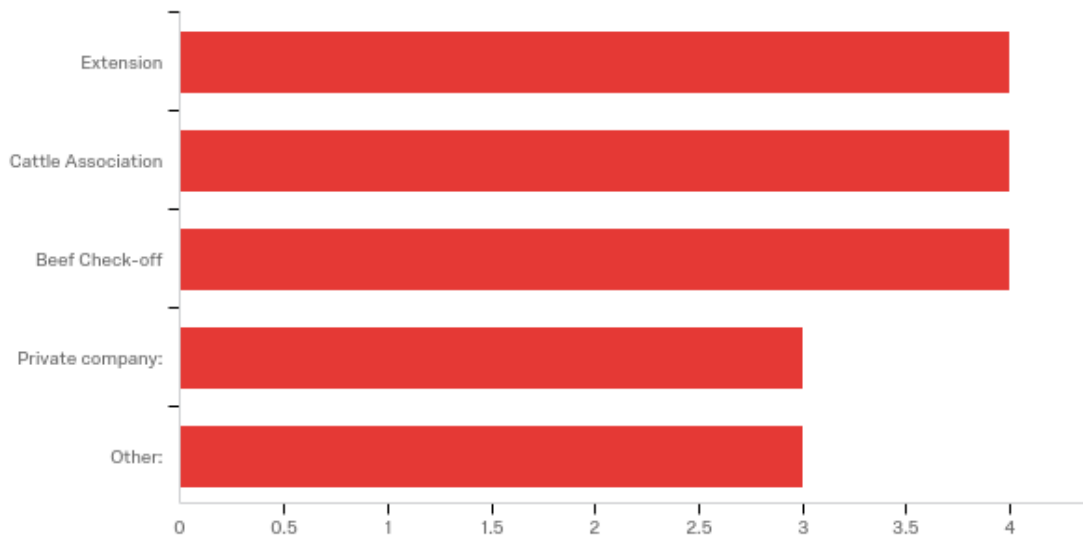
Managing Wildfires - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 6.25%  | 1     |
| 11 | Online course – (self-paced) available to enrolled students             | 6.25%  | 1     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 6.25%  | 1     |
| 5  | Single-day workshop – replicated regionally                             | 68.75% | 11    |
| 6  | Informational hand-out  | 6.25%  | 1     |
| 9  | - Other:  | 6.25%  | 1     |
|    | Total   | 100%   | 16    |

- Other:  
all

Understanding Economic Influences on the Beef Industry - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 22.22% | 4     |
| 5 | Cattle Association | 22.22% | 4     |
| 6 | Beef Checkoff      | 22.22% | 4     |
| 7 | Private company:   | 16.67% | 3     |
| 8 | Other:             | 16.67% | 3     |
|   | Total              | 100%   | 18    |

Private company:

Cattle fax

I'm not sure. Maybe a local or regional exporter

Cattle Fax; USMEF; Sterling Marketing; etc.

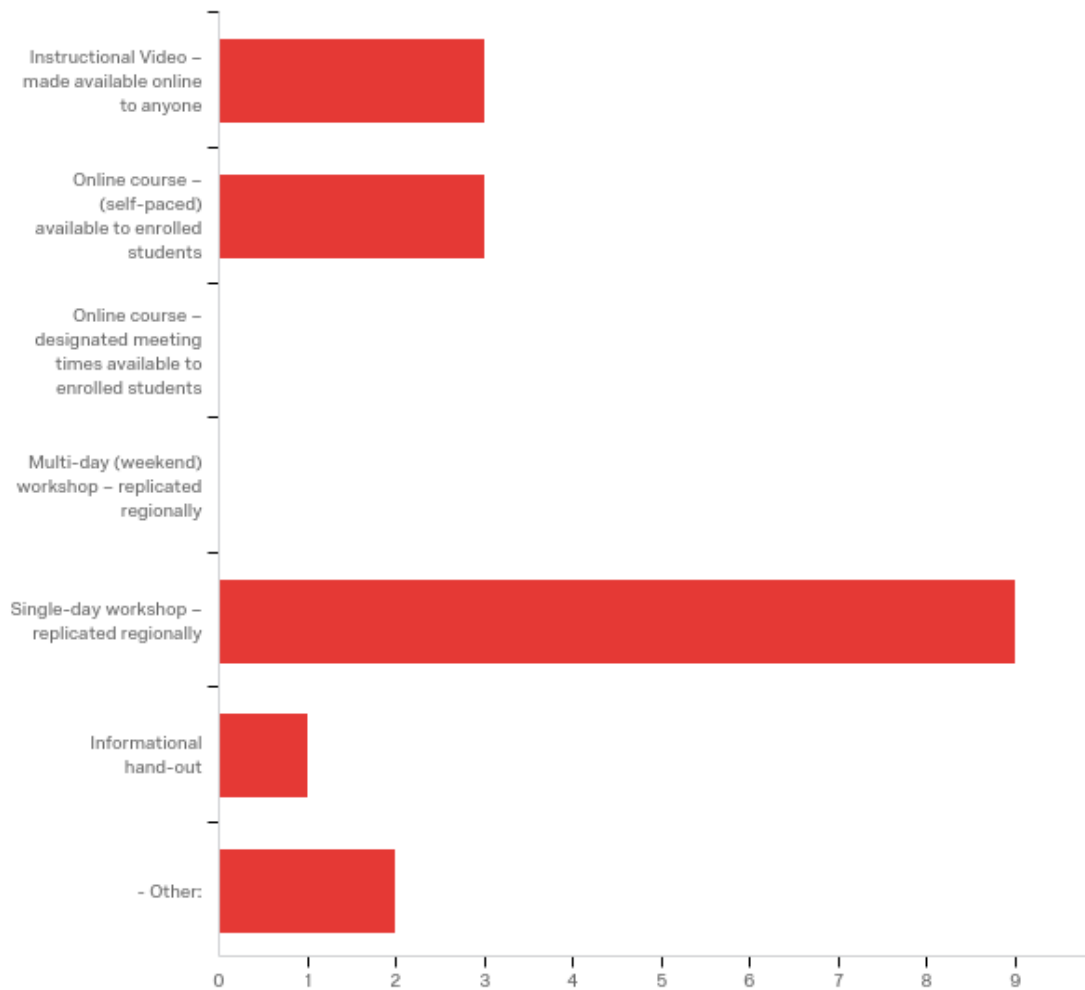
Other:

Extension with help from others.

NCBA

Cattle Association and the ISDA

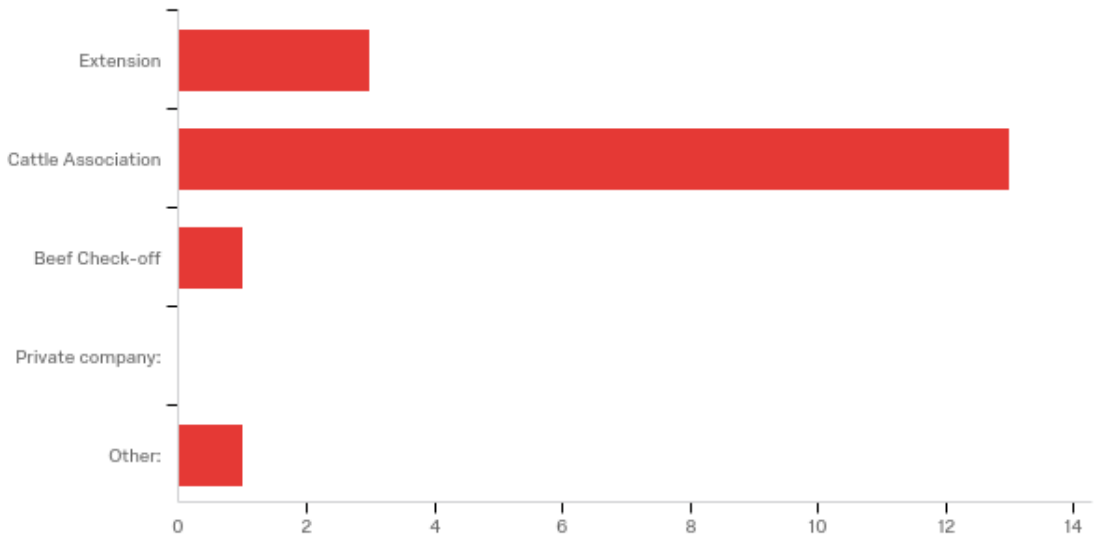
Understanding Economic Influences on the Beef Industry - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 16.67% | 3     |
| 11 | Online course – (self-paced) available to enrolled students             | 16.67% | 3     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 0.00%  | 0     |
| 5  | Single-day workshop – replicated regionally                             | 50.00% | 9     |
| 6  | Informational hand-out  | 5.56%  | 1     |
| 9  | - Other:  | 11.11% | 2     |
|    | Total   | 100%   | 18    |

- Other:  
all

Understanding Public Policy and Legislation affecting your operation - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 16.67% | 3     |
| 5 | Cattle Association | 72.22% | 13    |
| 6 | Beef Checkoff      | 5.56%  | 1     |
| 7 | Private company:   | 0.00%  | 0     |
| 8 | Other:             | 5.56%  | 1     |
|   | Total              | 100%   | 18    |

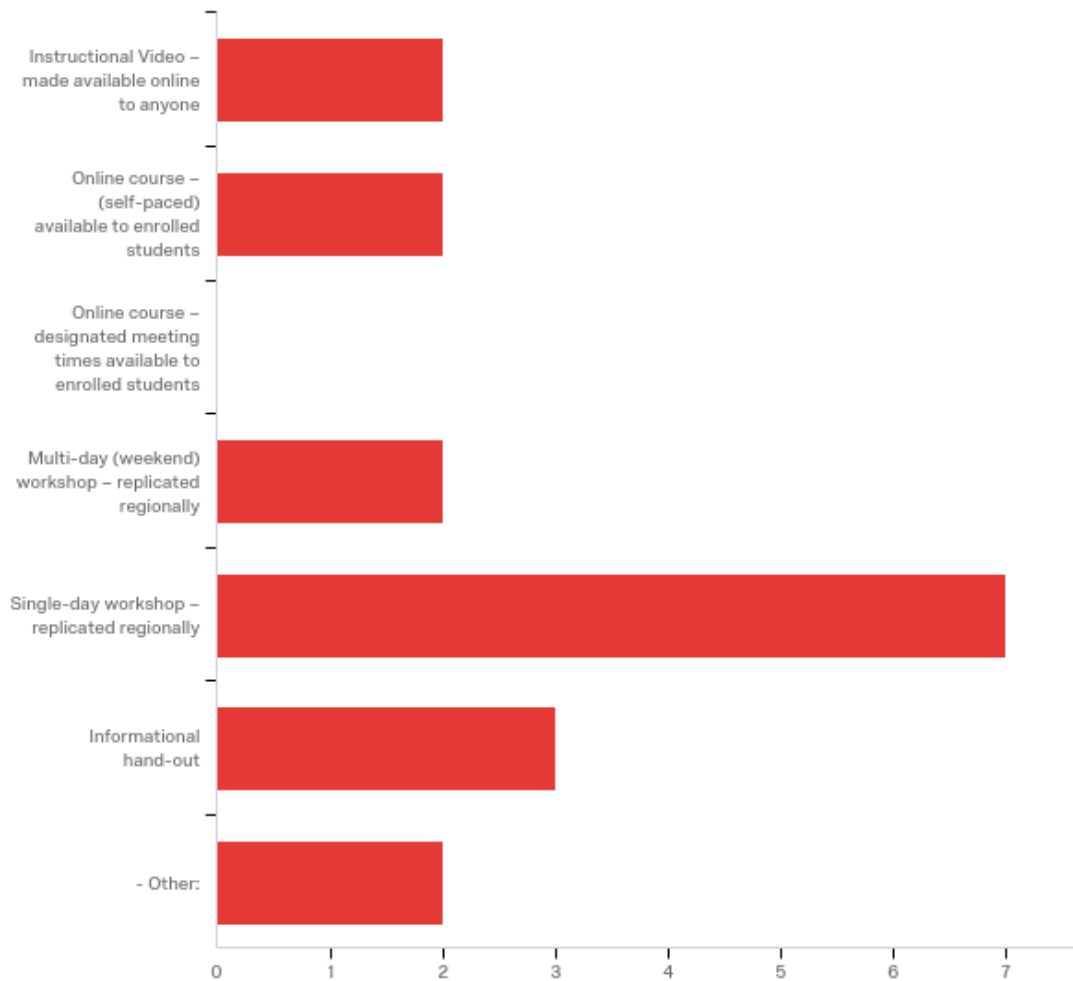
Private company:

Other:

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Beef council rep or someone involved in the political field

Understanding Public Policy and Legislation affecting your operation - What would be the most effective means for delivering this training to producers?



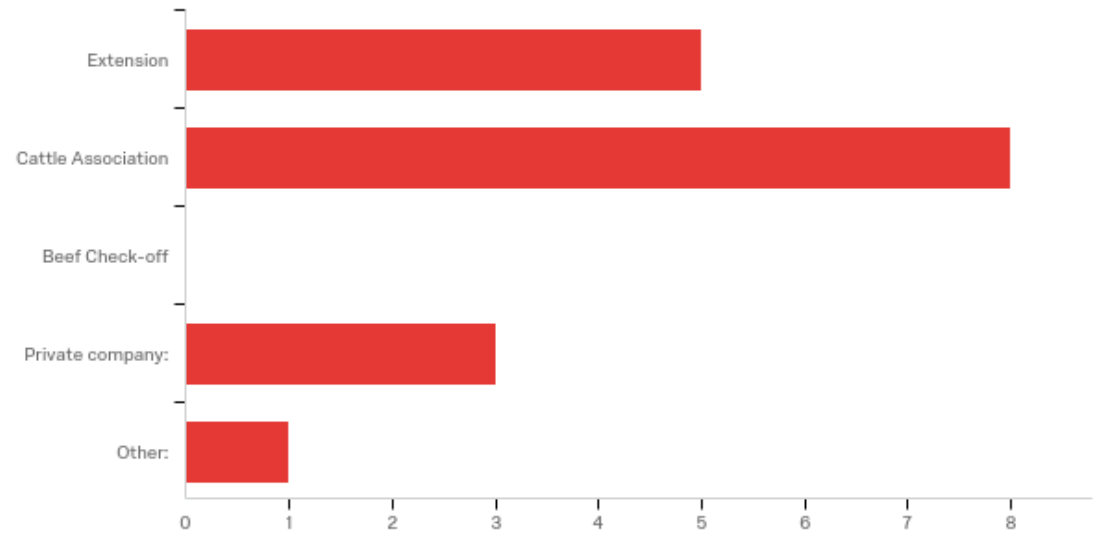
| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 11.11% | 2     |
| 11 | Online course – (self-paced) available to enrolled students             | 11.11% | 2     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 11.11% | 2     |
| 5  | Single-day workshop – replicated regionally                             | 38.89% | 7     |
| 6  | Informational hand-out  | 16.67% | 3     |
| 9  | - Other:  | 11.11% | 2     |
|    | Total   | 100%   | 18    |

- Other:

all

Possibly combined in one of the other two day workshops

Adapting to a Consolidating Industry - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 29.41% | 5     |
| 5 | Cattle Association | 47.06% | 8     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 17.65% | 3     |
| 8 | Other:             | 5.88%  | 1     |
|   | Total              | 100%   | 17    |

Private company:

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Cattle Fax, Cattle Buyers Weekly

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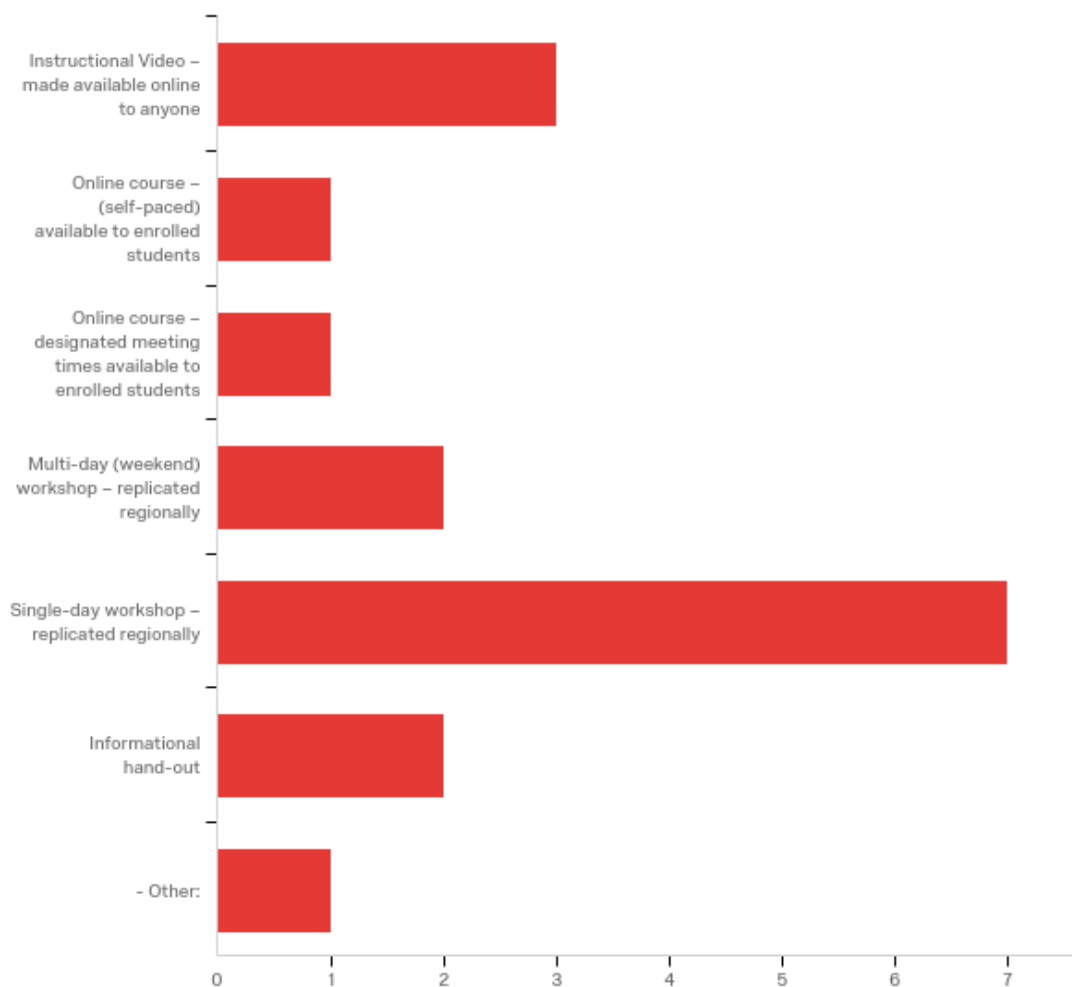
Other:

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Extension with help.



Adapting to a Consolidating Industry - What would be the most effective means for delivering this training to producers?

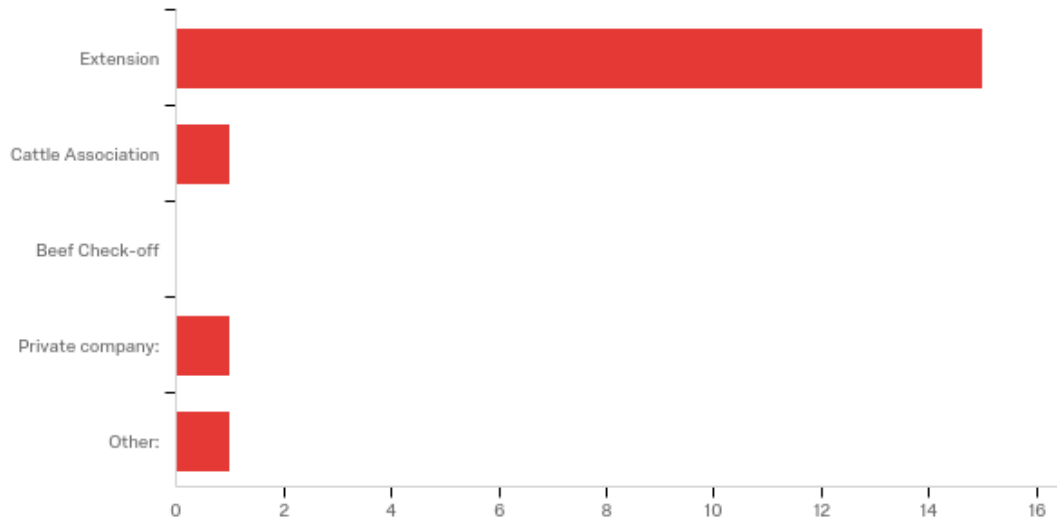


| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 17.65% | 3     |
| 11 | Online course – (self-paced) available to enrolled students             | 5.88%  | 1     |
| 12 | Online course – designated meeting times available to enrolled students | 5.88%  | 1     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 11.76% | 2     |
| 5  | Single-day workshop – replicated regionally                             | 41.18% | 7     |
| 6  | Informational hand-out  | 11.76% | 2     |
| 9  | - Other:  | 5.88%  | 1     |
|    | Total   | 100%   | 17    |

- Other:

all

Herd construction, selection, and maintenance - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 83.33% | 15    |
| 5 | Cattle Association | 5.56%  | 1     |
| 6 | Beef Checkoff      | 0.00%  | 0     |
| 7 | Private company:   | 5.56%  | 1     |
| 8 | Other:             | 5.56%  | 1     |
|   | Total              | 100%   | 18    |

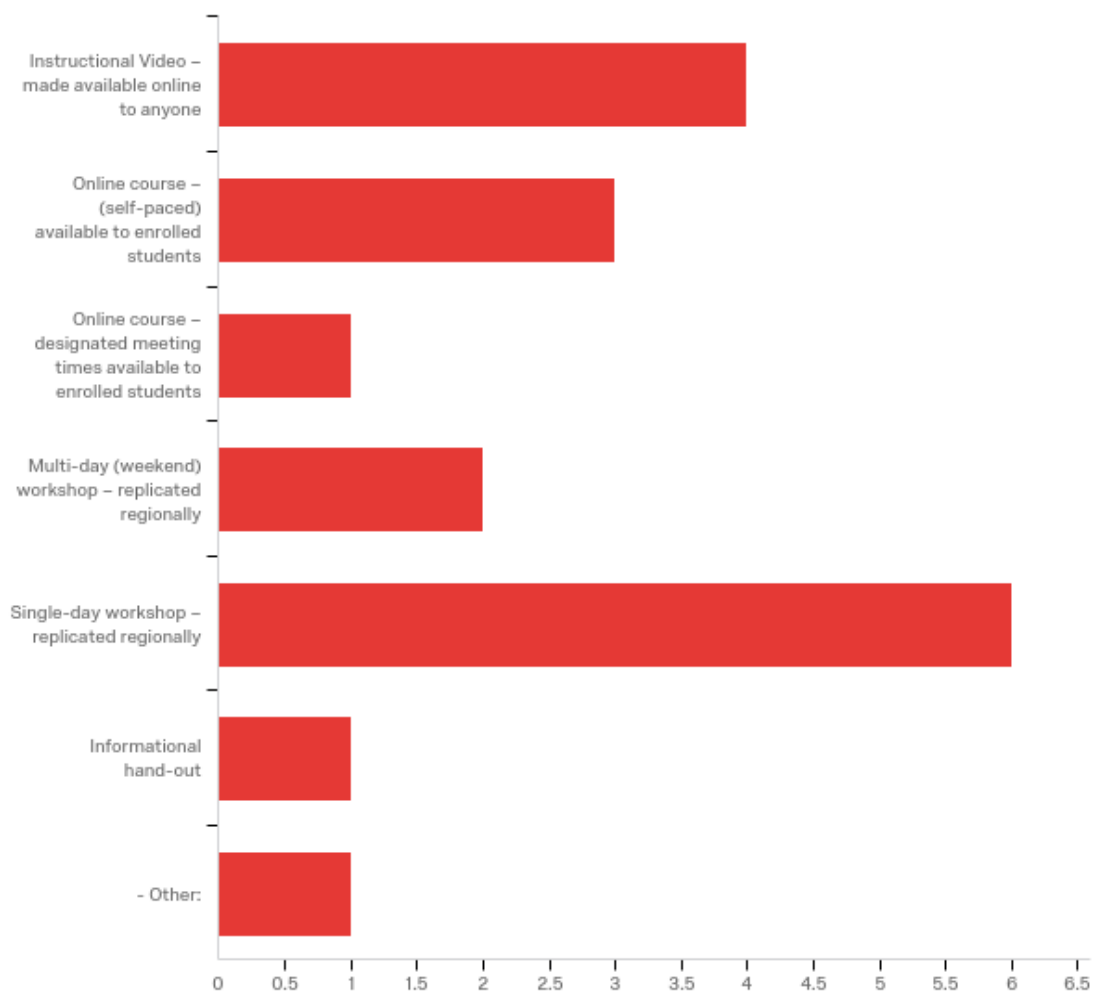
Private company:

angus assn

Other:

Same as above

Herd construction, selection, and maintenance - What would be the most effective means for delivering this training to producers?

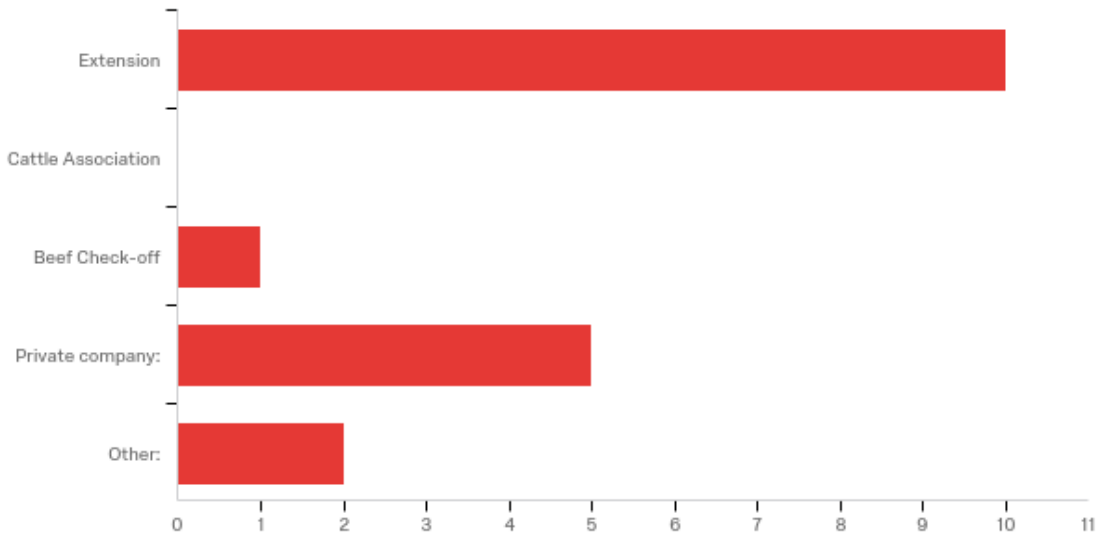


| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 22.22% | 4     |
| 11 | Online course – (self-paced) available to enrolled students             | 16.67% | 3     |
| 12 | Online course – designated meeting times available to enrolled students | 5.56%  | 1     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 11.11% | 2     |
| 5  | Single-day workshop – replicated regionally                             | 33.33% | 6     |
| 6  | Informational hand-out  | 5.56%  | 1     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:

all

Utilizing technology for efficient production - What organization should develop training on this topic?



| # | Answer             | %      | Count |
|---|--------------------|--------|-------|
| 4 | Extension          | 55.56% | 10    |
| 5 | Cattle Association | 0.00%  | 0     |
| 6 | Beef Checkoff      | 5.56%  | 1     |
| 7 | Private company:   | 27.78% | 5     |
| 8 | Other:             | 11.11% | 2     |
|   | Total              | 100%   | 18    |

Private company:

Allflex

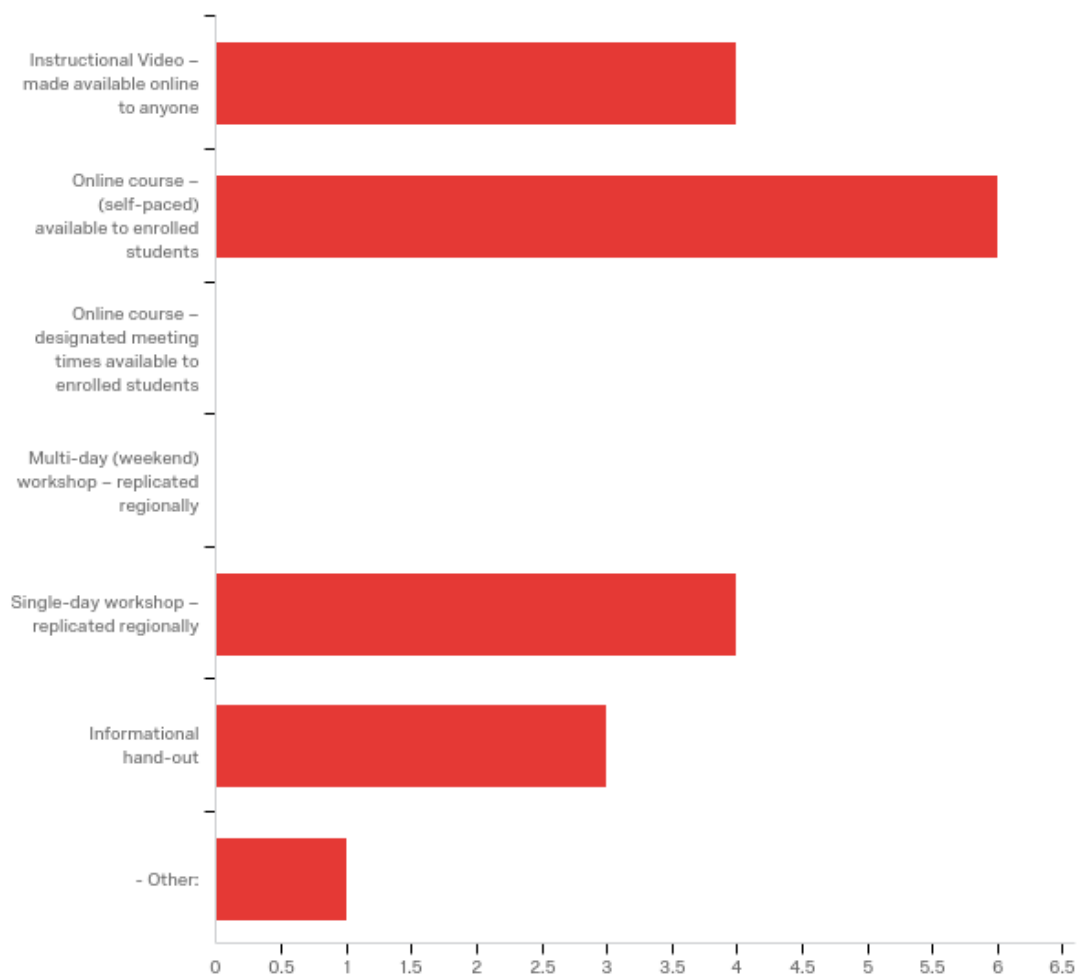
Some builders of said technology

Other:

same as the rest

ISDA; ICA; Idaho Brand; etc.

Utilizing technology for efficient production - What would be the most effective means for delivering this training to producers?



| #  | Answer  | %      | Count |
|----|---|--------|-------|
| 10 | Instructional Video – made available online to anyone                   | 22.22% | 4     |
| 11 | Online course – (self-paced) available to enrolled students             | 33.33% | 6     |
| 12 | Online course – designated meeting times available to enrolled students | 0.00%  | 0     |
| 13 | Multi-day (weekend) workshop – replicated regionally                    | 0.00%  | 0     |
| 5  | Single-day workshop – replicated regionally                             | 22.22% | 4     |
| 6  | Informational hand-out  | 16.67% | 3     |
| 9  | - Other:  | 5.56%  | 1     |
|    | Total   | 100%   | 18    |

- Other:

all

**Is there anything else that you feel is important to add as we complete this study?**

One group does not have all the answers. It will be a group effort to make this happen.

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Nothing at this time

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Some of these would be best served by use of multiple venues/avenues of delivery as well as multiple agencies. I think without question all of these topics identified as "important" should be coordinated by our UI extension faculty.

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I believe- it is important to use a diverse group of people with an excellent facilitator to create an up to date curriculum for the topics that you have identified. The university is lagging behind what is being applied currently on the land and in the industry. ( They still believe over grazing is a result of too many animals as opposed to too much time.)

- there is a need for a course titled "The Psychology of Families in Business" to help young people through the transitions from birth to ownership using material from the Ag Executive including "The Burdens of Ownership".
- Develop course work to teach producers how to create an Accrual Adjusted Income Statement.

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Although I like the group one day class setting for dispersing much of the information; having the option of a video and handouts are also very beneficial. recently at some of the ag seminars I have been at we are sent home with a copy of the information presented. that is very helpful. I like for extension to work with cattle associations and to develop most of the program topics that were discussed.

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Many of the topics in this latest survey should be addressed by more than one of the groups listed.