MARIANO MARCOS STATE UNIVERSITY

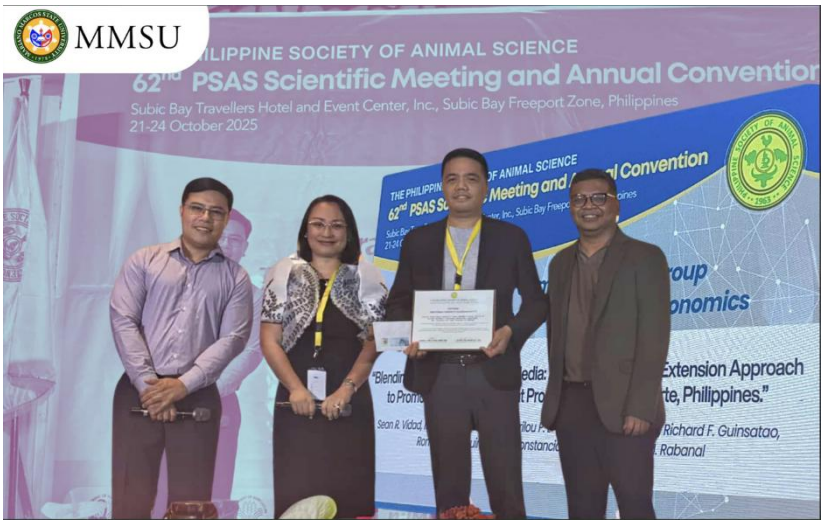
MMSU School-on-the-Air (SOA)/Eskuela iti Tangatang on Goat and Swine Production and Processing
July 2023 – February 2024

MMSU has dedicated outreach educational activities for the wider community, which could include alumni, local residents, and displaced people. For instance, MMSU, together with eight government and non-government organizations, conducted the School-on-the-Air (SOA) or Eskuela iti Tangatang (in vernacular) on Goat and Swine Production and Processing from June 2023 to February 2024.

Generally, the SOA aimed to promote through radio, information, and technologies that boost the potential of goat and swine production in the province as a source of livelihood.

Specifically, the SOA aimed to:

1. Promote the use of all available resources in the community for the benefit of goat and swine production;
2. Increase the level of Knowledge, Attitude, Skills, Practices, and Values (KASPV) of community households on goat and swine production that will lead to the creation of livelihood opportunities; and
3. Strengthen partnerships with LGUs and other stakeholders in Ilocos Norte.



https://www.mmsu.edu.ph/article/news/2654/study-on-mmsus-school-on-the-air-program-wins-best-socioeconomic-paper-at-national-confab

Terminal Report

Project Title:	School-on-the-Air (SOA)/Eskuela iti Tangatang on Goat and Swine Production and Processing
Proponent/ Implementing Agency:	Applied Communication Extension Directorate Mariano Marcos State University (MMSU)
Cooperating Agency/ies:	Provincial Government of Ilocos Norte (PGIN) Ilocos Norte LGUs ILAARRDEC/ILAARRDEC-RAISE Agricultural Training Institute (ATI) Gender and Development College of Agriculture, Food and Sustainable Development (CAFSD) Research Directorate DWFB Radyo Pilipinas, 954 khz Laoag City DWCI 105.1 Mhz LGU-Piddig, Ilocos Norte DWNI Radyo Karruba, Burgos LGU-Burgos, Ilocos Norte
Source of Fund:	MMSU (Fund 164/184) GAD ILAARRDEC/ILAARRDEC RAISE
Duration:	**7** months (June 2023-February 2024)
Total Budget:	P600,000.00

I. RATIONALE

The Covid-19, to a great extent, affected the lives of majority of people all over the world. It immobilized community people in most, if not all areas. Livelihood activities were affected. The agriculture particularly the livestock sector is one of the most affected areas. Until now, the effect of the pandemic is still evident. Lately, the African Swine Fever (ASF) also affected to a large extent, the livestock growers in the country, in general, and the province in particular.

The School-on-the Air (SOA)/Eskuela iti Tangatang which was initiated and implemented for several years now really made a big difference during the pandemic. The SOA provided a sustained source of relevant information and technologies to communities even during lockdowns.

Radio has been used extensively as an educational medium in developing countries as well as a source of information which creates a widespread awareness to a certain community. Radio is considered as the most accessible of all media and that most people can be reached at a relatively low cost. Thus, radio has a wide potential in educational delivery. Likewise, radio is an effective tool in disseminating information because of its attributes. Among these are: first, universality which means readily available; 2: popularity as it reaches audiences with low literacy levels especially those who are in far-flung areas

where the quality and standards of education may be inadequate; 3) diversity as it caters to a large number of listeners at a time; 4) immediacy because it provides live broadcasts; and 5) the use of sound. This allows full utilization of the human voice for communicating with the audience. This helps in establishing rapport, and in the process, credibility is enhanced and the interest level is sustained. In addition, radio can be used in combination with other media such as print and interpersonal communication.

Based from the evaluations conducted every after SOA airing and the overall airing, responses showed that majority of the enrollees rated the SOA as excellent in terms of the different parameters. These include the duration and time of airing, Topics aired, Comprehensibility of the topics aired, Time provided in every airing, How the SOA is aired, Selection of Speaker or lecturer, Program Host/Broadcaster.

Complementary activities and support strategies like the development, production, and distribution of Information, Education, and Communication (IEC) materials, publication of press releases, and the use of social media, resulted to increase in adoption and utilization of technologies by the SOA graduates. Their interest to join more SOA were strengthened.

The positive feedback from enrollees and graduates and their continued support and aspiration on the sustained conduct of the SOA is an indication that the strategy is relevant in providing the emerging needs of the community.

In addition, with the approval and implementation of the Collaborative Provincial Agriculture and Fisheries Extension Program of the Ilocos Norte Agriculture and Fisheries Extension System (INAFES), with Information and Knowledge sharing as one of the strategic extension support services to be conducted of which the SOA, production of IEC materials are included, the SOA was conducted. Topics were focused on the priority commodities of community members in Ilocos Norte. Thus, information and technologies aired in the SOA are relevant to the actual needs of the community members.

OBJECTIVES

Generally, the SOA aimed to promote information and technologies that will boost the potential of goat and swine production in the province, as a source of livelihood.

Specifically, the SOA aimed to:

1. Promote the use of all available resources in the community for the benefit of goat and swine production;
2. Increase level of Knowledge, Attitude, Skills, Practices, and Values (KASPV) of community households on goat and swine production that will lead to creation of livelihood opportunities; and
3. Strengthen partnership with LGUs and other stakeholders in Ilocos Norte.

IMPLEMENTATION/MANAGEMENT STRATEGIES

The following strategies were followed in the conduct of the SOA. These management strategies significantly contributed to the success of the SOA program.

1. **Organization.** The Extension Directorate through its Applied Communication (APCO) Section spearheaded the implementation of the SOA.

    a. Experts from the Units and College including agency-partners provided the technical expertise during the SOA airing.
    b. The TCE and Technology Demonstration assisted in the implementation of the SOA

c. The clients are the interested community members composed of farmers, fisherfolks, entrepreneurs, students, and out-of-school youth.

2. **Financing.** Financial counter-parting was done from the various stakeholders. MMSU through the Extension Directorate provided the manpower for the project implementation including additional funds. Counterpart funds from the PGIN thru the INAFES project, ILAARRDEC, and other partner-agencies provided additional fund support.

3. **Partnership agreements.** A memorandum of agreement (MOA) was signed between and among partners. The agreement formalizes the partnership wherein the roles and obligations of each party are stipulated. Basically, MMSU and PGIN spearheaded the conduct of the SOA and carry-out the aims and objectives of the project.

   In addition, the LGU partners, through their City/Municipal Agriculture Offices (CAO/MAO) provided the following:

   a. Assistance in the identification, evaluation, assessment, selection, and enlistment of project partners and project sites including the sustained monitoring and evaluation of the SOA;
   b. Acted as coordinator between MMSU and the project partners within its area of jurisdiction on concerns pertinent to the project; and
   c. Assigned one from among its agricultural technologists/technicians or agriculturists to serve as SOA coordinator.

4. **Communication and coordination.** Communication and coordination among the partners was made. Meetings and dialogues among the partners were done from time to time and as the need arise. Formal communications were made whenever necessary.

   a. Information campaign. The Extension Directorate used a combination of a variety of campaign strategies to let the public know about the SOA. The strategies include sending letters of information and invitation to local government units, and other potential partners and sponsors; sending information to potential clients via the internet; conducting personal visits and dialogues; making phone calls; and announcing it over the radio.

   b. **Sustain the use of the KaSOA Group Created.** This strategy facilitated the coordination and monitoring of activities between and among the enrollees and project partners. Enrollees were added as members of the group.

   c. **SMS Messaging.** Enrollees and coordinators actively participated in the SOA. This is also a strategy to determine whether or not the enrollees are listening. This also served as venue where the enrollees could ask their questions and share their ideas on the topic discussed. All SMS were recorded to ensure that all queries are answered.

5. Production and Distribution of IEC Materials. As a complementary material to the topics aired in the SOA and as part of the strategy to increase the level of knowledge among community members/enrollees, IEC materials were designed, produced and distributed during and after the SOA period.

6. **Monitoring and Evaluation.** The operation of the SOA are monitored and evaluated before, during, and after each airing. The SOA coordinators and the other Agricultural Technologists from the LGUs and other team members facilitated this activity.

7. **Follow-up/Emhancement Trainings** Follow-up activities were made to enrollees to verify what information and technologies were tried and adopted, know what problems and

needs they have in the adoption of technologies, provide continuous technical services to sustain the utilization of technologies, link the clients to and for assistance by other agencies; provide material or financial assistance wherever available, and other post-implementation services to ascertain that the SOA have to have impact on the lives of the enrollees/graduates.

HIGHLIGHTS OF ACTIVITIES

The implementation of the School on the Air (SOA) Program provided the beneficiaries and other community members the needed technologies and information on swine and goat production and processing. The following were the activities conducted during the SOA.

1. Inception Meeting

Inception meeting with the coordinators was conducted to orient the participating LGUs on the SOA project. This was attended by designated SOA coordinators from the different LGUs in the province. The following information were discussed in the inception meeting.

- Review of the past SOA and the SOA for 2023-2024
- Total number of enrollees per LGU
- Distribution of enrollment forms, attendance sheets, class records and summary list of enrollees
- Mode of presentation/broadcast and airtime
- Submission of enrollment forms
- Initial broadcast
- Requirements for graduation

The inception meeting also provided the program implementers the opportunity to identify issues and concerns including the priority topics to be aired in the program. Timelines were agreed and finalized between and among the participants.

2. Time and Schedule of Airing

Lectures were aired in three local radio stations in the province. In addition, the program was also aired via FB live to reach more number of audience and at the same time, address the demand of some enrollees to join the SOA via FB live.

Radio Station	Time of Airing/Day	Location/Address
DWFB Radyo Pilipinas-Laoag	12-1/Wednesday and Friday	Laoag City and City of Batac, Transmitter Site
	FB live via MMSU Extension Directorate FB Page. There are also times that the program/fb live is shared by MMSU Official Fb page.	
DWCI 105.1 Radyo FM	5-6 a.m./Tuesday and Thursday	Piddig, Ilocos Norte
DWNI Radyo Karruba	11-12 noon/Wednesday and Friday	Burgos, Ilocos Norte

3. Number broadcast conducted

Initially, the program targetted a total of 43 episodes for the duration of the SOA. With some requests and demand for additional relevant topics to be discussed, a total of 60 airings per station were accomplished, yielding a total of 180 airings for the three radio stations. In addition, 60 live broadcast was also aired via FB live of Radyo Pilipinas and the official FB Page of the Extension Directorate.

The initial broadcast was conducted on June 7, 2023 and ended March 6, 2024. The Top Achiever's Examination was conducted on March 15, 2024.

Among the topics discussed included the following:

- Fees and feeding Management for both swine and goat
- Disease and Health Management
- Breeding, Reproduction, and Selection of Farm Animals
- Animal Insurance
- Farm Planning, Budgeting, and Record Keeping
- Goat Housing and Silage Making
- Renewable Energy
- Occupational Safety
- Grit and Resilience: A Guide to Facing Life's Challenges and Adversities in Livestock Production
- Capital and Waste Management
- Value Adding Techniques

4. **Number and Characteristics of Enrollees**

Almost all the enrollees grows swine and goat, both fattener and breeder. In addition, majority of the enrollees are male (745) and 590 are female.

In terms of accessibility and preference on the mode of airing, majority of the enrollees (582) preferred for FB live, 466 of them answered that they will listen thru radio station DWFB Radyo, Pilipnas, Laoag, 144 for DWCI Radyo Adjo Piddig, and 66 for DWNI Radyo Karruba Burgos. Their preference on the mode of airing is influenced by their location where the radio station reaches and has access to internet connection. Initially, the SOA program was aired only at DWFB Radyo Pilipinas, Laoag. But with the need to cater other LGUs in Ilocos Norte that the station signal could not reach, the program partnered with additional two radio stations for wider coverage.

As to the number of times that the enrollees were enrolled in the SOA, majority (1,022) answered that this is the first time that they enrolled in the SOA, 147 answered twice, 132 answered once and 48 were enrolled thrice. The increase in enrollment, according to the enrollees is a manifestation that the airings really provided the community members with relevant information that they need. Yearly, the SOA provides information on various commodities. This is why, the type of enrollees keep on changing.

5. **Number of MOA Signed**

The SOA program sustained the its partnership t various stakeholders. A total of 18 MOA were signed with LGUS, PGIN and three radio stations. Stipulated in the MOA are the responsibilities of each of the participating LGUs and other partners.

6. Conduct of Quizzes and Top Achievers Examination

To determine the level of knowledge of the enrollees before the SOA, a pre-test examination was conducted. This was aired by the program host. This covered all the topics discussed in the SOA. Three SOA exams/quizzes were also administered on air to assess the extent of lessons learned on the topics discussed. Posttest evaluation was conducted after the SOA. Answer sheets were collected by the Agricultural Technicians (ATs) and SOA coordinators. In addition, a google form for the quizzes were also prepared to facilitate the collection of quizzes. The collected test papers were submitted to MMSU. MMSU later corrected and recorded their scores. This served as one of the bases to determine the

outstanding enrolees and at the same time, identify drop-outs. One of the challenges the program has, was the collection of quizzes. This is one of the activities that the program continues to address.

In addition to the regular monitoring activities conducted, a post activity assessment and review was undertaken to thresh-out problems and issues incurred during the implementation of the project.

Top achievers from the different municipalities were selected based on their active participation and scores from the quizzes provided.

Identified top achiever for each municipality underwent the final examination round to determine their ranks. As a result, the ranks of the Top Achievers were fetermined based on their scores.

LGU/CGU	SOA Coordinator	Top Achiever	Score	Rank
1. Dingras	Ms. Michelle Ann Agmata	Aiza Lagran	54	1
2. Currimao	Ms. Bernadette R. Cacactin	Janet Gracela	52	2
3. OPAG	Lorna Lubera	Patricia Medrano	51	3
4. Badoc	Ms. Clarence Luna	Anthony Yadao	45	4
5. Laoag City	Ms. Madelyn Baloalloa	Edwin Rivera	44	5
6. San Nicolas	Ms. Cecille Sambrano	Cherry Ann D. Nicolas	41	6
7. Marcos	Ms. Gladies Villanueva	Daniel Reototar	40	7
8. Bacarra	Ms. Trixia Y. Dadiz	Norma S. Valite	40	
9. City of Batac	Mr. Ricardo I. Sibucao Jr.	Yasser Berona	40	
10. Vintar	Ms. Maricel R. Serrano	Maria Cielo Grace Sao	39	8
11. Piddig	Ms. Donalyn N. Domingo	Rodel Dilla	38	9
12. Burgos	Ms. Karen Joy C. Racuya	Aileen Juan Pascua	35	10
13. Solsona	Ms. Liza E. Domingo	Marilou Cabael	35	
14. Pasuquin	Ms. Glenda A. Lagpacan	Unesco Udal	33	11
15. Sarrat	Ms. Annette Calvelo	Remigio Edrada	32	12
16. Nueva Era	Elaine Rabang	Rusella Bautista	32	
17. Banna	Ms. Kathryn T. Caindec-Fulgencio	Andrew Dominic Pasion	30	13
18. Paoay	Ms. Aurora Cacayorin	Rea Faye Saclayan Langaman	27	14

7. Visibility of Programs via Facebook Livestreaming

Initial data showed that from June to November, the SOA program recorded an accumulated views of almost a million (941,000), 8,110 comments, 4,693 hearts and likes, and 1,326 shares.

In addition, the SOA graduation in April 30, 2024 recorded a significant number of views with a total of 84 thousand views, 79 comments, and 496 hearts and likes compared to the SOA graduation on February 18, 2022. It recorded 8,300 views, 85 comments and 426 hearts and likes. A huge difference between the two consecutive SOA graduation excercises conducted by the Directorate.

These data shows the significant contribution of social media in information and technology dissemination and utilization.

8. Support assistance to SOA Enrollees

The SOA opened opportunities for SOA enrollees to access more projects from MMSU. Signifying their interest to become part of other programs and projects provided by MMSU announced in the SOA, some enrollees were able to become beneficiaries of various training activities, field days, dispersal projects, and others.

9. Development and production of IEC materials

Information and technologies aired in the SOA were consolidated. These were transcribed, developed and mass produced for distribution to the SOA graduates. This is also in reponse to their request for a copy of the materials discussed in the SOA. One thousand copies each of these materials were reproduced. IEC materials were distributed during the SOA graduation and during trade fairs.

The following were the IEC materials produced.

1. Agplanoka Para iti Naballigi a Panagtalon
2. Irekrekormo Met Laeng Dagiti Ar-aramidem iti Talon?
3. Pakanen Dagiti Taraken iti Concentrates
4. Madre de Agua: Nasustansia a Pagpakan Kadagiti Dingo
5. Napateg ti Garami
6. Agmula iti Nateng iti Sanna a Panwen
7. Saludsud ken Sungbat iti Panagtaraken iti Kalding
8. Bulong ti Talinum a kas Pagpakan iti Baboy
9. Hay Ruot
10. Bulong ti Kayanga, Kdp. A Kas Pagpakan iti Kalding
11. Agubo Kadi ti Apon ti Tarakenmo?

Likewise, modules on feeding management and entrepreneurship were also produced and made available for the enrollees. Sixty broadcast materials were also produced and are used from time to time to refresh the community members on goat and swine raising. Such materials are also shared to LGUs for their reference.

10. Press Releases

Articles on the implementation of the SOA were published in the MMSU Newsletter, Chronicle including the *Extensionist*, a quarterly publication of the Extension Directorate. Likewise, photo releases including the IEC materials produced were published in *Bannawag* and other circulations.

11. Monitoring and Post Assessment

- **KaSOA Group**

To facilitate coordination and monitoring of SOA activities, an FB group account named as KaSOA 2024 was created and sustained by the Extension Directorate. SOA Coordinators including enrollees who have internet access were invited as members.

In addition to the FB Page and FB Account maintained by the MMSU-Extension where the SOA announcements, airings, press releases and other SOA activities are posted, the same information were also shared in the KaSOA Group 2024.

- **SMS Messaging**

Enrollees were asked to actively participate in the SOA. This is also a strategy to determine whether or not the enrollees are listening. At the start of the SOA, the program host airs the CP and landline numbers where the enrollees could ask their questions and share their ideas on the topic discussed. SMS messaging serves a venue where the SOA presents themselves for attendance monitoring. This also serves as venue where they can send their answers to questions for the day provided.

- **Question for the Day/Giving Rewards to Winners**

Questions are also aired for the enrollees to answer. Enrollees who texted or answered the correct answer were consolidated. Winners are selected by drawlots in cases where one or more enrollees got the correct answer.

Prices in the form of planting materials like fruit tree seedlings, bamboo propagules, vegetable seeds, t shirts and e-load were awarded to the winners.

12. Graduation Exercises

A total of 1,300 successfully graduated the SOA. A hybridized graduation exercises was conducted due to limited budget. Six hundred composed of partners and graduates attended the SOA graduation on April 30, 2024. Top Achievers, outstanding graduates, and partners were recognized and awarded during the graduation ceremony. As stated mention, a significant number of views totalling to 84 thousand was recorded after the SOA graduation.

No.	LGU/CGU	SOA Coordinator	Number of Enrollees		
			AO May 22	Participated/ Completed	Attended the SOA Graduation F2F
1.	Nueva Era, Ilocos Norte	Ms. Lovely Joy C. Dalag	116	49	20
2.	Banna, Ilocos Norte	Ms. Kathryn T. Caindec-Fulgencio	38	30	15
3.	Solsona, Ilocos Norte	Ms. Liza Domingo Ms. Marnelie Colobong	93	85	30
4.	Marcos, Ilocos Norte	Ms. Gladies Villanueva	58	55	40
5.	Dingras, Ilocos Norte	Ms. Michelle Ann Agmata	123	60	30
6.	Piddig, Ilocos Norte	Ms. Donalyn N. Domingo	52	46	18
7.	Sarrat, Ilocos Norte	Ms. Annette Calvelo	135	132	30
8.	Laoag City	Madelyn Baloalloa	195	189	60
9.	Vintar, Ilocos Norte	Ms. Maricel Serrano	72	72	50
10.	Bacarra, Ilocos Norte	Ms. Trixia Y. Dadiz	71	70	14
11.	Pasuquin, Ilocos Norte	Ms. Glenda A. Lagpacan	78	50	35
12.	Burgos, Ilocos Norte	Ms. Karen Joy C. Racuya	72	35	10
13.	OPAG, Ilocos Norte	Ms. Lorna Lubera	31	20	10
14.	San Nicolas, Ilocos Norte	Mr. Leovigildo Bungobong Cecilia Sambrano	65	62	33
15.	City of Batac, Ilocos Norte	Ms. Rachel R. Aguilar Mr. Ricardo I. Sibucao Jr.	105	80	51
16.	Paoay, Ilocos Norte	Ms. Aurora Cacayorin	150	130	45
17.	Currimao, Ilocos Norte	Ms. Bernadette R. Cacactin	52	40	15
18.	Badoc, Ilocos Norte	Ms. Clarence Luna	59	55	32
19.	MMSU Students	CAFSD	28	25	23
20	INAC		30	15	9
		TOTAL	**1,623**	**1,300**	

More than 300 were considered drop-outs due to the following:

- Some went to abroad and outside Ilocos Norte
- Some were heavily affected by the strong typhoon
- Do not have enough time for the program
- Loaded with other activities

Top 5 LGUs with most active enrollees were also awarded during the activity. They are the following:

1. Marcos
2. Paoay
3. Solsona
4. Vintar
5. City of Batac

13. SOA Evaluation result

Based from the evaluations conducted every after SOA airing and the overall airing, responses showed that majority of the enrollees rated the SOA as excellent in terms of the following parameters:

1. Duration and time of airing
2. Topics aired
3. Comprehensibility of the topics aired
4. Time provided in every airing
5. How the SOA is aired
6. Selection of Speaker or lecturer
7. Program Host/Broadcaster

Annexes

1. **Approved Proposal**
2. **List of Topics Aired**
3. **Quizzes (Pre and Post Test, Quizzes 1-3, Top Achievers Examination**
4. **Photodocumentation**
5. **Press Releases**
6. **Testimonies/Feedback**

Approved Proposal

MARIANO MARCOS STATE UNIVERSITY

Extension Directorate

MARIANO MARCOS STATE UNIVERSITY
GZ5128324

VPPD

MMSU RECEIVED DATE FEB 14 2023 BY OFFICE OF THE PRESIDENT

February 13, 2023

DR. SHIRLEY C. AGRUPIS
President
This University

Thru: **DR. NATHANIEL R. ALIBUYOG**
VP for Research and Extension

ENGR. AMI RUTH R. COCSON
VP for Planning and Development & GFPS Executive Director

DR. OSCAR M. AGPAOA
VP for Administration, Finance, & Business

MS. CHRISTINE MAE B. PIZA
Director, FMS

Madam:

May we submit for your kind approval the attached proposal on the implementation of another University-initiated ***School-on-the-Air (SOA) Program/Eskwela iti Tangatang.*** This time, the SOA will be covering Goat and Swine Production, one of the priority areas of the Provincial Government of Ilocos Norte under the Ilocos Norte Agriculture and Fisheries Extension System (INAFES). Such need was also included in the consolidated additional information and technology needs of the community members during the evaluation of our SOA as part of our implementation strategy.

With all the issues and concerns the community members have experienced during the past year on African Swine Fever (ASF) including the need to improve the feeding strategies for improve production, the SOA will be implemented.

In addition, a closer link between the LGUs, PGIN, and other implementing agencies will be followed to ensure that the information and technologies disseminated will be adopted by the community members. To date, we have documented a lot of technology adopters from our SOA ***Tarabay iti Pagtaengan, Pagbiagan, Salun-at (TIPPS) ken Dadduma Pay***.

Through your support on the implementation of extension programs and projects, we are looking forward to more fortified community members. Thank you very much.

MMSU MARIANO MARCOS STATE UNIVERSITY
CITY OF BATAC, ILOCOS NORTE
APPROVED/DISAPPROVED
SHIRLEY C. AGRUPIS
UNIVERSITY PRESIDENT

Very respectfully yours,

MARILOU P. LUCAS
Director

Funds Available: 101 - 9,305.00
164 - 150,000.00

IMELDA C. CORPUZ
Chief, Accounting Office

Mariano Marcos State University
EXTENSION DIRECTORATE
RECEIVED
Date/Time: FEB 14 2023
By:
Ctrl No. EO-22-02-023

List of topics aired

Episode No.	Topic	Topic Content	Resource Person/Agency	Contact Number	Number of Airing	Broadcast Date		
						DWFB	DWCI	DWNI
1	Initial Broadcast	What to expect from the SOA/objectives, format, duration, topics to be aired, contact person, no. of quizzes, requirements for graduation, complementary learning resources, Sequence of airing (introduction/review of the previous lesson, answers to questions, feedback, interviews, announcements, summary, teaser for next season.	Program Host		1	June 7	June 13	June 14
2	Pre-testing	Items to determine the level of knowledge of the enrollees	Program Host		1	June 9	June 15	June 16
3-4	Feeding Management	Feed Resource and Feeding Techniques for goats	Sean R. Vidad/MMSU-CAFSD	09163957692	2	June 14 June 16	June 20 June 22	June 21 June 23
5-6		Unconventional feed resource for feeds and feed processing for swine			2	June 21 June 23	June 27 June 29	June 28 June 30
7-8		Answers to questions			2	June 28 June 30	July 4 July 6	July 5 July 7
9	Farm Planning and Budgeting	Importance of Planning and Budgeting	Sheila Marie Joy Lidora		1	July 5	July 11	July 12
10	Record Keeping	Record Keeping			1	July 7	July 13	July 14

Episode No.	Topic	Topic Content	Resource Person/Agency	Contact Number	Number of Airing	Broadcast Date		
						DWFB	DWCI	DWNI
11-12		Answers to questions Testimony related to Planning, Budgeting and Record Keeping	Program Host		2	July 12 July 14	July 18 July 20	July 19 July 21
13-14	Disease/Health Management	Animal Disease Detection for Goat and Swine, Signs and Symptoms, Control, and Prevention	Melvin Bagot/College of Vet Medicine	09203873942	2	July 19 July 21	July 25 July 27	July 26 July 28
15-16	Disease/Health Management	Animal Disease Detection for Goat and Swine, Signs and Symptoms, Control, and Prevention	Program Host		2	August 23	August 24	August 25
17	QUIZ 1		Program Host		1	August 25	August 29	August 30
18-19	Disease/Health Management	Animal Disease Detection for Goat and Swine, Signs and Symptoms, Control, and Prevention	Dr. Melvin Bagot		2	August 30 September 6	August 31 September 7	September 1 September 8
20-21	Breeding/ Reproduction	Selection and breeding techniques in goat and swine	Hazel H. Achuela/ MMSU-CAFSD	0946470803	2	September 8 September 13	September 12 September 14	September 13 September 15
22-25		Selection and breeding techniques in goat and swine	Program Host		2	September 15 September 20 September 22 September 27	September 19 September 21 September 26 September 28	September 20 September 22 September 27 September 29
26-28		Answers to questions	Program Host			September 29 October 4 October 6	October 3 October 5 October 10	October 4 October 6 October 11
29		Rabbies	Ms. Liza Domingo Solsona			October 11	October 12	October 13
30	Renewable Energy	Solar PV Systems for Household Generations	Engr. Jeremiah Corpuz			October 13	October 17	October 18

Episode No.	Topic	Topic Content	Resource Person/Agency	Contact Number	Number of Airing	Broadcast Date		
						DWFB	DWCI	DWNI
31	Housing	Housing Management for goat	Duane Mark Rarangon	09089581739	1	October 18	October 19	October 20
32		Napasayaat a Panangtaraon kadagiti Kalding				October 20	October	
33	**Quiz 2**	Lessons learned from the previous topics	Program Host		1	October 25	October 26	October 27
34		Occupational Safety and Health in Goat and Swine Production	Mr. Leiron Kaizer A. Ganal		1	November 8	November 9	November 10
35		Grit and Resilience: A Guide to Facing Life's Challenges and Adversities in Livestock Production	Prof. Nova Mateo Cabias		1	November 10	November 14	November 15
36		Anxiety and Depression: Coping Strategies			1	Nov. 15	Nov. 16	Nov. 17
37		Handling Customers' Needs and Complaints			1	Nov. 17	Nov. 21	Nov. 22
38		Self-Care Routine			1	Nov. 22	Nov. 23	Nov. 24
39		Saludsod ken Sungbat, Housing and Silage	Mr. Duayne Rarangon		1	Nov. 24	Nov. 28	Nov. 29
40		Panangmanehar KAdagiti Pangganakan a Baboy	Ms. Joan Rarogal		1	Nov. 29	Nov. 30	Dec. 1
41		Panangmanehar Kadagiti Pangganakan a Baboy			1	Dec. 1	Dec. 5	December 6
43		Meat and Meat Products: Market Needs and Opportunities	Prof. Fairie Ann Domingo		1	Dec. 8	Dec. 12	Dec. 13
44		Meat Processing Part 1: A Guide on Meat Selection and Handling			1	Dec. 13	Dec. 14	Dec. 15
45		Meat Processing Part 2: Methods of Preservation			1	Dec. 15	Dec. 19	Dec. 20
46		Climate Change: Panagbalbaliw ti Panawen: Ammuentayo no kasano a maapektaran dagiti tarakentayo	Engr. Juanito Maloom		1	Dec. 20	Dec. 21	Dec. 22
47		Meat Processing Part 4: Comminuted Meat Products (Skinless longganisa, longganisa with casing, nuggets)	Prof. Fairie Ann Domingo		1	Dec. 22	Dec. 26	Dec. 27
48		Meat Processing Part 4 (Pork/Chicken Ham, Bacon			1	Dec. 27	Dec. 28	Dec. 29

Episode No.	Topic	Topic Content	Resource Person/Agency	Contact Number	Number of Airing	Broadcast Date		
						DWFB	DWCI	DWNI
49		Meat Processing Part 5: Cured Meat Products (Pork/Chicken Tocino, Corned beef)			1	Dec. 29	January 2	January 3
50								
51		Capital Management	Basic Bookkeeping and Financial Management		1	January 19	January 23	January 24
52			Agricultural Marketing		1	January 24	January 25	January 26
53					1	February 2	February 6	February 7
54		Waste Management	Waste Management Strategies in Swine Production		1	February 5	February 13	February 14
55-56					1	February 14	February 15	February 16
57			Estimating Live Body Weight of Ruminants		1	February 21	February 22	February 23
58	**Quiz 3**	Lessons learned from the previous topics	Program Host		1	February 23	February 27	February 28
59	**Pos-test SOA Evaluation**	**Pos-test**	Program Host		1	February 28	February 23	March 1
60		**SOA Evaluation**	Program Host		1	March 1	March 5	March 6
		Top Achiever's Examination				March 15		
		SOA Graduation				April 30		

Pre-test, quizzes, and top achiever's exam

Pretest and Post Test

Para iti Kalding

Direksion. Pilien ti husto a sungbat kadagiti sumaganad a saludsod. Isurat/Kur-itan ti letra a mapili.

1. Klase ti taraon dagiti kalding a nangato iti digestible nutrients-na ken addaan daytoy iti nababa a fiber. Masansan dagitoy nga agricultural wenno industrial by-products ken kadawyan a maipakan kadagiti taraken tapno mapangato ti ganansia.
   a. Roughages
   b. Forages
   c. Concentrates
   d. Mineral supplements

2. Sadinno kadagitoy ti saan nga usto kadagiti sistema ti pannangan dagiti kalding?
   a. Kayatda ti mangan iti nadumaduma ti klasena a forages argaman dagiti bulbulong ken shrubs.
   b. Kabaelanda a pilien ti umiso, kangrunaan, ken kasustansiaan a mula argaman dagiti parte dagitoy, aramat ti bassit a bibigda.
   c. Maitakderda dagiti dua nga akinlikod a sakada tapno magaw-atda dagiti parte ti mula a kayatda a kanen.
   d. Saanda a madeterminar ti napait, nasam-it, naapgad, ken naalsem a raman.

3. Ania kadagiti sumaganad dagiti maibilang a *causative agents* a mangitunda iti sakit a *keratoconjunctivitis?*
   a. Moraxella ovis
   b. Brucella abortus
   c. *Pasteurella multocida*
   d. Paramyxovirus
   e. Awan kadagiti nadakamat

4. *Moniezia expansa* ket maysa a klase ti tapeworm ti animal kas iti _____?
   a. Ruminants
   b. Baboy
   c. Manok
   d. Aso
   e. Awan kadagiti nadakamat

5. Dagiti sumaganad ket senyales ti coccidiosis kadagiti kalding, malaksid iti
   a. Pumuraw a rugit dagiti kalding, adda wenno awan iti mucus wenno darana
   b. Constipation
   c. Awan ganas a mangan ken gurigoren
   d. Pannakadehydrate gapu iti panagibleng
   e. Panagkakapsot

6. Mano iti kapintasan a rukod wenno kangato ti aramiden a balay ti kalding, manipud iti daga agingga iti flooring?
   a. 0.5 metro
   b. 1.0 metro
   c. 1.5 metro
   d. 2.0 metro

7. Ania dagiti kasapulan a materiales wenno ramit tapno maipaay kadagiti kaiyanak a kalding ti makaumanay a pudot ti bagida kalpasan a naiyanak dagitoy.
   a. Brooder

b. Bucket
c. Used sacks
d. Used newspaper

Para iti Baboy

1. Ania kadagiti sumaganad ti example ti non-conventional feedstuff para kadagiti baboy.
   a. Tuyo
   b. Mais
   c. Wild root crops kas iti Ube ti bantay, buga ken dadduma pay
   d. Cassava meal

2. Taraon (processed feedstuff) para kadagiti baboy a maaramid wenno aggapo manipud kadagiti nagango ken nadekdek a bulbulong.
   a. Leaf powder
   b. Leaf meal
   c. Leaf mold
   d. Leaf feed

3. Ania ti kadawyan a mairekomenda a breeding age dagiti pangganakan a baboy (boars and gilts?)
   a. 6 months old
   b. 8 months old
   c. 1 year old
   d. 2 years old

4. Napadakayan ti pangganakan a baboy iti March 16, 2023. No saan a nagbalin daytoy, manamnama nga agarem to manen daytoy intono _____.
   a. March 21, 2023
   b. April 7, 2023
   c. May 7, 2023
   d. May 21, 2023

5. No ti pangganakan ni Manong Juan ket napadakayan idi June 6, 2023, kaano ti manamnama a panaganak daytoy?
   a. August 27, 2023
   b. September 14, 2023
   c. September 28, 2023
   d. October 2, 2023

6. Lapdan kadi ti panagpasuso ti baboy ti panagaremna?
   a. True
   b. False

7. Nadanum ken napusiaw a rugit ti baboy ket masansan a makita iti _____.
   a. Collibacillosis
   b. Coccidiosis
   c. Salmonellosis
   d. Swine dysentery

8. Dagiti sumaganad ket husto pakaseknan iti Transmissible Gastro-Enteritis (TGE), malaksid iti _____.
   a. Maprebentaran babaen ti pannakabakuna
   b. Alisto a makaakar
   c. Awan bakunana
   d. Awan agasna
   e. Awan kadagiti nadakamat

9. *Streptococcus suis* ket klase ti zoonotic disease a maala manipud kadagiti

A. Baboy
B. Baka
C. Aso
D. Pusa
E. Kalding

Quiz 1
August 25, DWFB
August 29 & 30, DWCI and DWNI

A. Multiple Choice. Isurat/i-click ti letra ti usto a sungbat kadagiti sumaganad a saludsod.

1. Maysa ti *Leptospirosis* kadagiti *most common infectious microorganisms* a mangitunda iti *abortion* kadagiti taraken a kalding
   a. Wen
   b. Saan

2. *Coccidiocis* ti awag iti kalding ma-*dehydrate* gapu iti *diarrhea*
   a. Wen
   b. Saan

3. Kangrunaan a maapektaran iti Swine Dystentery dagiti baboy a _____

   a. 2-3 weeks
   b. 3-6 weeks
   c. 8-14 weeks
   d. 10-15 weeks

4. Ti sakit a *Leptospirusis* ket maigapu iti _____
   a. **Bacteria**
   b. Virus
   c. Protozoa

5. Ti sakit nga ASF ket maigapu iti _____
   a. Bacteria
   b. **Virus**
   c. Protozoa

6. Ti _____ ket makatulong ken mangted daytoy iti idea no mano ti mapastrek iti panagtalon ken panagtaraken iti dinguen
   a. **Farm Planning**
   b. Farm Budgeting
   c. Farm Record Keeping

7. Ti kayat a sawen ti M iti SMART kas maysa a component ti Farm Planning ket
   a. Mighty
   b. **Measurable**
   c. Meaningful

8. Sensitibo dagiti kalding kadagiti ipauneg dagitoy. Malasinda ti nasam-it, naalsem, wenno naasin. Kabaelan dagitoy ti mangirwar kadagiti taraon a saan a maiyannatop kadakuada.
   a. **Wen**
   b. Saan

9. Kabilang dagiti *grasses, shrubs, ken tree leaves* kadagiti Forages a taraon dagiti kalding.
   a. **Wen**
   b. Saan

10. Kabilang ditoy dagiti commercial feed formulations wenno agro-industrial by-products ken addaan dagitoy iti maiyannatop a sustansia a kasapulan dagiti taraken.
    a. Forage
    b. Mineral Supplement

c. **Concentrates**

11. Dagitoy dagitay pagpakan kadagiti taraken a mabalin nga agtubo wenno maimula.
    a. **Forages**
    b. Grasses
    c. Shrubs

12. Dagitoy dagitay pagpakan ken alisto a paggapuan ti protina ken dregradable organic matters a kasapulan dagiti taraken iti panagdakkelda.
    a. Forages
    b. Concentrates
    c. **Alternative Feeds**

13. Ania kadagitoy ti karaman kadagiti mabalin nga alternatibo a pagpakan kadagiti taraken a baboy
    a. Madre de agua wenno *Trichantera gigantea*
    b. Taro wenno *Colocasia esculenta*
    c. Talinum
    d. Mulberry
    e. Amin dagiti nadakamat

14. Dagiti nadumaduma a sistema tapno mapaimas dagiti pagpakan kadagiti taraken a baboy
    a. Cooking
    b. Drying
    c. Fermentation/Ensiling
    d. Amin dagiti nadakamat

15. Daytoy ti kangrunaan ken kalaakka a kasapulan dagiti taraken a baboy, ngem no dadduma ket saan unay maikkan importansia
    a. Feeds
    b. Danum
    c. Vitamins

B. Ti makunayo?

1. Kadagupan kadagiti immuna a topiko a naidanon iti programa, mangted iti dua a manamnama nga adaptarenyo ken mabalin a nangnangruna a makatulong kadakayo.
    - Feeding Goats: From Science to Practice
    - Alternatibo a Pagpakan kadagiti Baboy
    - Farm Planning, Budgeting, and Recordkeeping
    - Crops and Livestock Insurance
    - Goat Diseases
    - Swine Diseases

2. Rason no apay a dagitoy a topiko ti napiliyo? _____

3. Kas maysa kadagiti SOA enrollees, ania iti makunayo iti SOA kas maysa a sistema ti panagadal? Ania dagiti benepisio a maipaayna kadakayo?

Agyamankami unay!

https://forms.gle/NkKhSyrFCvKJpaFA6

Quiz 2
October 25, DWFB
October 26, DWCI & October 27, DWNI

B. Multiple Choice. Isurat/I-click ti letra ti usto a sungbat kadagiti sumaganad a saludsod.

1. Ruguian a tingitingen/amirisen dagiti taraken nga adda potentialna wenno mabalin a pangganakan no addan _____ a bulan dagitoy.
   a. 1-2 months old
   b. 2-3 months old
   c. 3-4 months old

2. Maisayangkat ti pinal a pannakapili dagiti pangganakan no addan ____ a bulan dagiti taraken.
   a. 4-5 months old
   b. 5-6 months old
   c. 7-8 months old

3. Pilien dagiti pangganakan nga addaan iti mapagtalkan ken napintas ti production ____-na.
   a. Records
   b. List
   c. Volume

4. Kapintasan ti bula nga aramaten a pangganakan ket agdagsen iti ____kg.
   a. 90 kg
   b. 100 kg
   c. 110 kg

5. Iti panagpili iti bumalasang a mabalin a pangganakan (gilt), mairekomenda ti addaan iti ___ a paris a prominent and well-spaced, functional teats-na
   a. 5 pairs
   b. 6 pairs
   c. 7 pairs

6. Saan a mairekomenda a pangganakan ti gilt no namin-____ a napadakayan ngem saan a nagsikog
   a. 2
   b. 3
   c. 4

7. Maysa kadagiti rason ti _____ failure ket no saan a nafertilized ti egg cell/saan a nagbalin ti embryo, 1-12 nga aldaw kalpasan a napadakayan daytoy.
   a. Conception
   b. Inception
   c. Mummification

8. _____ ti awag iti naburro a feed materials kas iti grasses, legumes, crop residues, garami, kayo ti mais ken dadduma pay.
   a. Forages
   b. Silage
   c. Tree Leaves

9. _____ ti kolor ti naburro no napintas ti pannakaisagana/pannakaburrona.
   a. Greenish brown

b. Lumabbaga
c. Umamarillio

10. Maibalakad a _____ metro ti kangato wenno elevation ti maaramid a flooring tapno makapag circulate a nasayaat ti angin ken bentilasion ti lugar kasta met a nalaklaka ti pannakadalus ti apon dagiti kalding.
    a. 1-1.5 m
    b. 1.5-2 m
    c. 2-3 m

True/False. Isurat ti True no daytoy ket husto, False, no saan

1. Kasapulan a kanayon a sibubussog ti pangganakan a baboy no daytoy ket masikog aglalo iti 1st tri-mester daytoy (False).
2. Infection ti maysa a rason a pakaalaan ti Mummification (True).
3. Pannakasaluad dagiti dinguen kontra iti tudo, napigsa nga angin ken nakaro a pudot, ken dadduma pay a makadangran kadagitoy ti kangrunaan a rason no apay a maiyaramidan dagiti dinguen iti balay/aponda (True).
4. Mapreserba ken maaramat dagiti sustansia a kasapulan dagiti taraken babaen no maburro dagiti pagpakan kadagiti taraken (True).

Identification: Tsekan/Jur-itan ti naipaay nga espasio/Yes or No for listeners via radio

1. Kur-itan dagiti benepisio a maipaay ti panagaramat iti Solar PV System
   - ❑ Renewable and sustainable
   - ❑ Environment friendly
   - ❑ Reduces electricity bills
   - ❑ Energy Independence and security
   - ❑ Energy Access

2. Causes of Mummification
   - ❑ Infection
   - ❑ Poor nutrition
   - ❑ Uterine Crowding
   - ❑ Genetic factors
   - ❑ Stress
   - ❑ Parity
   - ❑ Hormonal Imbalance

3. Pagilasinan a ti tao ket naapektaran iti rabies
   - ❑ Panagsakit ti ulo
   - ❑ Kabutengna ti angin
   - ❑ Kabutengna ti danum
   - ❑ Kabutengna ti lawag

Agyamankami unay!

Quiz 3
February 23, DWFB
February 27, DWCI & February 29, DWNI

A. Multiple Choice. Isurat/I-click ti letra ti usto a sungbat kadagiti sumaganad a saludsod (10 points).

1. Maysa kadagiti mabalin a sagabaen dagiti taraken no napudot ti tiempo ket ti _____
   a. Heat stress
   b. Panaguyek
   c. Awan kadagiti nadakamat

2. Dagiti aktibidad dagiti _____ ti kangrunaan a makaigapo ti climate change
   a. Animal
   b. Tattao
   c. Isu a dua

3. Kangrunaan a kasapulan iti panangala iti kadagsen ti dinguen kas iti kalding wenno baka ket ti _____.
   a. Tape Measure
   b. Pagkiluan
   c. Palanggana

4. Amin dagiti sumaganad ket dagiti mabalin nga aramiden tapno maleplepan ti epekto ti nakaro a pudot kadagiti tarakentayo, malaksid iti maysa.
   a. Agtaraken kadagiti napintas ti breedna. Pilien dagitay naandur iti pudot
   b. Adda latta nakapondo a danum iti lugar nga ayanda
   c. Agmula kadagiti pagpakan a naandur iti tikag
   d. Suroten ti rotational grazing kadagiti taraken.
   e. Agaramat kadagiti sistema a pannakamanehar kadagiti rugit dagiti dinguen

5. Dagiti sumaganad dagiti rason no apay nga ipreserbatayo ti karne, malaksid iti maysa
   a. Mapagtalinaed ti kinatalged ken kinapintas ti kalidad ti karne
   b. Pabayagenna ti pannakapedi daytoy
   c. Paatiddogenna ti shelf-lifena
   d. Gusgusto dagiti gumatang

6. Maysa kadagiti kangrunaan a wagas a mabalin nga aramiden tapno maimanehar dagiti waste dagiti taraken ket babaen iti _____. (Waste Management Hierarchy)
   a. Source Reduction and Reuse
   b. Recycling/Composting
   c. Energy Recovery
   d. Treatment and Disposal

7. Amin dagiti sumaganad ket dagiti mabalin a mapasaran dagiti agtartaraken iti dinguen, malaksid iti maysa
   a. Drought/Tikag
   b. Adu ti paglakuan
   c. Awan ti paglakuan kadagiti produkto/taraken
   d. Nangina dagiti magatang a maaaramat iti panagtaraken
   e. Panagsakit dagiti dinguen

8. _____ ti awag iti sistema ti panagpreserba iti karne babaen iti pannakaipamaga/payangyang (drying) tapno maikkat ti moisture content na.
   a. Drying/Dehydration
   b. Chilling/Freezing
   c. Smoking

9. Karaman dagiti sumaganad iti Marketing Mix wenno 4Ps, malaksid iti maysa
   a. Product
   b. Price
   c. Place
   d. Policy
   e. Promotion

10. _____ ti awag iti sistema ti marketing mix wenno 4Ps tapno maiwaragawag iti publiko/kaaduan
   a. Product
   b. Price
   c. Place
   d. Policy
   e. Promotion

10. True/False. Isurat ti True no daytoy ket husto, False, no saan (10 points)

1. Maysa kadagiti ikonsidera iti panagpili iti karne nga iproseso ket ti kolor daytoy (True).
2. Meat is highly perishable because of its high moisture content (True).
3. Meat is considered as potentially hazardous food (True)
4. Napintas a pagpakan ti Madre de Agua ta nabaknang daytoy iti carbohydrates (False)
5. Kustomer ti awag iti mangimanmanehar iti negosio (False)
6. Napintas a manager ti awag iti siasinnoman a saan a pulos a dumngeg kadagiti suhestion wenno reklamo dagiti kustomerna (False).
7. Agresibo a customer (Aggressive Customer) ti awag iti naringgor ken ti kayatna maasikaso a dagus no adda ibagana. Kadawyan nga awan ti denggenna a palawag ken saan a mapnek iti serbisio (True).
8. No makapungpungtot ti customer, danggayan daytoy. Sungbatan amin nga ibagana (False).
9. No saan a mamanehar a nasayaat dagiti rugit dagiti taraken, mabalin a mangitunda daytoy iti saan a nasayaat a salun-at dagitoy (True)
10. Farming is a business (True)

11. Kas maysa nga enrollee ti SOA, ania ti makunayo iti eksperiensiyayo ti panagadaltayo iti radio/FB live

Agyamankami unay!

TOP ACHIEVERS' EXAMINATION
March 15, 2024, 9 a.m.

I. True of False. Isurat ti T no iti panagkunayo ket husto ti saludsod wenno sarita, F no saan nga husto. Isurat met ti husto a sungbat no daytoy ket F tapno agbalin nga husto daytoy *(plus additional one point*) - (20 points)

1. Farm Planning ti awag iti proseso a tingitingen no ania dagiti rumbeng nga aramiden iti ania man a ganuat ken no ania dagiti mabalin a kominasion	**T**	
2. Iti balikas nga SMART iti panagtalon, ti kayat a sawen ti M ket measurement	**F**	**Measurable**
3. Babaen iti panagplano, maamuan dagiti napipintas nga estratehia a naaramidmo nga isu met ti mabalinmo manen a suroten kadagtii sumaruno nga aktibidadmo	**F**	**Panagrecord**
4. Infection ti maysa a rason a pakaalaan ti Mummification	**T**	
5. Pannakasaluad dagiti dinguen kontra iti tudo, napigsa nga angin ken nakaro a pudot, ken dadduma pay a makadangran kadagitoy ti kangrunaan a rason no apay a maiyaramidan dagiti dinguen iti balay/aponda.	**T**	
6. Smoking ti awag iti sistema ti panagpreserba iti karne babaen iti pannakaipamaga/payangyang tapno maikkat ti *moisture content* na.	**F**	Drying/Dehydration
7. Promotion ti awag iti sistema ti marketing mix wenno 4Ps tapno maiwaragawag iti publiko/kaaduan	**T**	
8. Maysa ti *Leptospirosis* kadagiti *most common infectious microorganisms* a mangitunda iti *abortion* kadagiti taraken a kalding	**T**	
9. *Coccidiocis* ti awag iti kalding ma-*dehydrate* gapu iti *diarrhea*	**T**	
10. Kasapulan a kanayon a sibubussog ti pangganakan a baboy no daytoy ket masikog aglalo iti 1st tri-mester daytoy	**F**	Saan, timbengen ti ipakan
11. Mapreserba ken maaramat dagiti sustansia a kasapulan dagiti taraken no maburro dagiti pagpakan kadagiti taraken	**T**	
12. Napintas a pagpakan ti Madre de Agua kadagiti taraken ta nabaknang daytoy iti carbohydrates	F	Protein
13. Farming is a business	**T**	
14. Maysa kadagiti ikonsidera iti panagpili iti karne nga iproseso ket ti kolor daytoy	**T**	
15. **Rumination ti awag iti Panagngatingat ti Kalding**	**T**	

II. **Multiplie choice.** Pilien ti umno a sungbat kadagiti nailanad a pagpilian. Timbukelan ti usto a sungbat. (10 points)

1. Ti _____ ti maysa kadagiti tulbek ti naballaigi a panagtalon wenno panagtaraken iti dingo. Maysa daytoy a wagas ti panangmonitor kadagiti aktibidad.
   a. Panagplano
   b. Panagrekord
   c. Panagbudget

2. Ti sakit nga ASF ket maigapu iti _____
   a. Bacteria
   b. Virus
   c. Protozoa

3. Kabilang dagiti *grasses, shrubs, ken tree leaves* kadagiti Forages a taraon dagiti kalding.
   c. Wen
   d. Saan
   e. Diak ammo

16. Kabilang ditoy dagiti commercial feed formulations wenno agro-industrial by-products ken addaan dagitoy iti maiyannatop a sustansia a kasapulan dagiti taraken.
   d. Forage
   e. Mineral Supplement
   f. Concentrates

17. Dagitoy dagitay pagpakan ken alisto a paggapuan ti protina ken dregradable organic matters a kasapulan dagiti taraken iti panagdakkelda.
   d. Forages
   e. Concentrates
   f. Alternative Feeds

18. Pilien dagiti pangganakan nga addaan iti mapagtalkan ken napintas ti production ____-na.
   d. Records
   e. Capacity
   f. Identity

19. _____ ti awag iti naburro a feed materials kas iti grasses, legumes, crop residues, garami, kayo ti mais ken dadduma pay.
   d. Forages
   e. Silage
   f. Tree Leaves

20. Maysa kadagiti mabalin a sagabaen dagiti taraken no napudot ti tiempo ket ti _____
   d. Panaguyek
   e. Heat stress
   f. Awan kadagiti nadakamat

21. Kangrunaan a kasapulan iti panangala iti kadagsen ti dinguen kas iti kalding wenno baka ket ti _____.
   e. Pagkiluan
   f. Tape Measure
   g. Palanggana

22. Amin dagiti sumaganad ket dagiti mabalin nga aramiden tapno maleplepan ti epekto ti nakaro a pudot kadagiti tarakentayo, malaksid iti maysa.
   f. Agtaraken kadagiti napintas ti breedna. Pilien dagitay naandur iti pudot
   g. Adda latta nakapondo a danum iti lugar nga ayanda

h. Agmula kadagiti pagpakan a naandur iti tikag
i. Suroten ti rotational grazing kadagiti taraken.
j. Agaramat kadagiti sistema a pannakamanehar kadagiti rugit dagiti dinguen

23. Karaman dagiti sumaganad iti Marketing Mix wenno 4Ps, malaksid iti maysa
f. Product
g. Price
h. Place
i. Policy
j. Promotion

24. Dagiti aktibidad dagiti _____ ti kangrunaan a makaigapo ti climate change
d. Animal
e. Tattao
f. Isu a dua

25. Dagitoy dagitay mula a maipakan kadagiti kalding a mabalin nga imula wenno agtubtubo kas iti grasses, shrubs, ken tree leaves.
a. Alternative feeds
b. Forages
c. Crop residues

26. Dagitoy dagitay locally available mineral sources kas iti limestone, ground snail, ken oyster shells
a. Non-protein nitrogen
b. Mineral supplements
c. Processed feeds

27. Dagitoy dagitay natay a fetus ngem *fully formed* wenno kompleto ti amin a partes ti bagida, nupay natay dagitoy iti uneg ti takong sumagmamano nga oras wenno minutos sakbayda a naiyanak. No dadduma, mabalin met a natay dagiti burias kabayatan ti pannakaiyanakda.
a. Mummified fetus
b. Stillborn piglets

III. Enumeration/Identification(10 points)

A. Ania ti kayat a sawen ti balikas nga SMART no agplanotayo **(6 points)**

1. S _____ - Specific
2. M _____ - Measurable
3. A _____ - Attainable
4. R _____ - Relevant
5. T _____ - Time bound

B. Mangted iti tallo a sistema tapno mapaimas dagiti pagpakan kadagiti taraken a baboy **(3 points)**
1. Cooking
2. Drying
3. Fermentation/Ensiling

C. Mangted iti tallo a rason wenno pakaigapuan ti Mummification **(3 points)**
1. Infection ken Poor nutrition
2. Uterine Crowding ken Genetic factors
3. Stress ken Parity
4. Hormonal Imbalance

D. Mangted ti uppat (4) a Tips iti Record keeping **(3 points)**

1. Keep it simple
2. Record immediately
3. Organize your data
4. Record data accurately

E. Sipud naimplementar ti School-on-the-Air (SOA) Program, namin-ano kan a nag-enroll? _____. Ania ti makunam iti programa kas maysa a sistema ti pannakaidanon dagiti impormasion ken teknolohia. Kadagiti naidanon, adda kadin iti pinadas mo nga inyaplikar. No adda, adda kadi naitulongna kenka?

Photodocumentation of SOA Activities

School-on-the-Air (SOA)/Eskuela iti Tangatang. Conducted the SOA Top Achievers Examination on March 15, 2024 at MMSU-UBRC. The activity was participated by 18 LGUs and 2 cities in Ilocos Norte. Representatives from the LGUs were selected by the SOA Coordinators.

School-on-the-Air (SOA)/Eskuela iti Tangatang. Conducted the SOA Graduation Exercises on April 30, 2024 at MMSU Teatro Ilocandia. A combination of face-to-face and online platform were used considering the capacity of the Teatro Ilocandia and the present climate situation. A total of 1,300 graduates received their Certificates of Completion during the activity. Top Achievers, Top Scorers, Enrollees with Complete Attendance were given Certificates of Recognition during the activity. Eighteen LGUs and 2 cities participated in the activity. Graduates were composed of farmers/livestock raisers, rural women and students actively participated in the activity.

The Provincial Government of Ilocos Norte including NGAs like DA, ATI, DOST, PCC, PhilRice provided support to the SOA program. These include assorted vegetable seeds, sprayer, and inoculant were provided to the graduates.

A total of 84 thousand viewers were recorded during the graduation exercises.

https://www.facebook.com/share/v/2pV4KBcP8awCLYRu/

Production and Distribution of Information, Education, and Communication (IEC) Materials. Twenty-five titles at 1,000 copies each were reproduced and distributed to SOA graduates during the graduation exercises. The IEC materials produced were the topics aired in the SOA. Materials were produced as an answer to the demand of enrollees/graduates for a complementary material to the learning activities in the SOA.

TULONG ITI MANNALON

Agplanoka Para iti Naballigi a Panagtalon

Ni MERCY R. GAÑO

Ni Dr. Sean R. Vidad manipud iti MMSU-CAFSD, Siudad ti Batac (naka-T-shirt iti amarilio) iti panangisurona kadagiti miembro ti Saricao Upland Farmers Association iti Vintar, Ilocos Norte iti panagaramid iti silage. Kunana a "napateg nga ammuen dagiti materiales nga adda iti aglawlaw tapno ammo dagiti isagana" no agaramidka iti silage.

NO dadduma, gapu iti kaadu a trabaho, malipatantayo 'tay maysa kadagiti kapatgan a banag iti benneg ti panagtalon. 'Tay panagplano. No dimo insagana a nasayaat, agsaganaka met iti agbalin a di makaay-ayo a resultana.

Agsipud ta maibilang met a negosio ti panagtalon, planuem ngarud a nasayaat dagiti aramidem tapno dakdakkel ti posibilidadna nga adda nasayaat a resultana.

Ania ti Farm Planning wenno Farm Plan?

Daytoy 'tay proseso a tingitingen no ania dagiti rumbeng nga aramiden iti ania man a gannuat ken no ania dagiti mabalin a kombinasion. Kas koma: Ania dagiti imula wenno taraknen a dingo. Ania dagiti kasapulan iti panagmula ken panagtaraken?

Daytoy 'tay sistema nga iplano ken yalokaran dagiti kasapulan.

Imet ti napintas a farm plan 'tay kunada a 4 Ws ken 2H. *What (Ania), Who (Asino), When (Kaano), Why (Apay), How (Kasano),* ken *How Much (Mano).* Apay nga agtaraken wenno agmulaka? Asino dagiti pakaisangratanna wenno pagserbianna? Kaano nga aramidem ken apay nga aramidem? Apay nga agtarakenka? Apay nga agmulaka?

Mabalin a ti panggepmo ket para laeng iti pamilia. Mabalin met a kas nayon a pamastrekan wenno pamaltuadan. No desididokan iti aramidem, kasano nga irugim? Masapulmo kadi ti nayon a trabahador? Ken mano kadi ti kasapulam a pagpuonan?

Napateg ti plano iti panagtalon ta daytoy ti mangidalan kadagiti aramiden nga aktibidad. Manipud kadagiti kasapulan a materiales, pagpuonan, ken no kasano nga imanehar ti pagtatalonan wenno pagtaraknan.

No adda plano, kayatna a sawen, sisasaganaka iti ania man a mapasamak. Kas pagarigan adda napigsa a tudo wenno layus, wenno ania man a mangapektar iti aramid iti pagtatalonan, babaen ti farm plan, idalannatayo kadagiti desision nga aramidentayo.

Dagitoy man ti sumagmamano a balakad nga impaay ni Asst. Prof. Sheena Marie Joy P. Lidora manipud iti MMSU, College of Agriculture, Food and Sustainable Development (CAFSD):

(Maituloy iti panid 56)

Agplanoka Para...

(Tuloy ti panid 52)

1. No agaramid iti Farm Plan, masapul a *flexible*. Adda dagiti tiempo wenno panawen a no kasapulan a baliaren, aramiden, basta pagsayaatan ti gannuat.

2. Masapul a maaramat amin dagiti materiales iti aglawlaw. Awan ti masayang.

3. Panunoten met: Makatulong kadi a mangpataud iti agserbi ken kangrunaanna, mangpasayaat iti kasasaad ti panagbiag? No saan, apay nga aramidem?

4. Kasapulan met nga isaganaan dagiti nadumaduma a risgo ken dagiti saan a mapakpakadaan a pasamak a kas koma ti bagyo wenno layus. Ngarud, planuen a nasayaat. Naandur kadi iti tikag wenno layus dagiti imula kasta met dagiti taraken?

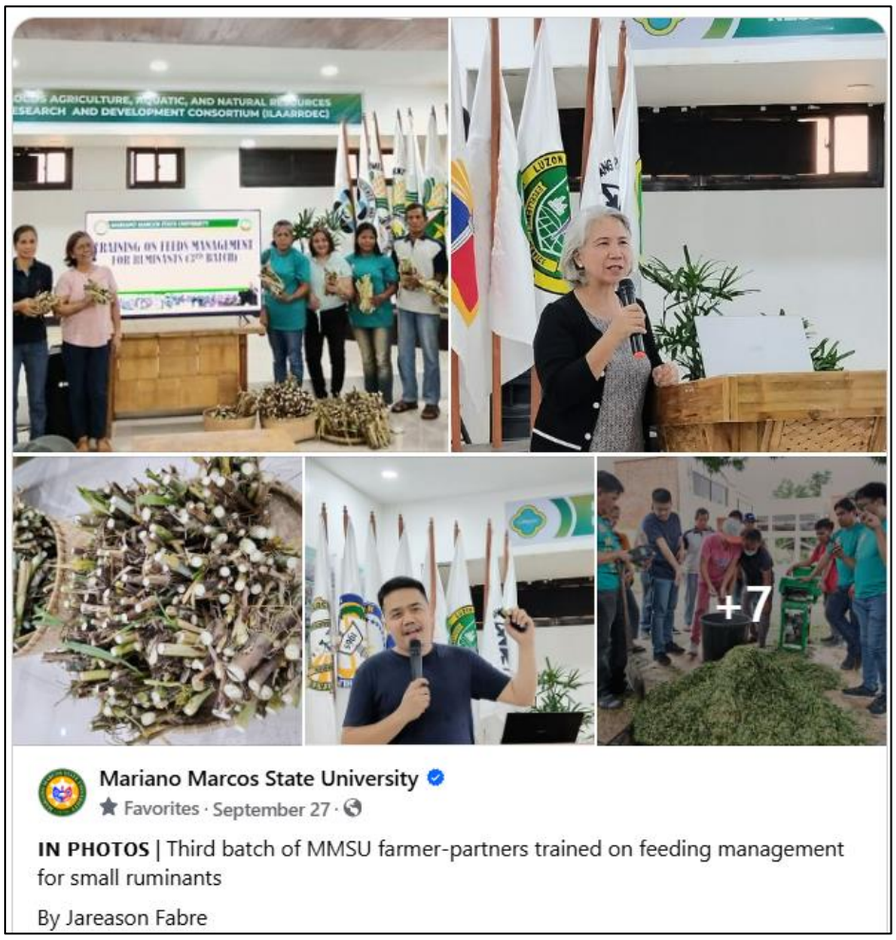
5. Maysa kadagiti nangruna a panunoten, no kas bilang adda nabulod a nagpuonan, makabayadka kadi iti umno a tiempo ken oras? No dagitoy ket naiplano, makuna a napintas ti naaramidmo a plano.

6. No agplanotayo, panunotentayo ti balikas nga SMART. Umuna: S, masapul nga Specific. Kongkreto a kunada. Ania ti kayattayo a magun-od? Maikadua, M-Measurable. Mano a porsiento ti kayatmo a ngatuan ti apit wenno ganansia? A-Attainable. Mano ti kayatmo a taraknen iti las-ud ti makatawen-- tallo, uppat? Kabaelam kadi nga imanehar dagitoy? R-Relevant. Maibagay kadi met laeng iti agdama a kasapulam ken kadagiti adda iti aglawlawmo? No isu ti imulam wenno taraknem, adda kadi paglakuam wenno gumatang iti produktom? T-Time-bound. Masapul nga adda orasna-- no kaano nga irugi ken no kaano a malpas.

7. Kasapulan nga adda *inventory* dagiti materiales agraman dagiti nagbalin a problema iti napalabas. No agtarakenka, adda kadi makaumanay a lugar; no agmulaka, kasano ti kasasaad ti lugar, ti daga? Nataba kadi wenno adda pagalaan iti asideg a pagpadanum wenno pagsibug? No agtaraken, adda kadi masapul a trabahador? No wen, mano ti kasapulan a *capital* (puonan)? Ania dagiti nagbalin a problema iti napalpalabas tapno maliklikan ti pannakaulitda?

8. Adda kadi dagiti alternatibo a wagas a mabalin a makatulong iti gannuat? No agkurangka iti igatang iti agpakan, adda kadi pakaalaam iti sabali a pagpakan?

9. Masapul nga ilista dagiti agsasaruno nga aktibidad nga isayangkat nangruna no agdadamoka. Adda met listaan dagiti kasapulan. Narigat ti agsammaked iti lagip wenno iti memoria.—O


+7
Mariano Marcos State University
Favorites · September 27 ·
IN PHOTOS | Third batch of MMSU farmer-partners trained on feeding management for small ruminants
By Jareason Fabre


Thank you, DA-INREC, Dingras Experiment Station and MMSU-CAFSD for the planting materials/forages distributed to our SOA graduates and partner LGUs.
Maraming salamat po
+5

Testimonies/Feedback

School-on-the-Air (SOA):/Eskuela iti Tangatang
Sungbat Un-unnoy kenni Apo Dios

Limmabasen ti panawen mi nga agiskwela ngem baben iti iskwela ti tangatang nga insayangkat ti Mariano Marcos State University (MMSU), naisubli kadakami ti gundaway nga agadal.

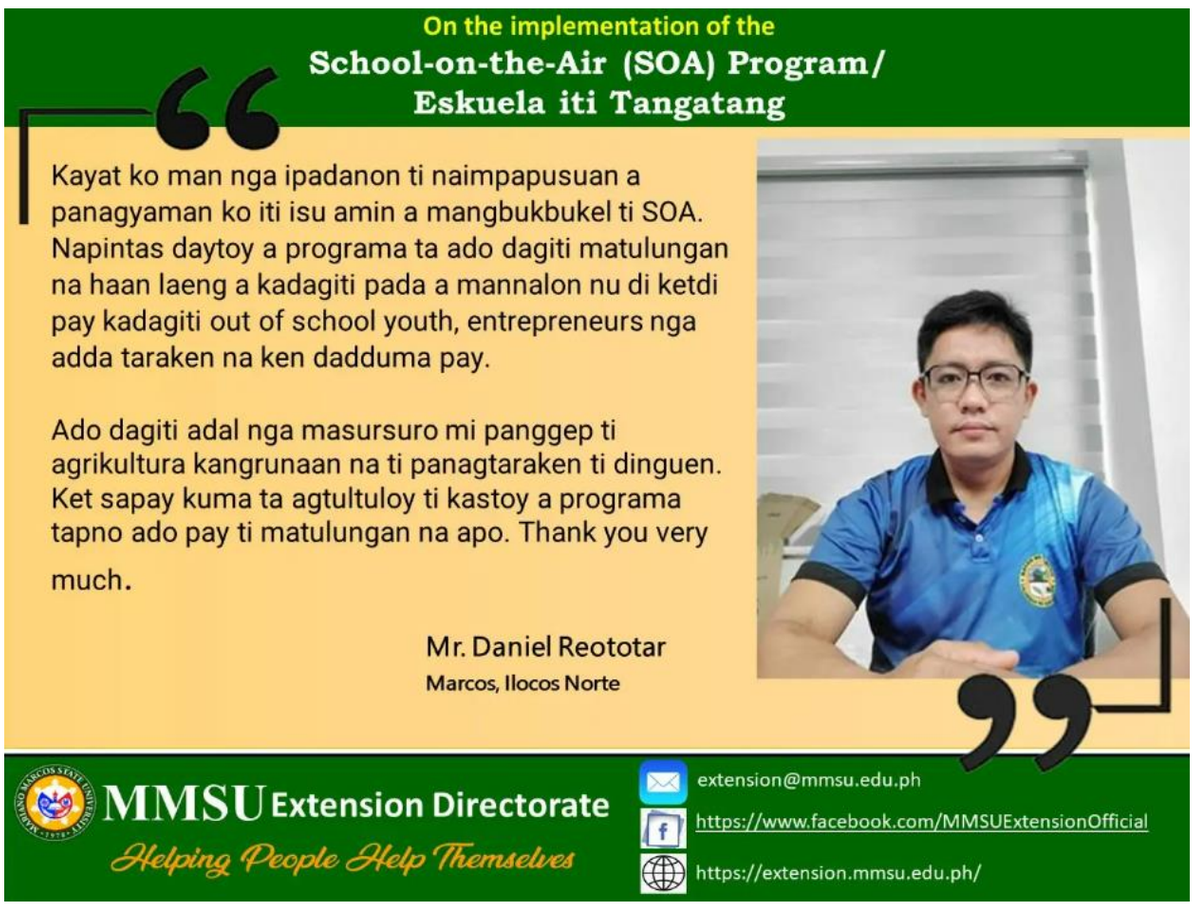
Siak ni Wilmar Miguel, estudyante ti SOA manipud iti Saricao, Vintar, Ilocos Norte. Ikablaaw ko ti napateg a nagan ni Apotayo a Hesu-Kristo iti tumunggal maysa.

Naammoak ti school -on-the-air babaen iti nasingpet a **Mam Maricel Serrano,** ti SOA coordinator ti iti ilimi a Vintar. Pinagundawayannakami nga agenrol kaduak ti 23 a miembro ti asosasion nga agduduma ti edad ken kasasaad. Adda Senior citizen, adda agtagtagibi, adda physical therapist, adda pharmacist, adu ti farmers, adda dagiti sumagmamano nga estudyante ken adda tallo nga out-of-school youth (OSY).

Ti SOA ket sungbat ni Apo Dios iti karkaragmi. Kunak daytoy ta saandakami laeng nga Insuro ta tinarabaydakami pay a maiyaplikar dagiti insuroda. Ti immuna ngamin a panagatendarmi iti SOA, naisuro iti food processing isu't gapuna a nagkiddawkami ti training maipanggep iti longganisa, embutido ken tocino processing nga siaayat a pinatgan ti very supportive President ti MMSU, **Dr. Shirley C. Agrupis**, agyamankami unay ti suportayo mam. Gapu iti lectures iti SOA nga imatmatonan ni **Mam Mercy Ramos Gano** ken laing dagiti trainor's (**Mam Bella, Mam Diana**) ken gagetda a dimmanon uray nakaadadayo ti ayanmi, sigida a nakasursuro dagiti kakaduami. Iti agdama manarimaanen ti regular a pinagaramid ken pinaglako ti Saricao Upland Farmers Association (SUFAI) iti Saricao embutido, Saricao longganisa ken Saricao tocino. Kasta pay nga inkariaannakamin ti ama ti ili a Vintar, **Hon Mayor Richard Degala**, iti pundo nga agdagup iti P250k+ para iti daytoy a livelihood.

Agyamyamankami unay kenni Apo Dios ta matungtungpalen dagiti arapaapmi a maaddaan kadagiti nayon a pamastrekan ken pagbiagan. Dakayo appo ti araramaten ni Apo Dios tapnu agbalin kami a self-sufficient. Kararagmi nga iyadadda pay ni Apo Dios ti parabur ken bendision nga itedna kadakayo amin agraman pamiliayo.

Pastor Wilmar V. Miguel
Secretarry
Saricao Upland Farmers Association
Brgy. Saricao, Vintar, Ilocos Norte



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SCHOOL-ON-THE-AIR PROGRAM AND SOCIAL MEDIA: A SYNERGISTIC EXTENSION PLATFORM FOR THE PROMOTION OF IMPROVED GOAT PRODUCTION MANAGEMENT IN ILOCOS NORTE, PHILIPPINES

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ABSTRACT

This paper presents the effectiveness of the school-on-the-air (SOA) program, integrated with a social media platform, in disseminating enhanced goat production technologies to stakeholders in Ilocos Norte, Philippines. The initiative was designed and executed by Mariano Marcos State University to deliver accessible, practice-oriented information on goat production, emphasizing key management practices. Instructional content was customized according to the felt needs of enrolled participants. The SOA was transmitted via three strategically positioned community radio stations across the province and simultaneously livestreamed on Facebook, thereby engaging a broad and heterogeneous audience. Lectures were delivered using the vernacular language. The program was conducted from June 2023 to February 2024. Conventional evaluation methods indicated a favorable influence of the platform on participants' knowledge acquisition, evidenced by elevated quiz pass rates. Statistically significant improvements were noted between pre-test and post-test scores, suggesting enhanced performance post-intervention and validating the platform's effectiveness in knowledge transfer. Furthermore, elevated graduation rates and unsolicited requests for supplementary training activities underscored the platform's role in stimulating interest, practical application, and sustained learning among participants. This novel and integrative extension strategy affirms that radio, when synergized with social media, constitutes a potent mechanism for propagating knowledge on improved and sustainable goat production.

Keywords: social media, school-on-the-air, goat, improved practices

RATIONALE

Goat production is an integral component of the agricultural landscape of the Ilocos. This animal commodity is known for its adaptability to the climatic conditions of the region and perfectly fits the farming system, making it a valuable livestock resource for local farmers. The production of goats not only provides a sustainable source of meat for the community but also contributes to the economic livelihood of many households. Additionally, goat farming helps diversify agricultural activities, promotes sustainable land use, and supports rural development in the Ilocos and the province.

The region ranked second with 2.23 metric tons of live weight production, while it ranked fourth in terms of goat inventory at 374.74 thousand heads (PSA, 2023). The province ranked third in terms of volume and inventory of goats among the provinces of the region. On the other hand, the Cooperative Development Authority of the Philippines identified goats as one of the livestock commodities of the province, while the Department of Trade and Industry identified goats as a niche commodity of the Ilocos, including the province.

The Mariano Marcos State University recognized the importance of this animal commodity in the province. Through the years, the extension arm of the university has implemented numerous extension activities and programs that promote technologies for improved production. Among these are the provision of training and seminars, dispersal of breeders and production of information, and education campaign (IEC) materials. To reach more raisers, the university initiated the school-on-the-air program (SOA) locally dubbed "Eskwela ti Tangatang" as an extension tool in the delivery of goat-based technical know-how and technologies. The uniqueness of the SOA program at the university is its complementation with other communication support strategies, like social media, as the emerging platform of communication and distribution of IEC materials. This complementary extension medium of the university was realized in partnership with local radio stations in the province, reaching even the far-flung rural communities and offering convenient learning opportunities to smallholder raisers.

Radio has been used extensively as an educational medium in developing countries and as a source of information that creates widespread awareness in a certain community. Radio is considered the most accessible of all media and most people can be reached at a relatively low cost. Thus, radio has a wide potential in educational delivery. Considering this, the SOA program aimed to increase the technical uptake of goat-based technical know-how and technologies among smallholder raisers in a fast, convenient, and cost-efficient learning mode. The study aimed to understand the dynamics of the school-on-the-air (SOA) program and social media as a complementary extension platform in the promotion of goat production technologies.

METHODOLOGY

A. Project Organization and Formality Setting

The SOA was spearheaded by the Applied Communication (APCO) Section of the Extension Directorate. Speakers or technical experts were the faculty of the Department of Agricultural Sciences- Animal Science Division of the university. On the other hand, to facilitate the recruitment of SOA enrollees, partner Municipal Agriculture Offices (MAO) identified SOA coordinators from the different municipalities. On the other hand, formal agreements were established among the stakeholders, and a Memorandum of Agreement (MOA) was signed between MMSU, the Local Government Units of Ilocos Norte, the Provincial Government of Ilocos Norte, and the radio stations involved.

B. Project Operation and Management

Active participation among stakeholders was achieved. The LGU played a great part in the selection of community members as enrollees. An inception/planning meeting was conducted with the LGUs to validate and ensure the alignment of the topics with the immediate needs of the enrollees. All interested community members who wished to enroll in the SOA were asked to complete the enrollment form. The SOA coordinators facilitated the recruitment of farmer-enrollees from their municipalities, executed a pre-airing survey, and distributed and collected enrollment forms. The results of the pre-airing survey were consolidated, specifically in identifying the topics that are important to the enrollees. This ensured horizontal alignment of topics to the needs of enrollees, as well as the selection of

lecturers. The following topics were identified: feeding and nutrition, management during the rainy season, breeding, and marketing live goats.

The airing of lectures with partner radio stations was done during lunchtime, from 12:00 noon to 1:00 PM. The preferred time slot was identified by the enrollees. The lecturers used PowerPoint presentations as the lectures were simultaneously broadcast via FB live. Pre and post-tests were administered at the start and end of the project. The answer sheets of the participants were personally collected by the SOA coordinator, checked, and the scores were recorded. Lectures were delivered using the vernacular language. Before the beginning of the lecture in subsequent airings, a question-and-answer portion was done, wherein the questions of the participants were collected by the SOA coordinators or via Fb messenger and answered by the lecturers. Quizzes were also administered. The SOA runs from June 2023 to February 2024.

At the end of the project implementation, a graduation program was held. Top achievers were recognized and given modest incentives. A post-implementation survey was conducted to determine the immediate impact of the project on the beneficiaries. Moreover, follow-up activities were made to enrollees to verify what information and technologies were tried and adopted, know what problems and needs they have in the adoption of activities, provide a continuous technical support system, link clients to and for assistance from other agencies, provide production materials and other post-implementation services.

C. Data Analysis

Descriptive statistics were used to analyze the socio-demographic profile of the respondents, and paired t-test analysis using SPSS v 20.0 was used to determine the significant impact of the SOA on the knowledge uptake of enrollees using the pre- and post-test scores.

RESULTS AND DISCUSSION

A. Targeted Local Reach and Lecture-Broadcast Dynamics

Lectures were aired on three local community radio stations in the province of Ilocos Norte. Community radio can play a significant role in disseminating information to rural illiterate and semi-literate farmers as it is affordable and accessible. It is a powerful communication tool that reaches the farmers in the absence of a regular and stable electric supply can run with a battery. It is also a portable medium that a farmer can carry with him/her to the place where they work and listen to the station while doing their work (Nirmala, 2018). The three radio stations are strategically located in different geographic corners of the province, which ensures a wider reach. The DWFB Radyo ng Bayan Laoag reached almost all towns of the Central to Southern part of the province. DWCI 105.1 Radyo FM, based in Piddig, I.N., reached the eastern towns, while DWNI Radyo Karruba, situated in Burgos, I.N., catered to northern towns. Furthermore, the program was also aired via Facebook Live to reach a greater audience and, at the same time, address the demand of some enrollees to join via the platform. Kabir et al (2023) emphasized that the use of social media like Facebook in agricultural extension enables the connection, sharing of experiences, advice seeking, and access to valuable information among gardeners. Livestreaming was done via the DWFB Radyo ng Bayan FB page, cross-posted in the MMSU Extension Directorate FB page, and sometimes shared by the MMSU Official FB page.

The program produced a total of 60 airings per station and 60 live broadcasts via FB lives of Radyo ng Bayan and MMSU Extension Directorate. The bread and butter of these airings/broadcasts were tailored-fit topics that were formulated based on the felt needs of the enrollees. The topics presented were the specific components of successful goat raising, evolving on the three pillars: nutrition, breeding, and management. Specific topics were feeds and feeding management, disease and health management, breeding, reproduction and selection, goat housing, silage making, animal insurance and farm planning, budgeting, and record keeping. Interestingly, topics outside goat raising targeting

the raisers themselves were also delivered, which include occupational safety and grit and resilience: a guide in facing life's challenges and adversities in livestock production.

B. Socio-Demographic of the Enrollees

Age and Sex. The most represented age group was the older adult segment (46–60 years) at 27.58%, suggesting a mature demographic interested in continuous learning or improving agricultural practices and still in their most productive age. It also confirms the statistics that our farmers are already old. Young adults (18–35 years) comprised 17.05%, and middle-aged adults (36–45 years) followed closely at 16.77%. Seniors aged 61 and above made up 10.81%, and adolescents (10–17 years) were 1.32%. Notably, 12.61% did not report their age. This distribution reflects the intergenerational appeal of the SOA, with the majority being adults actively involved in livelihood and family support. On the other hand, more than half (56 %) of the respondents are male, while the remaining (44 %) are female. The higher proportion of male enrollees might be attributed to the time slot of airing of the program, which is at noon. Male farmers are usually resting at the identified time, which enables them to listen to the program. Rao (2018) asserted that certain time slots are better for farmers when they are home and have finished all other work.

Civil Status. The civil status of respondents reveals that the majority (74.50%) were married, which may explain their high interest in livelihood-related programs, as they bear responsibility for household well-being. Single participants accounted for 20.51%, and widows or widowers made up 6.44%. This aligns with the demographic typically engaged in rural economic activities and responsive to educational interventions that support family livelihoods.

Educational Attainment. Educational levels among participants varied, with college graduates representing the largest group (24.32%), followed by high school graduates (22.94%), and college undergraduates (9.91%). Senior high school graduates comprised 9.01%, while elementary graduates were 6.17%. Vocational or technical course completers made up 6.44%,

Table 1. Sex, age, civil status, and educational attainment of the school-on-the-air (SOA) program enrollees on Goat Production and Management.

	Frequency	Percentage
Sex		
Male	820	56
Female	644	44
Age		
Adolescent Age (10-17)	19	1.32
Young Adult (18-35)	246	17.05
Middle-aged (36-45)	242	16.77
Older Adult (46-60)	398	27.58
Senior (61and above)	156	10.81
N/A (did not answer)	182	12.61
Civil Status		
Married	1075	74.50
Single	296	20.51
Widow	93	6.44
Educational Attainment		
Master's Degree	3	0.21
College Grad	351	24.32
College Level	143	9.91
Technical Vocational	93	6.44
Senior Highschool Grad	130	9.01
Highschool Grad	331	22.94
Highschool Level	88	6.10
Elementary Grad	89	6.17
Elem Level	17	1.18
N/A (did not answer)	147	10.19
Category/Occupation		
Agriculture Related (Livestock Raiser, Agricultural Technologist, and Agricultural Assistant)	1038	68.70
Household	322	21.31
Education (Teacher and OSY)	4	0.26
Government/Community Service Government Employee, BHW, and NGO)	82	5.43
Community Organization (4-H Club, Agri-Youth, and WID)	12	0.79
Other Labor & Employment (Driver, Working, DWC, and Souvenir Maker)	13	0.86
Unemployed (Student and Looking for a Job	40	2.65

while a small number had attained a master's degree (0.21%). A portion of the respondents did not report their educational background (10.19%). This diverse educational profile suggests the program is accessible and relevant to learners across educational levels, from those with formal training to those with limited academic background.

Category/Occupation of Participants. The majority of participants (68.70%) came from the agriculture-related sector, comprising farmers, livestock raisers, agricultural technologists, and extension workers, highlighting the program's core target audience. Household members accounted for 21.31%, which may indicate indirect engagement with agricultural activities or support roles in family-based farming. A smaller segment came from government and community service (5.43%), followed by participants in education, labor, youth organizations, and other employment sectors. This shows the program's reach beyond just farmers, encompassing other community members with a stake in agricultural development.

Times of Enrollment in SOA. A large portion of respondents, 76.72% (1,107 individuals), were first-time enrollees in the SOA program. This demonstrates the program's continued ability to attract new participants, particularly those seeking accessible learning platforms in agriculture. Meanwhile, 10.12% (146 individuals) had enrolled once, 9.70% (140 individuals) twice, and 3.47% (50 individuals) three times. The presence of repeat enrollees suggests that previous participants found the program beneficial, motivating them to re-enroll.

Reasons for Enrolling in SOA. The top reason was "to gain knowledge and learn new things," selected by 35.55% of respondents. This was followed by the desire to improve farming and livestock practices (12.27%), apply knowledge to livelihood and everyday life (4.71%), and enhance agricultural/livestock productivity and management (4.78%). Other motivations included acquiring modern farming technologies, accessing information about government programs, and engaging with useful content during their free time. This range of responses illustrates that the SOA program fulfills both intellectual and practical needs, particularly in rural agricultural communities.

Table 2. Times of enrollment and reason for enrolling among the SOA enrollees.

Times of Enrollment to SOA	Frequency	Percentage
First Time	1107	76.72
Once	146	10.12
Twice	140	9.70
Thrice	50	3.47
Reason for Enrolling in SOA (multiple responses)		
To gain knowledge and learn new things	513	35.55
To improve farming and livestock practices	177	12.27
To apply knowledge to livelihood and daily life	68	4.71
To improve agricultural/livestock productivity and management	69	4.78
To ensure proper livestock care and management	64	4.44
To learn modern technology and innovations in farming	67	4.64
To become responsible and skilled in animal farming	46	3.19
To have better opportunities for income and livelihood	3	0.21
To learn about government programs and access support	9	0.62
To have access to education and information	3	0.21

C. Knowledge Uptake Indicators Through Traditional Assessments

Knowledge assessments were administered, particularly quizzes and pre- and post-tests (Table 3). The pre-test was administered to gauge the knowledge level of enrollees on goat production before engaging in SOA. More than half (52%) passed, and 48 % failed. This indicates that the majority of the enrollees have previous or basic knowledge of goat production management. This is attributed to the exposure of the participants to many extension services offered within the province regarding goat production.

On the results of the post-test administered, a significant increase was recorded in the percentage of enrollees with a passing score from 52% during the pretest to 80% passing the post-test, an increase of around 28% among the participants. This implies the effectiveness of the SOA as a tool in increasing knowledge uptake of enrollees.

On the same trend, of the three quizzes administered during the implementation of the SOA, a high passing percentage among enrollees was recorded. It can also be noted

Table 3. Passing percentage of SOA enrollees on the implemented assessment tasks (passing score: 50%)

Assessment	Pass (%)	Failed (%)	SD
Pre-test	52.00	48.00	0.502
Post-test	80.00	20.00	0.402
Quiz 1	96.40	4.00	0.197
Quiz 2	98.40	1.60	0.126
Quiz 3	97.60	2.40	0.154

that the standard deviation of the quizzes (0.197, 0.126, and 0.154) was low, which means that most of the enrollees scored close to the average, indicating consistency in performance. The complementation of live radio airings and FB livestreaming positively influences the knowledge retention of farmers using quizzes as an assessment tool and their consistent performance. This is because enrollees with FB accounts can easily revisit the recordings on the FB pages when they fail to understand the live lectures, ensuring a complete grasp of the topics.

Based on the result of the paired sample t-test, there was a statistically significant difference between the pre-test (M_1) and post-test (M_2) scores, $t(124) = 7.95$, $p < .001$. These results indicate that the enrollees performed significantly better on the post-test than on the pre-test. This indicates that SOA, complemented with FB livestreaming as a method of teaching farmers, had a real effect on their knowledge uptake on goat production and management despite varying educational backgrounds, listening environment, attendance and participation, and motivation and interests of the enrollees. Moreover, the use of vernacular in lecture delivery might also contribute to the effectiveness of the complementary radio airings and FB livestreaming, which is aligned with the statement of Rao (2018) that radio programs in vernacular languages provide new communication channels and space for dialogue for communities in more remote areas, or of varying literacy levels. Our observation is in congruence with the findings of Silvestri et al. (2021) that interactive radio and social networking sites improve knowledge among farmers and allow the dissemination of information on innovative agricultural techniques, which supports the adoption of legume-based sustainable practices. Similarly, with the assertions

Table 4. Paired samples T-Test of the pre- and post-test of the enrollees.

			statistic	df	p
POST-TEST	PRE-TEST	enrollees t	7.91	124	<.001

Note. H_a $\mu_{Measure\ 1 - Measure\ 2} \neq 0$

of Shodipe et al. (2024) that radio is effective in influencing the practices of farmers and helping them adopt new knowledge, ideas and skills.

D. Graduation Rates of Enrollees

The mean graduation rate of farmer enrollees across groups or municipalities is 79.14 percent, which is more than a quarter of the officially enrolled participants. The graduation rate is relatively high despite the long duration of the SOA. This reflects sustained interest and trust in the program by the enrollees and indicates that it holds their attention over time. Moreover, it suggests strong engagement and relevance of the SOA to the enrollees' needs. It also implies that enrollees acquired or improved a basic understanding of goat production management, which is considered an alternative for successful knowledge dissemination. On the other hand, the complementation of SOA and social media livestreaming is a manifestation of integration and synergy as reflected by the high graduation rates of enrollees. It shows not only the effectiveness of the radio delivery system but also the added value of social media in enhancing understanding, retention, and interest of participants. Moreover, social media facilitates two-way communication that promotes interactivity, which positively influences motivation, which in turn influences program completion among enrollees.

More than 300 enrollees were considered dropouts of the program. Among the recorded reasons for the non-continuity of participation are migration to other countries and outside the province, some were heavily affected by strong typhoons, lack of time to participate, and were loaded with many activities.

Table 5. Graduation rates of SOA enrollees.

Municipality/Group	Number of Enrollees	Number of Graduates	Percentage of Graduates
Nueva, Era	116	49	42.24
Banna	38	30	78.95
Solsona	93	85	91.40
Marcos	58	55	94.83
Dingras	123	60	48.78
Piddig	52	46	88.46
Sarrat	135	132	97.78
Laoag City	195	189	96.92
Vintar	72	72	100.00
Bacarra	71	70	98.59
Pasuquin	78	50	64.10
Burgos	72	35	48.61
San Nicolas	65	62	95.38
City of Batac	105	80	76.19
Paoay	150	130	86.67
Currimao	52	40	76.92
Badoc	59	55	93.22
OPAG	31	20	64.52
MMSU Students	28	25	89.29
INAC Students	30	15	50.00
Total	1623	1300	
Mean			79.14

E. Visibility of the Program via Facebook

The complementation of social media to the SOA program opens a wider communication not only to the enrollees but also to the communities. As a result, it created more opportunities and partnerships with various stakeholders. Data showed that simultaneous live streaming of the lectures garnered 1.5 million views, 9,280 comments, 6,146 hearts, and 1,664 shares. These huge engagements with the livestreaming imply the effectiveness of the program in catching the attention of social media enthusiasts of various backgrounds. Sandeep et al. (2022) claim that social media platforms can be utilized effectively by developing a better interface and information content. Similarly, Munthali et al. (2021) elucidated that the platform plays meaningful roles in supporting knowledge processes and is likely to generate useful input for knowledge integration and collaborative problem solving in complementary face-to-face settings.

F. Self-Initiated Requests of the Enrollees

The project recorded self-initiated requests among the enrollees. Identifying the self-initiated requests of the enrollees is a good indicator of the use of SOA and social media complementation in knowledge and information dissemination. These voluntary actions of the enrollees insinuate that the participants are not merely passive listeners, but they are also motivated, engaged, and with a high degree of eagerness to elevate beyond the basic content provided by the program. Moreover, their interest in seeking further learning opportunities beyond the platform reflects engaging interests, relevance, and trust in the SOA program.

Among the requests recorded by the program include the provision of planting materials of improved forage species and hands-on training on feeding management, silage making, and improved forage pasture production. Furthermore, information and education materials were also requested and provided to the enrollees. These self-initiated requests of the participants were rolled out after their graduation. This behavior among the enrollees ignited curiosity and the desire to apply the knowledge they gained via the platform, enabling them to pursue more hands-on capacity-building activities, which is a clear sign of effective knowledge transfer. Likewise, the program promotes continuous learning and self-improvement among the enrollees.

In the self-initiated requests of the graduates, LGUs through the MAO play a vital role in ensuring the access of the graduates to technical provisional supports that they need to apply the learnings they gained from the program. For instance, the MAO is the one lobbying requests to the University and other offices, like the Provincial Government of Ilocos Norte (PGIN), for capacity building activities and farm tools and equipment for the graduates. Nevertheless, some MAO sponsored and led capacity building activities directly aligned with the topics discussed in the SOA in cooperation with the university. This scenario implies that the effectiveness of this extension approach is highly dependent on the proactive involvement of the LGUs through the MAO. Without the MAO's continued support, such as lobbying resources, coordinating with other offices, and spearheading capacity-building activities, the graduates may struggle to translate theoretical knowledge into practice and transform their existing production practices into a sustainable and

efficient system. This suggests that institutional support and resource mobilization are not just complementary, but it is important for graduates to fully benefit from and implement what they have acquired through the SOA.

Table 6. Self-initiated requests of the SOA enrollees.

Type	Nature of Request	Nature of Assistance Provided
Messages in the FB Page/Messenger Account/Group	Copies of IEC materials to be provided after the program	Links to the topics (in videos) were provided to the participants after the SOA Topics are transcribed and posted on the FB page after each lecture Press releases were published in *Bannawag* for wider coverage and dissemination IEC materials were developed, reproduced, and distributed during the SOA graduation
Conduct of Training	Face-to-face training and conduct of an actual demonstration on silage making	Three batches of training were conducted in various locations, attended by SOA graduates (155 participants attended). Forages/Planting materials were distributed to the participants Hands-on training was conducted on silage and concentrate making
Consultancy Services	Face-to-face/SMS	Community members come to the University for advice Community residents are sending messages via SMS/Messenger and asking for assistance with feeding management and problems that arise

CONCLUSION AND RECOMMENDATION

The study underpins the vital role of the school-on-the-air (SOA) program, complemented with the use of social media, in the promotion of improved goat production practices. The high graduation rates of enrollees and substantial knowledge gained reflected from the pre- and post-tests demonstrate the effectiveness of this extension platform. The program's success is also reflected in the active engagement of the enrollees and self-initiated requests in support of the foundation knowledge they gained, which

communicates an intensifying commitment to improving their production practices and manifestation of continuous learning and self-improvement. This complementation of traditional radio and digital platforms proved to be an effective tool in disseminating agricultural knowledge as well as igniting interest and engagement of stakeholders. As such, effectiveness is directly connected to the alignment of its content with the specific needs of the participants, enabling relevance and practical application in their farming activities. The results of the project suggest that complementary extension strategies like SOA, coupled with social media, can be a powerful platform in advancing agricultural innovation and improving practices of small-hold goat keepers. Since the use of radio combined with online platforms such as Facebook, as well as the distribution of IEC materials as supplementary reading materials, coupled with sustained monitoring, a combination of traditional and contemporary media can be used to improve the knowledge of the farmers. The sustained partnership with the local government units that are at the grassroots and have primary contact with the farmers in the community is an important intangible characteristic to have sustainable development programs or projects.

A more in-depth impact assessment of the project must be conducted to determine the real impact of the project on the targeted stakeholders. Likewise, tracing of the enrollees of the project must be done to determine and document if they have applied the learnings and knowledge they gained from the project.

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