

# Comprehensive Statement

**Jesse P. Bamba**

## **Request for Continuing Employment/Reappointment as Extension Agent II/Instructor November 30, 2022**

I am applying for my continuing employment/reappointment as an Extension Agent II/Instructor at the University of Guam. I have been in this position since December 2020, and I want to continue my extension and research work at UOG. As a new faculty of Extension & Outreach, Agriculture and Life Sciences Division of the College of Natural and Applied Sciences (CNAS), University of Guam, I have embraced the Land Grant mission of extending our expertise to the community and region, and I have contributed to the Extension mission of “helping people help themselves” through extension education, community activities and applied research.

This statement will provide a brief overview of the nature of my work and accomplishments under my 3 major roles as an Extension Faculty. The timeline highlighted on this statement starts from my date of hire, December 7, 2020, to November 30, 2022, which comprises my first 2 years of employment under my current position.

Actual items of evidence that support my accomplishments in this 2-year timeframe are attached as Hyperlinks in this order 1. Extension, Community Activity, and Instruction, 2. Creative/Scholarly Activity or Research, and 3. University and Community Service. The following weights are recommended for evaluation of my reappointment as identified in the Comprehensive Faculty Evaluation System (CFES) document.

1. **Extension, Community Activity, and Instruction (60%)**.....1.1. - 1.9.
2. **Creative/Scholarly Activity or Research (25%)** .....2.1. - 2.6.
3. **University and Community Service (15%)** .....3.1. - 3.2.

### **1. Extension, Community Activity, and Instruction (60%)**

#### **1.1. *Farm/home-garden site visits and phone/e-mail/face to face conversations.***

Extension and community activities encompass a broad range of facilitative and educational activities. With the extensive development of technology, I have included other ways of delivering the Extension & Outreach technical assistance. I still provided the traditional methods of face-to-face interaction (75), phone conversations (300), workshops, power point presentations, e-mails, extension literature, classroom, and field-site education to all clients regardless of age and education.

The 2020 COVID-19 health disaster brought the world to a standstill with the implementation of travel restrictions. The controls varied from country to country, but they all encouraged some sort of travel control, limit of people at social gatherings, sheltering in place, social distancing, wearing a mask, and shutting down of non-essential services during the height of the virus infection. The restrictions caused E&O to change the way traditional services were delivered to clients. In my case I turned to social media platforms provided by WhatsApp, Zoom and Teams which enabled me to reach many clients without personal contact during the health restrictions.

The use of WhatsApp, specifically, allowed me to safely correspond to questions from clients via photos, texts, and phone conversations. WhatsApp improved my ability to answer questions faster, and to also send E&O literature when needed. More importantly, the WhatsApp

platform enabled me to regain the lost personal contact I shared with clients before the COVID-19 pandemic. The Hyperlinks attached are some of the WhatsApp smart phone correspondence I had with clients over the last 2 years.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [Whatsapp pics\Duane lee avocado problem.jpg](#)
2. [Whatsapp pics\duane lee coconut tree problems.jpg](#)
3. [Whatsapp pics\duane lee papaya problem.jpg](#)
4. [Whatsapp pics\jeff whatsapp plant problem.jpg](#)
5. [Whatsapp pics\Kyle messaging using Whatsapp.jpg](#)
6. [Whatsapp pics\kyle pepper problem.jpg](#)
7. [Whatsapp pics\mike pest id.jpg](#)
8. [Whatsapp pics\Rose pest problems on ornamentals.jpg](#)
9. [Whatsapp pics\steve whatsapp mango problem.jpg](#)
10. [Whatsapp pics\tommy pests on citrus.jpg](#)

**1.2. Curbside bags** - A collaboration between the University of Guam's (UOG) Extension & Outreach (E&O) Agriculture & Natural Resources (ANR) and the Farmers' Cooperative Association of Guam (FCAG).

The government restrictions from COVID-19 in 2020 decimated Guam's restaurant, entertainment, and everything related to the tourist industry. The collapse of tourism in Guam caused many island farmers to abandon the crops they had in their fields and reduce the amount they usually produce to sustain the farm operation. The operations of the Farmers' Coop in Dededo were drastically reduced and eventually suspended because of the health restrictions imposed by the government of Guam's efforts to reduce the spread of COVID-19 in Guam. The reduction in operations and closing of the Farmers' Coop posed problems for individual farmers as well as consumers of locally grown foods.

The absence of the once dependable tourist industry was nonexistent and that lack of demand from the service industry caused farmers to look elsewhere for support. UOG E&O ANR and the Farmers' Cooperative Association of Guam (FCAG) collaborated to bring together farmers and consumers in the distribution of locally grown fresh produce in a safe environment while supporting the agriculture economy in Guam. Many local farmers rely on growing and selling produce as their primary source of income. As for consumers, the Farmers' COOP provided easy access to relatively affordable, healthy, and nutritious foods. I collaborated with Dr. Bob Barber and Dr. Kuan-Ju Chen in working with the FCAG on the initial Curbside Mixed Local Produce Bag initiative. This project was to help mitigate lost markets with local customers buying mixed bags of local produce on a weekly basis. Attached is a copy of the flyer for the curbside mixed local produce bag.

A Hyperlink is attached as evidence that support my accomplishments:

1. [December 2020 FCAG bags\December 2020 curbside mixed local produce bag.jpg](#)

The Curbside Bag initiative was an emergency relief program for Guam's large and small-scale farmers that offered alternative, virus-free, sales of family sized, bags of fresh, local produce to island consumers. Customers pay one price for the weekly mixed produce bags. The goal of the project was to increase consumer awareness of and stimulate the demand for local produce, mitigating the economic impact of the pandemic on farmers. All while providing consumers with a COVID-19 safe drive up, curbside pickup of a weekly produce supply at 80% of local retail price.

This effort improved local food production, reduced import reliance, and helped stabilize produce prices. The products in the bags were grown by Co-Op members.

The success from 2020-2021 Curbside project spurred the creation of two more related projects 1. The Mixed Local Produce Bag Initiative 2. The GEDA Qualifying Certificate Community Contribution (QCCC) Grant (*COVID-19 relief program*).

**1.3. Mixed Local Produce Bag Initiative** – A partnership with the Department of Public Health and Social Services Division of Senior Citizens (DPHSS/DSC) Guam State Office on Aging, Guam Farmers' Cooperative Association of Guam (FCAG), and the University of Guam's Cooperative Extension & Outreach Agriculture & Natural Resources (UOG/E&O/ANR).

With the success of the Curbside Bag initiative during the height of the COVID-19 health restrictions, Department of Public Health and Social Services Division of Senior Citizens (DPHSS/DSC) approached UOG/E&O/ANR and FCAG about providing clients from there Senior Citizen programs who stayed at home, with locally grown fresh produce bags. The FCAG curbside bag initiative had already provided hundreds of \$25.00 mixed produce bags to local families who ordered and picked up the packaged bags in a safe environment at the Dededo Farmers CO-OP on a weekly basis. The initial correspondence between DPHSS/DSC, FCAG, and UOG/E&O started in July of 2020 resulting with the first *Mixed Local Produce Bags* delivered in the first two weeks of September 2020. The initiative was deemed to be a success by DPHSS/DSC officials and the senior citizens that received the *Mixed Local Produce Bags*.

Hyperlinks are attached as items of evidence that support my accomplishments:

2. FCAG letter to DPHSS '*Mixed Local Produce Bags*': [july 2020 dphss bags\DPHSS coop letter.pdf](#)
3. Flyer for September '*Mixed Local Produce Bags*': [july 2020 dphss bags\FCAG flyer for dphss.docx](#)
4. Letter of success from DPHSS: [july 2020 dphss bags\Letter of success from dphss.docx](#)

In 2021, with the help of Dr. Bob Barber, I was able to connect DPHSS/DSC with FCAG and successfully planned and delivered 2,684 \$8.00 fresh produce bags on September 21<sup>st</sup>, 22<sup>nd</sup>, 28<sup>th</sup>, and 29<sup>th</sup>, 2021 to 13 different Senior Centers/Adult Care Centers across the island and the S. H. Enterprises Inc., who assisted with home deliveries, building in Tamuning. The project involved coordinating with several local farmers to produce thousands of pounds of produce for the 4 days of scheduled deliveries to different parts of the Island. The total dollar amount for the 2021 September contract "*Mixed Local Produce Bag Initiative*" amounted to \$21,472.00 worth of locally grown produce. The funding for the 2021 September "*Mixed Local Produce Bag Initiative*" came from the CARE Act Nutrition funding.

Hyperlinks are attached as items of evidence that support my accomplishments:

5. Letter from DPHSS/DSC wanting to continue the "*Mixed Local Produce Bag Initiative*": [September 2021 DPHS bags\Mail - JESSE P BAMBA - DPHSS.mhtml](#)
6. Flyer for September 2021 "*Mixed Local Produce Bags*": [September 2021 DPHS bags\FCAG Flyer for DPHSS FY2021 \(final edits\).docx](#)
7. Purchase orders for September "*Mixed Local Produce Bags*": [September 2021 DPHS bags\Q211730142 - Fully Executed Purchase Order - P216A05560 - For FARMER S A....pdf](#)

8. [September 2021 DPHS bags\Q211730143 - Fully Executed Purchase Order - P216A05563 - For FARMER S A....pdf](#)

The same “*Mixed Local Produce Bag Initiative*” was organized again in December of 2021 to coincide with the holiday season. A few days before Christmas (FCAG) and (UOG/E&O) successfully worked with (DPHSS/DSC) to deliver 2,700 \$8.00 fresh produce bags once more to 13 different Senior Centers/Adult Care Centers across the island and S. H. Enterprises Inc., who assisted with home deliveries, building in Tamuning. The final cost for the 2021 December “*Mixed Local Produce Bag Initiative*” totaled \$21,600.00 of locally grown produce. The DPHSS/DSC funding for the 2021 December “*Mixed Local Produce Bag Initiative*” came from the 2021 CARE Act Nutrition funding.

Hyperlinks are attached as items of evidence that support my accomplishments:

9. Letters from DPHSS/DSC wanting to continue the “*Mixed Local Produce Bag Initiative*”:

[December 2021 DPHS bags\DPHSS grab bags december 2021.pdf](#)

10. FCAG 2021 letter to DPHSS “*Mixed Local Produce Bags*”:

[December 2021 DPHS bags\PHSS proposal 2021 mix bag2 december.docx](#)

11. Minutes from organization meeting: Attendees: DPHSS/DSC, FCAG, UOG/E&O, S. H.

Enterprises Inc.: [December 2021 DPHS bags\Mtg Notes \(Mixed Produce Bags\) 12.15.21.pdf](#)

12. Flyer for December 2021 “*Mixed Local Produce Bags*”: [December 2021 DPHS bags\Finalized Flyer-Mixed Produce Bags december 2021.pdf](#)

13. Delivery locations for Produce bags: [December 2021 DPHS bags\ENP C1 Mixed Local Produce Bags 12.17.21.pdf](#)

14. [December 2021 DPHS bags\ENP C2 Mixed Local Produce Bags 12.17.21.pdf](#)

15. Purchase orders for December 2021 “*Mixed Local Produce Bags*”:

[December 2021 DPHS bags\Vendor Acknowledged\\_Q221730022 - Fully Executed Purchase Order - .pdf](#)

16. [December 2021 DPHS bags\Vendor Acknowledged\\_Q221730023 - Fully Executed Purchase Order - P226.pdf](#)

#### **1.4. Pesticide Safety Education Program (PSEP) - CORE review trainings**

The effects from COVID-19 also took a toll on the way traditional pesticide safety education was delivered on Guam and the country. The shutdown of most services due to government restrictions to combat the virus shifted any type of meeting, training, class setting, or congregation to some sort of online venue. The CORE, (P. L. 30-197) consists of sixteen (16) hours of class training, which covers the basics of how to spray pesticides, is required by the Guam Environmental Protection Agency (GEPA). The mandate for all Guam farmers who sell produce on island, was completely abandoned by GEPA because of the restrictions brought on by COVID-19.

As the COVID-19 restrictions persisted from 2020 and well into 2021, I saw the need for some form of EPA CORE training for new and expired CORE card holder. The pesticide CORE manual contains a total of 11 units that have learning objectives that the applicators study before taking the CORE exam. I developed the review material for the 11 units and the in-class activities needed to help applicators make safe decision if spraying a pesticide is needed. With the help of Phoebe Wall Extension Associate III, I scheduled a (2) two-day CORE review workshops that targeted 25 farmers on September 21<sup>st</sup> and 22<sup>nd</sup> 2022. The following attachments are the September CORE review training Agenda, Sign-up sheet for the attendees, and the evaluations from the attendees for the two-day workshop.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [CORE Reviews schedule sep 2022\September 21 core workshop\Agenda for CORE PAT September 2022 1.pdf](#)
2. [CORE Reviews schedule sep 2022\9 21 2022 evals sign in\9-21-2022 core sign in sheet.pdf](#)
3. [CORE Reviews schedule sep 2022\9 21 2022 evals sign in\9-21-2022 core review evals.pdf](#)

On October 27<sup>th</sup> and 28<sup>th</sup>, 2022, with help from Extension Associate III Phoebe Wall, I conducted another CORE review training that was attended by 5 predominantly Chinese speaking farmers. Drs. Kuan-Ju Chen and Jeng-Hung Liu who are native Chinese speakers, helped with training the Chinese speaking farmers. Dr. Kuan-Ju Chen was able to translate the review material for the 11 units, local EPA law, and modify the in-class activities needed to help the applicators make safe decision if spraying a pesticide is needed. The following Hyperlinks are the October CORE review training Agenda, Sign-up sheet for the attendees, and the evaluations from the attendees for the two-day workshop.

Hyperlinks are attached as items of evidence that support my accomplishments:

4. [Core Reviews schedule oct 2022\material for workshop pdf\Agenda for CORE PAT october 2022.pdf](#)
5. [Core Reviews schedule oct 2022\CORE TRAINING DAY 1 \(CHINESE\).pdf](#)
6. Evaluations [Core Reviews schedule oct 2022\evals translated\evals from Oct Core.pdf](#)

### ***1.5. Conduct workshops that target vegetable/ fruit cultivation, Agriculture marketing and New and emerging issues in agriculture.***

Extension & Outreach is one of my primary roles as an Extension Agent and conducting farmer focus groups is important to find out what is happening in Guam's agriculture industry. With the help of Dr. Kuan Chen, we developed survey and interview instruments that enabled us to conduct and coordinate focus group studies. The results emphasized major issues faced by Guam farmers and it identified the issues and needs for program development.

On June 19<sup>th</sup>, 2021, E&O invited farmers (Producers) to the Hyatt hotel in Tumon to participate in 6-hour agriculture needs assessment. The 18 producers represented different industries within the local agricultural community. The objectives for the 6-hour session revolved around surveys, focus group activities that helped identify challenges that producers face, the opportunities available, and possible solutions to the identified concerns. I conducted and coordinated a focus group study, to better understand the experiences and thoughts on major issues faced by Guam farmers and to hear the diverse experiences and perspectives from the producers/growers on Guam. I am one the authors of the publication "*Head start for agriculture on Guam: Focus group studies on challenges and opportunities ahead*" that came about from the work done at the needs assessment workshop.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [Farmer focus group june 2021\Head Start Agriculture Guam \(Proof 2 29 08 2022\).pdf](#)
2. [Farmer focus group june 2021\Farmer focus group 2021 hyatt.pdf](#)

Pests on crops were identified as important (30%) factor affecting the agricultural industry in the needs assessment survey. In my first 18 months I addressed ways for farmers to manage feral pig pressure on agriculture crops. The most common practice is to exclude the pest from the field, in the case of feral pigs, building an electric fence. I was one of the main authors for an Extension fact

sheet that provided a better understanding of how to purchase materials, install, and maintain an electric fence to deter feral pig damage on agricultural crops.

A Hyperlink is attached as evidence that support my accomplishments:

3. [electric fencing\Electric Fencing.pdf](#)

### **1.6. Tomato Virus Workshop- I am the IPM Coordinator for Guam**

On July 13, 2022, the UOG CPPM-EIP program hosted an IPM and Tomato Virus Workshop. A total of 14 farmers or farm employees attended the workshop. I spoke on topics focused on IPM practices for tomato production and tomato viruses. Farmers were given a copy of the Guam Tomato Production Guide, a factsheet about growing tomatoes on Guam, and other handouts related to the workshop topics. After presentations ended, we held an open discussion period with farmers where they were allowed to discuss their specific concerns and ask questions.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [..\workshops\IPM tomato workshop 7-13-22\IPM and Tomato Virus Workshop Agenda draft \(1\).pdf](#)
2. [EIPM tomato grant\IPM and Tomato Virus Workshop Sign-in Sheet.docx](#)
3. [EIPM tomato grant\IPM and Tomato Virus Workshop Evaluation Results from participants.pdf](#)
4. [EIPM tomato grant\Post Workshop Evaluation Results IPM and Tomato Virus Workshop.docx](#)

### **1.7. GEDA Qualifying Certificate Community Contribution (QCCC) Grant (COVID-19 relief program).**

The 2020-2021 Curbside project spurred the creation of a GEDA QCCC grant “Agricultural Enterprise Development using Research and Extension to work with Agriculture producers and Farm Operators”. As the Project Associate Director, I worked with Dr. Kuan Chen (PI) and a professional film producer to develop short videos that highlighted different organizations that make up the Guam farming community, the ability of the organization to adapt to COVID-19 restrictions, and how the UOG/E&O mission statement helped to strengthen the relationship with the Guam agriculture industry. The GEDA QCCC grant awarded Dr. Kuan Chen and I \$9,984.00 to produce the videos.

A Hyperlink is attached as evidence that support my accomplishments:

1. [QCCC video\University of Guam Presents- Reinforcing A Sustainable Guam \(1\).mp4](#)

### **1.8. Instruction/Teaching**

The Extension work I provide for the Guam community is primarily non-formal in nature. The subject matter of the non-formal education varies from pest identification/management, tropical fruit/vegetable production, using pesticides safely, and general agriculture economics. I also teach formal resident instruction classes in the Agriculture and Life Science Division of the College of Natural and Applied Sciences. As listed, these efforts include:

AL-485 Tropical Fruits Horticulture Lecture and Laboratory I will be teaching this course every even Spring. Hyperlinks are attached:

1. [resident instruction\al 485\AL-485 Syllabus Spring 2022.pdf](#)
2. [resident instruction\al 485\AL-485L Syllabus Lab Spring 2022.pdf](#)
3. Student Evaluations for Lecture [C:\Users\User\Desktop\Extension agent II production technologies and methods emerging issues in Agriculture\Promotion and tenure](#)



[documents\jesse\resident instruction\al 485\BAMBA JESSE 0013927 22-SP\\_AL48501\\_UOG-Instructor-Report.pdf](#)

4. Student Evaluations for Lab [C:\Users\User\Desktop\Extension agent II production technologies and methods emerging issues in Agriculture\Promotion and tenure documents\jesse\resident instruction\al 485\BAMBA JESSE 0013927 22-SP\\_AL485L01\\_UOG-Instructor-Report.pdf](#)

AL-340-01 Pest Management Lecture and Laboratory in spring 2022. I will be teaching this course every odd spring. Hyperlinks are attached:

3. [resident instruction\al 340\AL-340 Syllabus Spring 2022.pdf](#)

4. [resident instruction\al 340\AL-340L Syllabus Lab Spring 2022.pdf](#)

## **1.9. Accomplishments**

### **1.9.1. Extension Publications**

1. Chen K. J., [Bamba J. P.](#), Wiley M. C., and Vinca L. (2022). Head Start for Agriculture on Guam: Focus Group Studies on Challenges and Opportunities Ahead. Cooperative Extension & Outreach, College of Natural & Applied Sciences, University of Guam.

[Farmer focus group june 2021\Head Start Agriculture Guam \(Proof 2 29 08 2022\).pdf](#)

2. San Nicolas, P. J., [Bamba J. P.](#) and Dresbach S. H. (2021). Electric Fence for Feral Swine: Materials, Installation Guidelines, & Maintenance. Cooperative Extension & Outreach, College of Natural & Applied Sciences, University of Guam.

[electric fencing\Electric Fencing.pdf](#)

3. [QCCC video\University of Guam Presents- Reinforcing A Sustainable Guam \(1\).mp4](#)

## **2. Creative/Scholarly Activity or Research (25%)**

As an Agriculture Extension Agent, I am primarily concerned with issues regarding agriculture production, pest management, markets, environments, natural resources, and agriculture self-sufficiency. The following grants and projects I have been involved in over the past two years all take into consideration the concerns I have listed above. In the first two years of my faculty appointment, I served as the principal investigator (PI) on three grants, (CO-PI) on one grant, and I was requested to become the PI for a grant that I was actively working on.

**2.1. Improving irrigation practices - Forecasting daily reference evapotranspiration and rainfall for water resources conservation and sustainable agriculture.** Natural Resource Conservation Service (NRCS) National Conservation Innovation Grants (CIG) Program. Effective dates are May 12<sup>th</sup>, 2020 – February 27<sup>th</sup>, 2023. This NRCS/CIG grant includes Hawaii (HI) [Oahu, Maui, and Big Island], Guam (GU), and Nebraska (NE) (\$935,581.00). I am the Guam Co-PI.

A Hyperlink is attached as of evidence that support my accomplishment:

1. [NRCS CIG\Package ALL new \(1\) cig.pdf](#)

Most commercial vegetable production operations on Guam irrigate based on past experiences, which can lead to over irrigation and negative effects on the farm system and the

environment, including loss of water due to deep percolation, leaching of fertilizers increasing potential for groundwater contamination, and excess water and energy costs to the farmer.

The negative effects of under irrigation are more evident to farmers as they diminish crop yields which is why optimizing irrigation scheduling benefits not only the environment, but also the local economy.

As part of my commitment to the agriculture community on Guam I provided technical assistance for three Guam farmers (Mike Aguon, Bernard Watson, and Ernie Wusstig) to improve their irrigation practices. The research for the “Forecasting daily reference evapotranspiration and rainfall for water resources conservation and sustainable agriculture” grant which was funded by the U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) looked at different parameters during crop growth 1. Crop that was grown 2. Soil type 3. Root growth 3. Canopy cover and root length 4. Weather stations.

The objectives for the outreach program of this grant were to enable farmers to schedule watering to minimize crop water stress and maximize yields, reduce farmer’s cost of water and labor through fewer irrigations, and increase net returns by increasing crop yields and crop quality. I am the Co-PI and coordinator for field day workshops which were scheduled for 2020-2022. Unfortunately, the field days were postponed because of COVID-19 health restrictions. The project is also on hold until new software is cross checked by our University of Hawaii collaborator and PI Dr. Sayed Bateni.

Because of the amount of data collected at the three Guam farms and the UOG experiment station, a technical report was published. I am one of the authors of Improving Irrigation Efficiency on Vegetable Crops Using Smart Irrigation Technologies in Guam.

Publication: *Efficiency on Vegetable Crops Using Smart Irrigation Technologies in Guam*. Western Pacific Tropical Research Center (WPTRC). Technical Report No. 4 October 2021.

A Hyperlink is attached as of evidence that support my accomplishments:

2. [NRCS CIG\WPTRC-Technical Report No 4 Oct 1 2021.pdf](#)

**2.2. Pesticide Safety Education Funds Management Program (PSEFMP)** - Awarded December 14, 2020. Effective dates are January 1, 2021 – December 31, 2021. (\$16,625.00) SA-2021-08. I am the (PI) and the Pesticide Safety Education Program Coordinator for Guam.

A Hyperlink is attached as evidence that support my accomplishment:

1. [PSEP\psep 2021\Guam - Final Dec 14.pdf](#)

The 2021 PSEP grant was centered around working with the National Pesticide Safety Education Center (NPSEC), Guam, Hawaii, American Samoa, and the Commonwealth of the Northern Mariana Islands to develop a multi-media team that will produce an online training resource based on the research review of the PSEP in the Pacific Island.

The new COVID-19 environment forced islands to seek outside funding to secure safe pesticide safety education for the farming communities in the Pacific islands. A new Pacific Collaboration Team (PCT) made up of Guam, Hawaii, American Samoa, and the Commonwealth of the Northern Marianas was formed to address issues that effected the Islands of the Pacific.

While a vast majority of the Core trainings are done online in the United States, there are still jurisdictions that follow the traditional delivery of conducting face to face training. The PCT PSEP coordinators from the different islands approached the Pesticide Safety Education Funds Management Program (PSEFMP) about working with NPSEC, which has the technical expertise, to



develop and produce an online CORE training. With the intention of improving the CORE program in the Pacific the PSEFPM agreed to fund the online CORE training PTC farming communities.

The multi-media team produced an online training resource based on the research review of the PSEP in the Pacific Island. NPSEC provided a zipped folder with the RISE modules which can be distributed in a variety of ways like PowerPoint, USB drive, a website, or any other delivery method.

Hyperlinks are attached as items of evidence that support my accomplishments:

2. [PSEP\Pacific Island Core Manual\220125-PI-Core-1-WEB\content\index.html](#)
3. [PSEP\Pacific Island Core Manual\Unzipped\content\index.html](#)
4. [PSEP\Pacific Island Core Manual\220125-PI-Core-3-WEB\content\index.html](#)
5. [PSEP\Pacific Island Core Manual\220125-PI-Core-5-WEB\content\index.html](#)

**2.3. Pesticide Safety Education Funds Management Program (PSEFMP)** - Awarded December 20, 2021. Effective dates are January 1, 2022 – December 31, 2022. (\$17,025.00) SA-2022-20. I am the (PI) and the Pesticide Safety Education Program Coordinator for Guam.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [PSEP\psep 2022\Guam - Award Package \(1\) 2022.pdf](#)

The 2022 PSEP grant funding I received went directly into updating the 19-year-old 5<sup>th</sup> edition 2004 Guam Fruit and Vegetable Pesticide Guide. I worked with Extension Associate I Elizabeth Hahn to produce a 2022 6<sup>th</sup> Guam Fruit and Vegetable Pesticide Guide. The 2022 draft Guam Fruit and Vegetable Pesticide Guide identifies the different pesticides available in Guam for commercial and subsistent producers (Farmers). The guide can be used as an index to identify and treat pests that are common on fruit and vegetable crops grown on Guam. I am the primary author for the updated 2022 guide.

A Hyperlink of the 2022 draft is attached as evidence that support my accomplishment:

2. [PSEP\psep 2022\FINAL VERSION PESTICIDE GUIDE 11-16-22.pdf](#)

**2.4. “5 Future Trainers: Developing a Farmer Run Agriculture Production Monitoring Program for The Farmer’s Cooperative Association of Guam (FCAG)”**. Awarded March 22, 2022. Effective dates are June 1st, 2022 – October 1st, 2025. (\$58,401.00). I am the (PI) for the WSARE 2022 Professional + Producer Grant.

Hyperlinks of the 2022 WSARE grant is attached as evidence that support my accomplishment:

1. [WSARE 2022 5 future trainers\Mail - JESSE P BAMBA - Outlook.mhtml](#)
2. [WSARE 2022 5 future trainers\5FUTUR~1.pdf](#)

With the guidance of Dr. Bob Barber, I collaborated with the FCAG to successfully apply for and receive a 2022 WSARE grant. The grant will develop a production monitoring and harvest projection program for FCAG members, determine the opportunities and barriers in running a farmer production monitoring system for member farmers, teach the core farmer management team the use and maintenance of the production monitoring system, and conduct farmer trainings for member famers on field production monitoring, yield documentation and reporting. In addition to supporting FCAG's marketing efforts, this project will provide Guam agricultural professionals with accurate yield data.

The initial plan is to use the skills and knowledge local agriculture professionals working with a core 5 of the 70 FCAG members. E&O will train the 5 selected FCAG farmers on how to collect important planting and harvest data and the 5 FCAG trained members will then train the other 65 members. The FCAG will utilize these harvest projections in their marketing efforts with their customers.

E&O and FCAG producers will research, develop, and write, new educational materials about developing a production yield data system for tropical island crops. Educational materials will include PowerPoint presentations, Extension publications, and resource lists. The secondary producer group will provide feedback on the educational materials targeting beginning to intermediate-level farmers.

**2.5. Tomato Extension Integrated Pest Management (EIPM)-** I am the (PI) for the CPPM-EIP grant 2021-700006-35507. Effective dates are September 1<sup>st</sup>, 2022, August 31<sup>st</sup>, 2024. (\$16,00.00).

In 2007, I discovered a new tomato virus that was found to be affecting the yields of a cherry tomato farmer in northern Guam. Bernard Watson, a Guam farmer, reported losing multiple cherry tomato fields over the 2007-2008 growing season. In 2013, Ageratum yellow vein virus (AYVV) was identified as the possible culprit to the decline in cherry tomato yields. Because AYVV did not account for all the symptoms on the infected tomato plants, more tests were done to find out the exact virus causing the loss in production.

Guam's most recent tomato virus survey, which was conducted in 2016, identified six tomato viruses in Guam. The work was done on 10 tomato fields that were surveyed bi-weekly. A total of 25 surveys were conducted on 10 tomato plots over the course of the year (for a total of 250 surveys).

As a result of the continued interest of finding out the proper tomato virus name extension plant pathologist Robert Schlub and cooperators submitted a manuscript in 2021. The manuscript was accepted for publication in the American Society For Microbiology Journal, Microbiology Resource Announcements. I was one of 5 authors of the "Complete Sequences of Tomato Leaf Curl Guam Virus, a Novel Tomato-Infecting Begomovirus from Guam, USA".

Hyperlinks are attached as items of evidence that support my accomplishments:

1. [EIPM tomato grant/Complete Genome Sequences of Tomato Leaf Curl Guam Virus, A novel Tomato-infecting Begomovirus from Guam, USA.pdf](#)

## **2.6 Accomplishments**

### **2.6.1. Publications**

1. Casila J., Delfin M., Galsim F., Golabi M. H., Bateni S. M., and Bamba J. P. (October 2021). Improving Irrigation Efficiency on Vegetable Crops Using Smart Irrigation Technologies in Guam Technical Report No. 4. Western Pacific Tropical Research Center (WPTRC). College of Natural & Applied Sciences, University of Guam.

[NRCS CIG\WPTRC-Technical Report No 4\\_Oct 1 2021.pdf](#)

2. Bamba J. P., Hahn E., Quitugua R. J., and Wall P. (2022). Draft 6<sup>th</sup> Edition, 2022 Guam Fruit and Vegetable Pesticide Guide. University of Guam College of Natural & Applied Sciences Cooperative Extension & Outreach.

[PSEP\psep 2022\FINAL VERSION PESTICIDE GUIDE 11-16-22.pdf](#)

3. Schlub R. L., Li R., Bamba J. P., Marutani M., and Ling K. S. (2021). Complete Genome Sequences of Tomato Leaf Curl Guam Virus, a Novel Tomato-Infecting Begomovirus from Guam, USA. American Society Microbiology Journal, Microbiology Resource Announcements. [EIPM tomato grant/Complete Genome Sequences of Tomato Leaf Curl Guam Virus, A novel Tomato-infecting Begomovirus from Guam, USA.pdf](#)

### 2.6.2 Grants

1. **Guam Co-PI** - Improving irrigation practices - Forecasting daily reference evapotranspiration and rainfall for water resources conservation and sustainable agriculture. Natural Resource Conservation Service (NRCS) National Conservation Innovation Grants (CIG) Program. Effective dates are May 12<sup>th</sup>, 2020 – February 27<sup>th</sup>, 2023. This NRCS/CIG grant includes Hawaii (HI) [Oahu, Maui, and Big Island], Guam (GU), and Nebraska (NE) **(\$935,581.00)**.

**Role:** manage all objectives and activities for outreach activities on Guam.

2. **Principal investigator and the Pesticide Safety Education Program Coordinator for Guam.** Pesticide Safety Education Funds Management Program (PSEFMP) - Awarded December 14, 2020. Effective dates are January 1, 2021 – December 31, 2021. **(\$16,625.00)** SA-2021-08.

**Role:** manage all objectives and activities, oversee progress of the project, and write summary reports on project status.

3. **Principal investigator and the Pesticide Safety Education Program Coordinator for Guam.** Pesticide Safety Education Funds Management Program (PSEFMP) - Awarded December 20, 2021. Effective dates are January 1, 2022 – December 31, 2022. **(\$17,025.00)** SA-2022-20.

**Role:** manage all objectives and activities, oversee progress of the project, and write summary reports on project status.

4. **Principal investigator** WSARE 2022 Professional + Producer Grant. - “5 Future Trainers: Developing a Farmer Run Agriculture Production Monitoring Program for The Farmer’s Cooperative Association of Guam (FCAG)”. Awarded March 22, 2022. Effective dates are June 1st, 2022 – October 1st, 2025. **(\$58,401.00)**.

**Role:** manage all objectives and activities, oversee progress of the project, and write summary reports on project status.

5. **Principal investigator** - Tomato Extension Integrated Pest Management (EIPM) - CPPM-EIP grant 2021-700006-35507. Effective dates are September 1<sup>st</sup>, 2022, August 31<sup>st</sup>, 2024. **(\$16,00.00)**.

**Role:** manage all objectives and activities, oversee progress of the project, and write summary reports on project status.

### 3. University and Community Service (10%)

My University and Community Service is diverse and addresses the needs of the island and the University of Guam. I have served and continue to serve on several college committees, two UOG committees, and three community volunteer organizations.

**3.1.** Within UOG, I serve on University Review Board (IRB) (2021-2023) committee, three (3) Search Committees for faculty positions, Faculty Election Commission (FEC) (2021-2023), and the Faculty Senate (2022-2024).

**(IRB) Committee.** With the guidance of the IRB committee, I review proposed research methods that come from different research projects across UOG. The IRB committee is made up of a team of multi-disciplinary members that work together to ensure the appropriate steps are taken to

protect confidentiality, anonymity, and the rights and welfare of all the subjects participating in the research study.

A Hyperlink is attached to show evidence of my appointment:

<C:\Users\User\Desktop\Extension agent II production technologies and methods emerging issues in Agriculture\Promotion and tenure documents\jesse\community service\IRB\IRB Appt. Jesse Bamba.pdf>

**Search Committees for Faculty Positions.** I have served on three search committee for a Tenure Track Faculty (1) Extension position and (2) Research positions. I served as the chair for the Extension & Outreach Plant Pathologist, and I served as a member to the WPTCR search committees for the Plant Pathologist Researcher and Sustainable Plant Production Faculty positions.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. Committee appointment by Dean Lee Yudin <community service\search appointment letters\recommittees and chairs.msg>
2. Committee members <community service\search appointment letters\committee appointment.jpg>
3. Extension Plant Pathologist faculty position announcement <community service\E&O pathologist\extension plant pathologist.pdf>
4. Research Plant Pathologist faculty position announcement <community service\Research pathologist\research plant pathologist.pdf>
5. Extension Plant Pathologist Faculty position letter to Dean <community service\E&O pathologist\Letter to Dean 1.docx>
6. Research Plant Pathologist Faculty position letter to Dean [community service\Research pathologist\WPTRC Plant Path Search \(2\).docx](community service\Research pathologist\WPTRC Plant Path Search (2).docx)

**Faculty Election Committee (FEC).** I have served on the FEC since 2021 and I had opportunity to conduct the 2022 UOG Faculty General Election which was done online from April 5<sup>th</sup> 8:00 am to April 7<sup>th</sup> 5:00 pm. The main function of the FEC ensures continuous faculty leadership for the different committees that help UOG deliver university education on Guam.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. 2021 election results <community service\Faculty election\2021 FEC Election Results Memo.pdf>
2. 2021 appointment <community service\Faculty election\Faculty Election Commision 2021 appointment.png>
3. 2022 FEC online <community service\Faculty election\2022 FEC Memo- List of Nominees.pdf>

**Faculty Senate** – I have recently been elected to the faculty senate for a two-year term (2022-2024) and I have been assigned to the Standing Committee on Institutional Excellence (SCIE). The SCIE have three goals for the 22nd Faculty Senate 1. Clarify with Admissions and Records the Modes of Delivery to be included in the course schedule. 2. Recommend continued review of the 8-week courses, learning outcomes, faculty load, and impact on schedule. 3. Concerned about credit creep within programs and an increase in program offerings that may not have the faculty to support.

Hyperlinks are attached as items of evidence that support my accomplishments:

1. 2022 FEC election results <community service\faculty senate\2022 FEC Election Results Memo.pdf>

## 2. SCIE report to the Faculty Senate

1. [community service\faculty senate\Faculty Senate\SCIE\scie sep 15 2022.pdf](#)
2. [community service\faculty senate\Faculty Senate\senate\Log No. 6998 Appointment as Interim M - Copy.pdf](#)

3. 22<sup>nd</sup> Faculty Senate Agenda

1. [community service\faculty senate\Faculty Senate\senate\Log No. 6896 DRAFT MINUTES 21FS-10, 4 - Copy.pdf](#)
2. [community service\faculty senate\Faculty Senate\senate\Log No. 6897 Agenda 21FS-11 & 22FS-1, - Copy.pdf](#)
3. [community service\faculty senate\Faculty Senate\senate\Log No. 6913 AGENDA 22FS-2, 8.25.2022 - Copy.pdf](#)
4. [community service\faculty senate\Faculty Senate\senate\Log No. 6943 AGENDA 22FS-3, 9.15.2022 - Copy.pdf](#)
5. [community service\faculty senate\Faculty Senate\senate\Log No. 6977 AGENDA 22FS-4, 10.20.202 - Copy.pdf](#)
6. [community service\faculty senate\Faculty Senate\senate\Log No. 7004 AGENDA 22FS-5, 11.17.202 - Copy.pdf](#)

**3.2.** Outside of the University of Guam, I serve as a committee member to the following organizations:

**Farmer's Cooperative Association of Guam (FCAG)** 2020-present: I attended monthly FCAG meetings, provided updates on the University of Guam E&O activities, and engaged with local farmers on market and management issues. I also provided onsite technical advice to farmers, Federal and Government of Guam Agencies, and Non-Government Organizations on agricultural production, crop production, and agriculture produce marketing.

**Mong Mong-Toto-Maite (MTM) Municipal Planning Council (MPC)** 2021-2023  
I attended monthly meetings to discuss issues that the MTM Mayor Rudy Paco brings to the MPC attention. The issues range from the village budget, social events, village projects, and land rezoning within the municipality of MTM. The MTM MPC serves as a guiding body for the short- and long-term goals of the MTM Mayor.

Letter from MTM Mayor acknowledging my participation

1. [community service\MPC oath and appointment 2021\MTM MPC Appoinmnet letter 2021.pdf](#)
2. [community service\MPC oath and appointment 2021\MCP oath 2021.pdf](#)

**Marriage Ministry for the Roman Catholic Archdiocese of Hagatna.** 2019-present  
My wife and I are the Archdiocese of Hagatna Marriage Ministry Coordinators for the Western Vicariate and we have prepared and provided training for 8 newly engaged catholic couples. The training for each couple covers 14 chapters of the "For Better & For Ever" Roman Catholic sponsor couple Book. We spent 5 evening sessions (2-2.5 hours per session) to prepare each couple for marriage in the catholic church.