Western SARE Farmer/Rancher Project Reports

Research

The project will address the production of local feeds for poultry farming in Guam. Activities will include gathering and collection of locally available alternatives such as, fish waste (fish guts) and agro-industrial by-products grain malt, Guatemala and Star grass and pelletize to produce local feeds. Another activity will be to combine the local feed ingredients with imported feeds to observe poultry welfare when fed on both feeds and the other just the local feeds.

Figure 1 Vegetables & Fruit Feeds from local food distributors.

The chicken flock will be divided into three groups. A selected 5 of the chicken flock will be considered the control group and fed only with imported commercial feed. Another selected 5 of the flock will be fed 75 % commercial and 25% local described and the final third of the flock will be fed with a 50% mixture of imported commercial feed and locally available feed.

Figure 2 Local fruit feeds.

A period of 45 days will produce results which can be gauged.
There will be record keeping on the poultry feeding preferences, physical activities and overall welfare including weight tracking. There will be feeding measuring cups to capture the amount of feed that is fed to the selected flocks each day and captured through record keeping along with scaling the poundage of the feeds on a weekly basis. Egg production will be monitored on a weekly basis and the eggs size, weight, egg quality and quantity will be measured.
First 60-90 Days: PI and Farm Team plan and implement local feed ingredients gathering. [This has been an on-going activity from day 1.]
First 30-90 Days: Planting and Continuity of farm vegetation for supporting ingredients. [This has been an on-going activity from day 1. Project is facing challenges due to the number of tropical storms and heavy rains falling in Guam and its vicinity the past year.]

First 30-120 Days: Farm Team collecting local ingredients for the local feed processing. [This has been an on-going effort from day 1.]
First 30-120 Days: Farm Team feeding poultry with local feeds and mixed feeds for observation and documentation. [This activity will be fully documented from the period of January 5, 2025-February 18, 2024.]
Remaining Time Frame for the Project: Planning, Scheduling and Implementing the Demonstration for the Local Feeding Processing at the Farm [inclusion of researchers, students, educators, farmers and interest groups]. [This activity will be fully documented from the period of January 26, 2025-March 11, 2025.]

Figure 3 Local bakery feeds.

- Number of producers who participated in the research - Include cooperating producer(s) other than the PI, who was involved in the project's research. Enter "0" if there were none.
- None
- Research results - Report the results and findings you achieved to date according to each project's research objectives. Include quantitative and/or qualitative results.
  After numerous attempts at the project site to divide the hens into their respective research group, we have finalized the date to implement the 45 days research project from January 26, 2025-March 11, 2025. The project has been delayed due to Mawar Recovery efforts, series of storms and weather conditions that affected the number of the overall hens at the project site. The Ranch lost a vast number of laying hens during Super Typhoon Mawar and have had to order and ship 300 (3 days old) hens to the project site. The hens will be ready to lay eggs in the next few weeks. This group of hens will be divided and observed as part of research efforts from January-March 2025.

Figure 4 Research area Jan-Feb 2025

Research Outcomes

In this section include recommendations derived from your research activities. These recommendations should discuss the application of your results to sustainable agricultural production in the Western U.S. Describe and assess how your project has affected agricultural sustainability or will contribute to future sustainability. Indicate recommendations for future studies. [This portion of the report will be completed and submitted with the final report after the 45 days research period.]

- Recommendations for sustainable agricultural production and future research - Please include here recommendations based on the project's research activities
- Number of grants received that built upon this project - Report this per PI, Co-PIs, cooperator, and/or beneficiaries.

- Number of new working collaborations - Report this per PI, Co-PIs, cooperator, and/or beneficiaries

Education and Outreach

The fields in this section pertain to the educational and outreach objectives and activities described in the proposal and according to the project timeline. [This portion of the report will be completed and submitted with the final report after the 45 days research period.]

- Education and outreach methods and analyses - Some of the information here was pre-populated from your proposal. Please update this content and describe the education and outreach methods and analyses **that were conducted up to date** according to each project's educational and outreach objectives. Please address your activities regarding the project timeline, you can attach a timeline of what education activities were achieved up to date.
- Education and outreach results - Report the results or findings you achieved up to date according to each project's educational and outreach objectives. If possible, include quantitative and/or qualitative findings such as effective ways to communicate results, engage producers, reach underserved communities, teach students, etc.
- Education and outreach products and activities - Report here the number of educational products created, and activities conducted by the project team.
- Participants - Report here, the number of people who participated in your education and outreach activities. To the best of your ability, count each person only once, even if they participated in multiple activities. Zeros are valid answers.

Education and Outreach Outcomes

In this section include recommendations derived from your education and outreach activities. These recommendations should discuss ways to effectively disseminate agricultural research results. Describe and assess how your project has affected stakeholders' understanding of agricultural sustainability. [This portion of the report will be completed and submitted with the final report after the 45 days research period.]

- Recommendations for education and outreach - Please include here recommendations based on the project's education and outreach activities
- How many producers reported gaining knowledge, attitude, skills and/or awareness as a result of the project? - Report here changes in producers.
- Key areas in which farmers reported changes in knowledge, attitude, skills and/or awareness
- For each type of stakeholder, how many people other than producers reported gaining knowledge, attitude, skills and/or awareness as a result of the project? (Optional)

Information Products

If you produced standalone books, bulletins, or other educational products, add them here. Products should contain acknowledgement of SARE's support. Graphs, illustrations and tables should be uploaded to the related section of the report.

The photos below paint the pictures of success and challenges that we have faced in fully implementing the SARE research project. We are looking forward to document the 45 days research period in 2025.

Research Area Re-Work due to recent storm in Guam.

Collected Vegetables and Fruits for Feeding.

The Ranch contributed free local eggs to this local event.

Local Eggs donated featured at the Chef Competition.

Success Story

3 days old chicks shipped from Hawaii to The Ranch May 2024

3 days old chicks' new home. May 2024

Settling chicks into new home May 2024.

The Ranch hosting a Farm Visit for the NRCS -September 2024

Briefing for the NRCS Farm visit at The Ranch.- September 2024.

Success Story

NRCS Group touring the Laying Hens area -September 2024

NRCS Visit Group Photo near the Hens Free Ranging Area. - September 2024

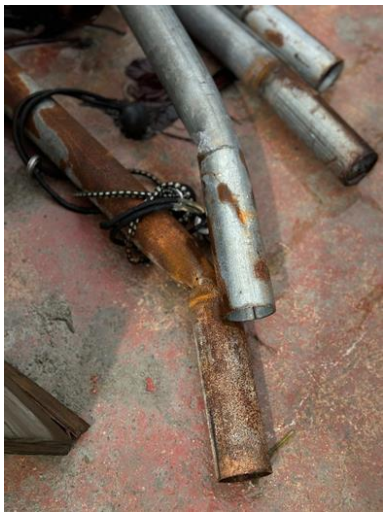
Success Story

The Ranch PI meeting and discussing farming approach in Guam to NRCS representatives. September 2024

NRCS ongoing tour at The Ranch. September 2024

Challenges





Photos of damaged canopy stands and tarps from the heavy rains in Guam. Sept-Nov 2024

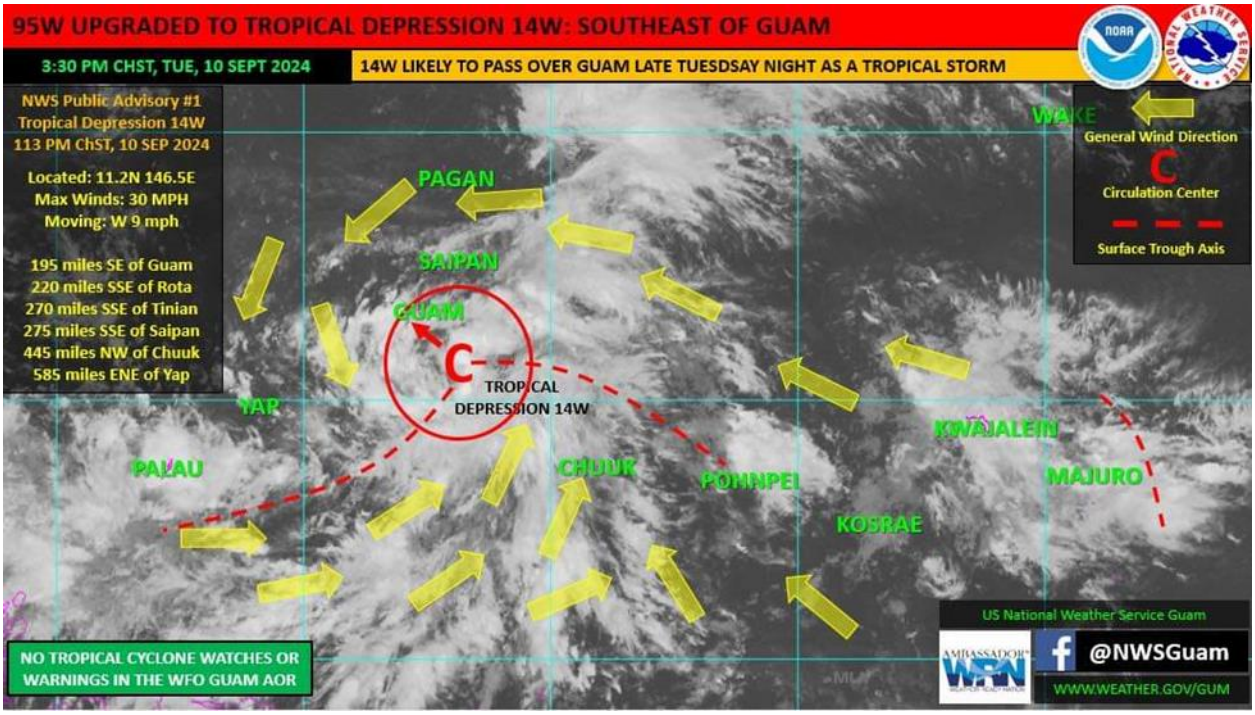


Photo of one of the most recent bad weathers which has further pushed back the research project.

Challenges

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Esther J.C. Agnigal
Homeland Security Advisor
Charles V. Esteves
Administrator

For Immediate Release
November 12, 2024 8:00 am (ChST)

Tropical Storm Warning in Effect, Man-Yi (25W) Continuing West-SouthWest

The National Weather Service (NWS), Weather Forecast Office Guam issued a **Tropical Storm Warning** in Effect for Guam and Rota. A tropical storm warning means that tropical storm conditions including winds of 39 mph or greater expected within 24 hours.

Tropical Storm Man-Yi is currently 385 miles East of Guam. Maximum sustained winds remain at 45 mph. Man-yi is forecast to slowly intensify through WednesdayTropical storm force winds extend outward from the center up to 70 miles.

Currently Guam has an active **Small Craft Advisory** in effect from 600pm Tuesday until 600am Thursday and **Rip Current Statement** in effect.

The offices of Guam Homeland Security and Civil Defense remind residents to continue to monitor official channels for updates in the event of a possible change in the condition of readiness.

Visit the following links for the latest information:
- NWS Website: https://www.weather.gov/gum/
- NWS Facebook: https://www.facebook.com/NWSGuam/
- GHS/OCD Website: https://ghs.guam.gov/
- GHS/OCD Facebook: https://www.facebook.com/GHSOCD

For more information, contact Acting Public Information Officer Stephen Cahill at (671) 489-9517 or via email at stephen.cahill@ghs.guam.gov.

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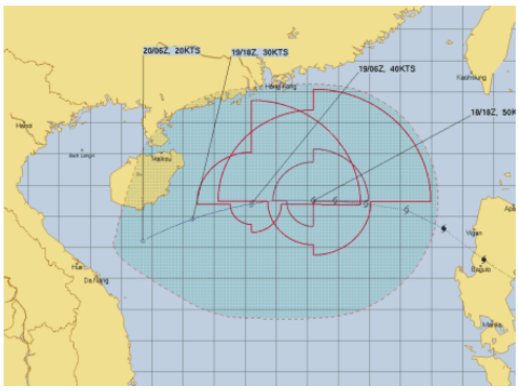
Tropical Storm Warning Nov 2024

Current super typhoon Man Yi

On November 9, 2024 at 10:00 a.m., typhoon Man Yi" formed in the northwest Pacific with an initial wind speed of 54 km/h. The storm system initially moved in a north-westerly direction at 15 km/h and reached a diameter of 611 kilometers in the meantime. The air pressure dropped to 921 millibars at times. On November 16, 2024 at 16:00, it reached its highest wind speed to date of 256 km/h near the Philippines. This corresponds to a category 5 typhoon.



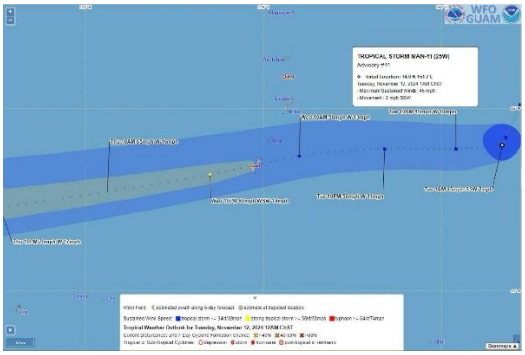
On November 17, 2024 at 19:00, Man Yi hit land near the city of Bambang in the Philippines. There, the typhoon had a wind speed of 202 km/h and a diameter of 300 kilometers.

Its closest distance to Guam was at 04:00 on November 13. At that time, the eye of Man Yi was about 41 kilometers away from Inalåhan. The wind speed there was 83 km/h.

The last position was about 197 km southeast of Wanning in China at 22:00 on November 19.

Last status: November 19th at 10:00 pm. All times refer to local time in Guam.

Source: https://www.worlddata.info/oceania/guam/typhoons.php



Source: US National Weather Service FB

Kong Rey: October 25 to November 1, 2024

Wind speed:	max. 65 km/h	**Most Affected Cities**
Diameter:	max. 963 km	Yigo
Air pressure:	below 927 mbar	Piti
Saffir-Simpson scale:	tropical storm	Hågat

Pulasan: September 16-21, 2024

Wind speed:	max. 65 km/h	**Most Affected Cities**
Diameter:	max. 963 km	Piti
Air pressure:	below 995 mbar	
Saffir-Simpson scale:	tropical storm	

Bebinca: September 10-16, 2024

Wind speed:	max. 104 km/h	**Most Affected Cities**
on land:	max. 83 km/h	Inalåhan
Diameter:	max. 933 km	Humåtak
Air pressure:	below 962 mbar	Hågat
Saffir-Simpson scale:	tropical storm	Piti

Shanshan: August 21 to September 1, 2024

Wind speed:	max. 119 km/h	The typhoon did not make direct landfall in Guam. On August 21st, 2024 at 10:00 pm it had the shortest distance at about 226 km northwest of Piti.
Diameter:	max. 485 km	
Air pressure:	below 932 mbar	
Saffir-Simpson scale:	tropical storm	

Bolaven: October 7-14, 2023

Wind speed:	max. 267 km/h	**Most Affected Cities**
on land:	max. 219 km/h	Yigo Village
Diameter:	max. 970 km	
Air pressure:	below 903 mbar	
Saffir-Simpson scale:	category 5	

Damrey: August 23-28, 2023

Wind speed:	max. 50 km/h	**Most Affected Cities**
Diameter:	max. 1482 km	Yigo Village
Air pressure:	below 977 mbar	
Saffir-Simpson scale:	tropical depression	

Khanun: July 27 to August 10, 2023

Wind speed:	max. 46 km/h	**Most Affected Cities**
Diameter:	max. 1111 km	Merizo Village
Air pressure:	below 928 mbar	
Saffir-Simpson scale:	tropical depression	

Mawar: May 23 to June 3, 2023

Wind speed:	max. 291 km/h	**Most Affected Cities**
Diameter:	max. 889 km	Inalåhan
Air pressure:	below 900 mbar	Yigo
Saffir-Simpson scale:	category 5	Dededo
		Piti
		Hågat

Mawar: May 20 to June 3, 2023

Wind speed:	max. 289 km/h	**Most Affected Cities**
on land:	max. 280 km/h	Inarajan Village
Diameter:	max. 604 km	Yigo Village
Air pressure:	below 897 mbar	Dededo Village
Saffir-Simpson scale:	category 5	Piti Village
		Agat Village

Source: https://www.worlddata.info/oceania/guam/typhoons.php

Planting Efforts August-December 2024

Success Story

Building & Recovery Efforts 2023-2024

Fruit Crops collecting and planting efforts 2023-2024

Planting various fruit crops and setting up plant protection barriers.

Ongoing work at the research jobsite to improve and build resilience.