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eXtension Goat Industry: The Source For Science Based Knowledge

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Abstract

The eXtension Website provides research-based information in ten resource areas: Community, Disaster Issues, Energy, Environment, Family, Farm, Health and Nutrition, Lawn and Garden, Pest Management, and Youth. Under each resource area are Communities of Practice (CoP). The Goat Industry Website (http://www.extension.org/goat) is a specific community of practice on the eXtension site that provides scientifically-based information for goat producers, extension educators and consumers. Currently, this site contains announcements, a glossary of terms, a meat goat management tool and instructional videos. Additionally, there is information on breeds, economics and business planning, facilities, fiber production, genetics, health, marketing, management, milk products, nutrition, reproduction, pastures and forages, predator control, vegetation management and youth. Resources on the site benefits people interested in learning more about goats.

Keywords: eXtension, Goat Industry, Goat Industry Website, Science Based Knowledge

Introduction

eXtension is a Website that provides research-based information on topics as diverse as horses, fire ants and energy conservation. In developing a Website on eXtension, a first step is for a group of people with a common interest, such as goats, to come together, forming a Community of Interest. Once they are approved by eXtension and begin developing and placing information on the eXtension website about a topic such as goats, they are now a Community of Practice. Communities of practice (CoP) are formed under one of ten resources areas (Table I). At the time that this article was written, there were 70 published communities of practice in eXtension. Table 1 shows the current CoP's under the resource areas that can be found on the eXtension Website. Information found in the communities of practice is developed by extension specialists and researchers from land grant universities, veterinarians, and numerous specialists from various USDA agencies across the United States. eXtension, therefore, is considered to: (1) offer credible expertise, (2) provide reliable answers based upon sound research, (3) have connections to the best minds in American universities, (4) provide creative solutions for today's complex challenges, (5) supply customized answers to your specific needs, (6) offer trustworthy, field-tested data, and (7) provide dynamic, relevant and timely answers to your questions. More details about eXtension can be found at https://www.extension.org/.

Community of Interest in Goats

Recently, members of the 1890 land grant universities took the lead in developing a Community of Interest in goats and eventually Community of Practice on the Goat Industry. It was felt that this was important to place on the eXtension website because of their growing importance in the U.S. In the United States, goats are used mainly for meat, milk and fiber production. Approximately 80% of goats in this country are meat goats, 15 % are dairy goats and 5 % are fiber goats (USDA-NASS, 2018).

Table 1. eXtension Communities of Practice

Community	Animal Manure Management
Agricultural and Food Law	Animal Welfare
Civil Dialogue	Apples
Community Planning and Zoning	Bee Health
Community, Local and Regional Food Systems	Beef Cattle
Cooperatives	Blueberries
Creating Healthy Communities	Climate, Forests and Woodlands
Diversity, Equity and Inclusion	Dairy
Enhancing Rural Community Capacity	Forest Farming
Entrepreneurs & Their Communities	Freshwater Aquaculture
Geospatial Technology	Goats
Internationalizing Extension	Grapes
Network Literacy	Horses
Program Evaluation	Marine Aquaculture
Volunteer Administration	Organic Agriculture
Women in Agriculture	Plant Breeding and Genomics
	Sheep
Disaster Issues	Small and Backyard Flocks
Agricultural Disaster Preparedness and Recovery	Small Meat Processors
Drought Resources	Sustainable Marine Fisheries
Floods	Wood Products
Wildfire	
	Health and Nutrition
Energy	Community Nutrition Education
Farm Energy	Families, Food and Fitness
Home Energy	Healthy Food Choices in Schools
Wood Energy	
	Lawn and Garden
Environment	Extension Master Gardener
Prescribed Fire	Gardens & Landscapes
Trees for Energy Conservation	The Garden Professors
	Water Conservation for Lawn and Landscape
Family	
Child Care	Pest Management
Companion Animals	Ant Pests
Drinking Water and Human Health	Feral Hogs
Family Caregiving	Imported Fire Ants
Food Safety	Invasive Species
Military Families	Pest Management In and Around Structures
Parenting	Wildlife Damage Management
Personal Finance	
Child and Family Learning Network	Youth
	Ag Zone
Farm	Science for Youth
Ag Safety and Health	

The January 2018 goat survey conducted by the National Agricultural Statistics Service, which has been conducting extensive goat surveys since 2005, indicates that there are approximately 2.66 million goats in the United States of which 2.15 million are meat goats (USDA-NASS, 2018). These numbers increased by 1% over the past four years (USDA-NASS, 2018).

Dairy goat numbers in the United States showed an increase of 7% since 2014 (USDA-NASS, 2018). For more information about the Goat Industry trends and outlook go to the following Website:
http://www.extension.org/pages/Goat_Industry_Outlook#Trends_in_the_U.S._Goat_Industry.

Producers, in all phases of production (meat, dairy and fiber) have expressed a need for current, correct information on how to raise goats and produce wholesome products in demand by the public. Information is needed in all areas, from basic housing and management to nutrition, breeds, herd health, reproductive issues, marketing, product safety, and value-added products. With this in mind, the objective was to develop an eXtension Website designed to meet the educational needs of goat producers, extension educators and farmers. The goals were: (1) To provide information from basic housing and management to nutrition, breeds, herd health, reproductive issues, marketing, product safety, and value-added products to goat producers; (2) To provide learning opportunities that are science-based and peer-reviewed; (3) To create collaboration among goat industry professionals resulting in a resource that provides valuable educational materials benefiting the user; and (4) To highlight goat industry resources.

Materials and Methods
Development of Goat Industry CoP Leadership
The initial CoP leadership team consisted of a USDA Program Leader, a CoP Administrative Advisor, a core leadership administrator and members from 1890 institutions shown in Table 2. The core team would not exceed 12 members. Today, the leadership team consist of members from 1890 institutions and two 1862 institutions (Cornell University and Washington State University).

Table 2. Institutions of the Initial Leadership Members of the Goat Industry Community of Practice

Institution	State Located
Alabama A & M University	AL
Alcorn State University	MS
Cooperative Extension Program at Prairie View	TX
Delaware State University	DE
Florida A & M University	FL
Lincoln University	MO
Langston University	OK

Making the Goat Industry CoP National in Scope
The national team of experts includes state goat extension specialists, research and teaching faculty, veterinarians, regional educators and professionals at education centers. The community of practice membership currently includes 14 of the 18 1890 land grant universities, 34 of the 1862 land grant and state universities, and the USDA Agricultural Research Service. Total membership is 117. Members continue to be added to this list as the community of practice develops and will include additional 1862 universities, other institutions, and professional organizations and societies. It is anticipated that marketing efforts through presentations at regional and national scientific meetings throughout the nation and through word-of-mouth will increase the awareness of the goat community of practice. These experts will be recruited as they are identified. Member institutions are shown in Table 3.

Table 3. Institution of Goat Industry Members

1890 Institutions
Alabama A & M University
Alcorn State University
Cooperative Extension Program at Prairie View
Delaware State University
Florida A & M University
Fort Valley State University
Kentucky State University
Langston University
Lincoln University of Missouri
North Carolina A & T State University
Tennessee State University
Tuskegee University
University of Maryland- Eastern Shore
Virginia State University
West Virginia State University

1862 Institutions

Auburn University	University of Delaware
Clemson University	University of Florida
Colorado State University	University of Georgia
Cornell University	University of Kentucky
Kansas State University	University of Maine
Louisiana State University	University of Maryland
Michigan State University	University of Minnesota
North Carolina State University	University of Missouri
Oklahoma State University	University of Nevada Reno
Oregon State University	University of Tennessee
Penn State University	University of the Virgin Islands
Purdue University	University of Wisconsin
Rutgers, State University of New Jersey	University of Wyoming
South Dakota State University	Utah State University
Texas Agri Life Extension Service	Virginia Polytechnic Institute and State University
The Ohio State University	Washington State University
University of Arkansas	
University of California	
Other Institutions and Agencies	

Missouri State University
USDA

Communication, Meetings and Continued Productivity

Year 1 included an organizational meeting for developing this proposal and occurred on January 31 - February 1, 2007. A meeting was planned for June 23- 24, 2007, just prior to the eXtension training conference. At this meeting, we began adding content to the CoP. The committee convened during the National Animal Science meetings held July 7 -12, 2007, in Indianapolis, Indiana, and one or two additional meetings were scheduled as the need arose. Web-based calls were held among the CoP leadership during year 1. It is anticipated that data on the number of visits to the Website, interaction with ask the experts, and the increased number of certifications will continue.

It is also expected that some of the universities will likely incorporate interactions with eXtension into the normal duties of extension professionals. Once this activity becomes a component of the evaluation and promotion process, the continued productivity of a community of practice is assured.

Content on Goat Industry Website
Currently, the site contains information on breeds, economics, establishing a goat operation, facilities, fiber production, genetics, goat milk products, health, marketing, management, nutrition, organic goat production, reproduction, pastures and forages, predator control, target grazing, vegetation management and youth. In addition to the above information, there are also announcements, assessment and outlook of the goat industry, a glossary of goat terms, a meat goat management tool, goat-related resources, and instructional videos.   Resources are continuously being added to the site to benefit the people interested in learning more about goats.

Ask an Expert
If a person has a question about goats they can go to the site and ask the questions and within 48 hours the person will have an answer from one of our experts.

Analytics for the Goat Industry Website
To determine how the Goat Industry Website is doing, eXtension provides Google Analytics (Google Analytics, 2018) to determine the Website traffic and marketing effectiveness.

Results

Initial Start of the Goat Industry CoP
The Goat Industry started as an eXtension CoP in March 2008. The CoP was launched to the live site of eXtension one year later in March 2009. Resources continued to be added to the Website.

Analytics for the Goat Industry Website
The following Google Analytics reflect the eight years of the Goat Industry since the launch of the Website (March 2009- March 2017). During the eight years, visitors viewed 68,046 pages of the top content of eXtension and these were viewed a total of 52,140,523 times. Of all content viewed during this time on eXtension, Goat Sexual Maturity and Puberty was eighth and the Goat Industry Website was 44th out of the top 100 content viewed. Goat Sexual Maturity and Puberty was viewed 189,764 times while the Goat Industry Webpage was viewed 71,437 times.

Top Content of the Goat Industry
The top content viewed during the eight year period was Goat Puberty and Sexual Maturity page viewed 9% of the time. The eXtension Goat Industry Webpage and Goat Vaccination Program pages were viewed 3% of the time. The top content (top ten) that was viewed and the number of times these pages were viewed are shown in Table 4.

Ask an Expert
During the eight years, the number of questions answered was 1,225. Questions that were resolved from outside of the United States were 180. The majority of questions asked ranged from, genetics, health, management, reproduction to predator control and pasture management.

Table 4. Number of Times Top Ten Content Viewed on Goat Industry Website During the Eight Years*

Top Content Viewed	Number of Times Pages Viewed	Percent of Total Time Pages Viewed (2,162,962)
Goat Puberty Sexual & Maturity	189,764	9%
Goat Webpage	71,437	3%
Goat Vaccination Program	69,684	3%
Goat Parturition/Kidding	51,630	2%
Goat Reproduction	31,562	1%
How to Do Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis	31,432	1%
What are Some Diseases Goats can Transmit to Humans?	31,368	1%
Goat Breeds	27,796	1%
Goat Pastures & Forages	24,354	1%
Newborn Goat Kids	21,301	1%

 * A total of 1,999 pages viewed 2,162,962 times during the eight years.

Conclusion

The Goat Industry Website provides basic information for the producer, consumer and extension personnel. This Website provides opportunities for persons interested in learning more about goats to find the information, and if it is not there they can ask an expert and receive an answer within 48 hours.

Since the launch of the Website in 2009, the leadership team has met and added information on dairy goats, fiber production, basic goat facilities, basic herd health procedures and biosecurity, crossbreeding, farm business planning and budgeting, organic goat production, risk management, economics of goat production, business plans and enterprise budgets, and disaster preparedness.

Retrieved from http://cop.extension.org/wiki/Goat_Industry_Content_Curriculum_Plan. Eventually, the Goat Industry Website (http://www.extension.org/goat) will be a one-stop source for goat information.

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