



DEPARTMENT OF AGRICULTURE
Cagayan Valley Region



2020 ANNUAL REPORT

*A food-secure and resilient Philippines
with empowered and prosperous farmers and fisherfolk*



Mandate

The Department is the government agency responsible for the promotion of agricultural development by providing the policy framework, public investments, and support services needed for domestic and export-oriented business enterprises.

In the fulfillment of this mandate, it shall be the primary concern of the Department to improve farm income and to generate work opportunities for farmers, fishermen, and other rural workers. It shall encourage people's participation in agricultural development through sectoral representation in agricultural policy-making bodies so that the policies, plans, and programs of the Department are formulated and executed to satisfy their needs.

It shall also use a bottom-up self-reliant farm system approach that will emphasize social justice, equity, productivity, and sustainability in the use of agricultural resources.



Vision

A food-secure and resilient Cagayan Valley with prosperous farmers and fisherfolk.

Mission

To collectively empower farmers and fisherfolk and the private sector to increase agricultural productivity and profitability, taking into account sustainability and resilience.





CONTENTS

| | |
|---|------------------|
| Mandate, Vision, Mission | <i>i</i> |
| Message of the Regional Executive Director | <i>1</i> |
| Executive Summary | <i>2</i> |
| Cagayan Valley Agriculture Sector Performance | <i>3</i> |
| Highlights of Accomplishments | |
| <i>Rice Program</i> | <i>8</i> |
| <i>Corn Program</i> | <i>14</i> |
| <i>High Value Crops Development Program</i> | <i>18</i> |
| <i>Livestock and Poultry Program</i> | <i>25</i> |
| <i>Organic Agriculture Program</i> | <i>29</i> |
| <i>Farm-to-Market Roads Services</i> | <i>33</i> |
| <i>Market Development Services</i> | <i>35</i> |
| <i>Integrated Agricultural Laboratory Services</i> | <i>42</i> |
| <i>Research for Development Services</i> | <i>48</i> |
| <i>Regulatory Services</i> | <i>54</i> |
| <i>Climate Change - Adaptation and Mitigation Initiative in Agriculture</i> | <i>59</i> |
| <i>Philippine Rural Development Project</i> | <i>67</i> |
| <i>Kabuhayan, Kaunlaran ng Kababayang Katutubo (4Ks) Project</i> | <i>79</i> |
| Other Milestones | |
| <i>ISO 9001:2015 Quality Management System</i> | <i>84</i> |
| <i>Unified Comprehensive Administrative System</i> | <i>87</i> |
| <i>Human Resource on Challenges and Changes</i> | <i>89</i> |

MESSAGE OF THE REGIONAL EXECUTIVE DIRECTOR

Setting the Bar to Success

As the Regional Executive Director, I am more than excited to present our notable accomplishments for Calendar Year 2020 through this Annual Report.

I would like to emphasize that the exemplary performance of the Department of Agriculture Regional Field Office No. 02 for the year is a consolidated effort of all the players and partners in the agriculture sector.

When the COVID 19 started last year, everything stopped, but agriculture went through, excelled, and remained as the backbone of the region's economy. This is despite the problems we encountered such as the occurrence of calamities, African Swine Fever, crop pests, and diseases, among others.

According to the National Economic Development Authority Region 02 in their Regional Development Report for CY 2020, though the year the agriculture sector was confronted with these challenges, the prompt response to mitigate losses and provide assistance to affected farmers and fisherfolk had resulted to the attainment of the target for most of the indicators.

The said report states that "Notwithstanding the challenges faced during the year, the lead agencies for the Agriculture, Forestry and Fisheries (AFF) sector planned and executed strategies that are more relevant and aligned to responding and adapting to the new normal."

Though productivity of most major crops were unmet due to COVID 19 restrictions, weather disturbances, and flooding, the yield of the region's top commodities, namely, palay and corn, still managed to attain 97.6 % and 97.8 % accomplishment, respectively. Moreover, Cagayan Valley still continued to be the top producer of corn and second highest producer of palay in the country.

Likewise, DA has continued to provide farm inputs like high-quality seeds, fertilizer subsidy, quality breeder stocks for livestock and poultry and other productivity-enhancing and cost reducing technologies. The implementation of the Rice Tarrification Law has enabled the department to provide more machineries, credit, and extension services.

Access to technologies was also realized. The number of farmers' cooperatives and associations that adopted new technologies had increased, attaining a high percentage accomplishment rate through on-line trainings and technical assistance. Also, access to land and water resources, financing, and insurance had increased and improved.

We will continue to improve productivity through crop diversification, livestock production, urban agriculture, and upland agriculture through consolidation and clustering, intensify the Rice Competitiveness Enhancement Fund (RCEF) implementation, strengthen marketing through digital platforms, provide transport and logistics, continue R & D activities and massive swine repopulation.

I know that these good reports energize you, me, the stakeholders and the millions across the region to continue working closely and together, we will set the bar higher toward success.

As we shift to new normal, I hope that the partnership and commitment will remain strong and steadfast. As we continuously move towards the attainment of the OneDA's objectives, let us not forget our farmers and fisherfolk, our real heroes and frontliners in our vision of a food-secure and resilient Philippines.

Mabuhay!


NARCISO A. EDILLO, M.A.Ed.
Regional Executive Director



Aligned to the 8 Paradigms to Level-Up the Agriculture Sector in our region including our refocused interventions as measures to mitigate losses and key strategies to adopt to the “NEW NORMAL” due to COVID-19 pandemic, the following interventions were implemented in the region.

Starting with the paradigm on Modernization in Agriculture, we have projects on the promotion/provision of modern, high-yielding, and climate resilient seeds and planting materials, animals, and other similar interventions to improve productivity and sustainably boost local production under the Production Support Services (PSS).

Another intervention is the provision of Extension Support, Education and Training Services (ESETS). This is another component of the Technical Support Services Sub-Program that is contributory to the Modernization in Agriculture. Projects/activities on ESETS include the conduct of trainings to improve the technical, business, and social capabilities of farmers, Agricultural Extension Workers (AEW), and other clients along the value chain and information and transfer of technologies through technology demonstrations, radio programs/plugs, and production and distribution of Information, Education, and Communication (IEC) materials and giving of incentives to our partner-AEWs at the LGU level.

In the Industrialization of Agriculture Sector, DA RFO 02 implements Research for Development undertakings on generation, verification, adoption, and commercialization of R&D technologies; however, more focus is given on technology outscaling and upscaling to fast track technology utilization in larger scale thus, a take-off point for clustering, crop diversification and crop-livestock integration.

Still under the Industrialization of the Agriculture Sector in the Region, increasing farmers’ income by developing markets and linking both raw and agricultural products to private partners is one of the major activities particularly on sustaining the KADIWA ni Ani at Kita. More Market Development Services are provided with emphasis on Big Brother-Small Brother Partnership among stakeholders. In partnership with the Regulatory Division, Integrated Laboratory Division, and Research Division, food safety is assured.

On Infrastructure Development, interventions are implemented particularly provision of safe, quality, efficient, and climate-resilient production and postharvest-related machineries and equipment, and construction/upgrading of facilities and infrastructure as we really need these projects in the region to address the low sufficiency level for machineries and postharvest equipment.

Moreover, under the Infrastructure Development, construction, installation, and rehabilitation of Small-Scale Irrigation Projects/Systems including Small Water Impounding Projects (SWIPs), Diversion Dams (DDs), Shallow Tube Wells (STWs), Pump Irrigation System (Solar Pumps) are undertaken.

Monitoring of Farm-to-Market Roads (FMR) construction is also done to ensure timely completion of FMRs in the region.

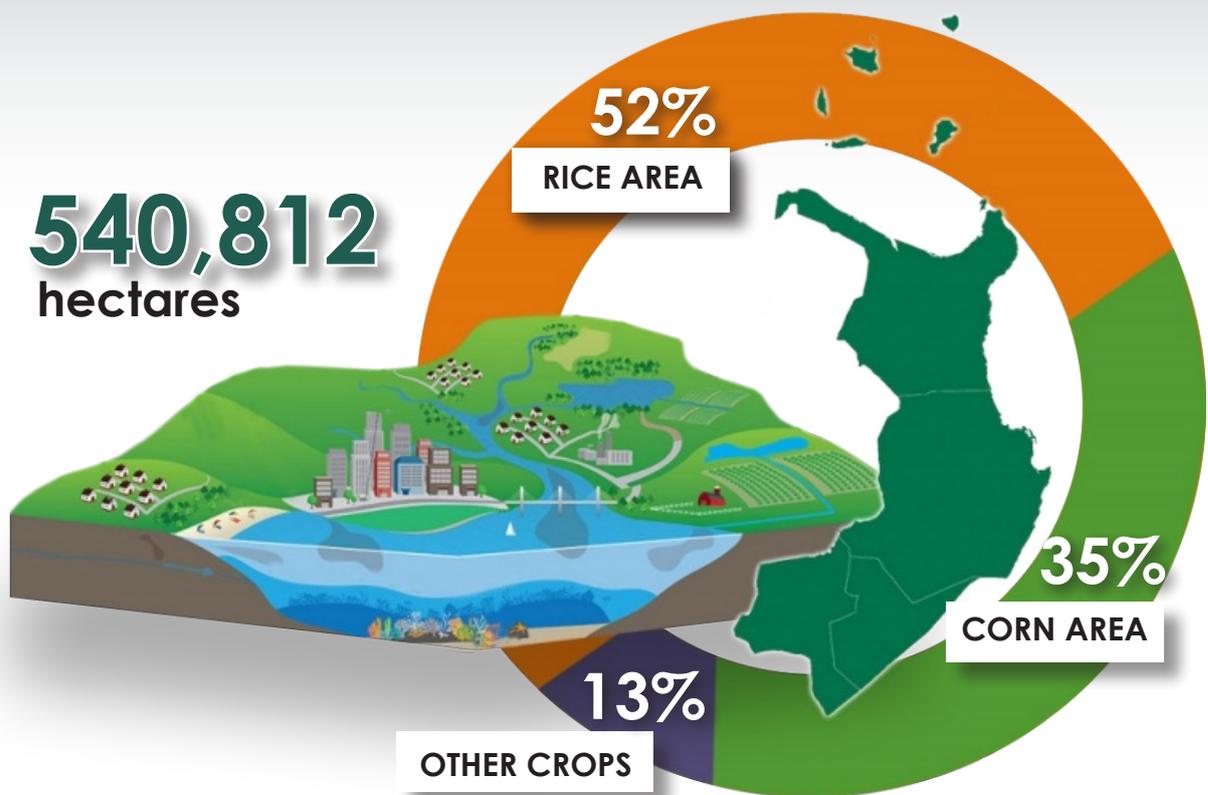
On top of General Appropriation Act (GAA) funds, we are implementing the Philippine Rural Development Project (PRDP) which is part of increasing investment in agriculture. We have a total of 98 sub-projects implemented in region for both Investments for Rural Enterprises and Agricultural and Fisheries Productivity (I-REAP) and Intensified Building-Up of Infrastructure and Logistics for Development (I-BUILD).



CAGAYAN VALLEY

AGRICULTURE

SECTOR PERFORMANCE



Cagayan Valley's Agricultural Land Area

Totals to about 540,812 hectares which comprise about 20% of the total regional land area. In terms of physical area by commodity, the region has a comparative advantage on rice and corn with an area devoted to rice and corn of more than 52% and almost 35% of the agricultural land, respectively.

In 2020, Cagayan Valley was faced by challenges brought about by the COVID-19 pandemic along with devastating typhoons in November and the impacts of African Swine Fever (ASF) which reversed the gains made in the previous year particularly by the agriculture sector. The pandemic has affected food security as the restrictions imposed to contain the spread of the virus have limited the movement of people and goods, thus disrupting all aspects of agricultural activities in the region. The severe flood that was experienced in November of the same year brought magnitude of damage to the production of most agricultural commodities.

The African Swine Fever (ASF) also posted negative impacts to the hog industry, especially to the hog raisers which resulted in the increase of the prices of pork. The ASF first occurred in the region in February 2020 but was controlled. ASF came back stronger during the second wave on July 25 almost two months after the last reported case in April. Most of the cases were reported in Isabela where the second wave originated with 28 out of 37 municipalities affected. Isabela province shares 90.6 percent of the total 19,676 culled hogs in the region.

The economy of the Cagayan Valley Region contributed 2.1 percent of the total Gross Domestic Product (GDP) despite its decline by 9.9 percent in 2020. This was lower compared with the 6.9 percent growth recorded in the previous year. Among the major industries, Agriculture, Fishery and Forestry accounted for 31.1 percent share of the Gross Regional Domestic Product (GRDP) which exhibited the least contraction of 0.2 percent from the 7.2 percent increase in 2019 while the services accounted for the largest share of the regional economy at 43.0 percent and correspondingly posted a decline of 11.6 percent. The Industry Sector accounted for 25.9 percent share of the GRDP and decreased by 16.9 percent.

The full year inflation rate was registered at 3.2 percent with an increase of 1.1 percent compared to the previous year and 0.6 percent compared to the national average. Faster inflation rate was attributed to the impacts of ASF and damage to agricultural produce caused by massive flooding due to Typhoon “Ulysses” in November 2020 that pushed the prices of agricultural produce higher.

In terms of employment, the region’s annual average employment rate was consistently high from 2016 to 2019, staying within the 96 to 97 percent range. With the onslaught of the pandemic, the employment rate was recorded at 91.3 percent in 2020 compared to the 96.4 percent in 2019. From a second highest employment rate among the regions in the entire Philippines, Cagayan Valley declined to sixth place due to temporary business closures, adoption of flexible work arrangements, and job displacement. The agriculture sector was hardly hit in terms of labor employment displaced 2,849 swine farmers and backyard raisers affected by ASF.

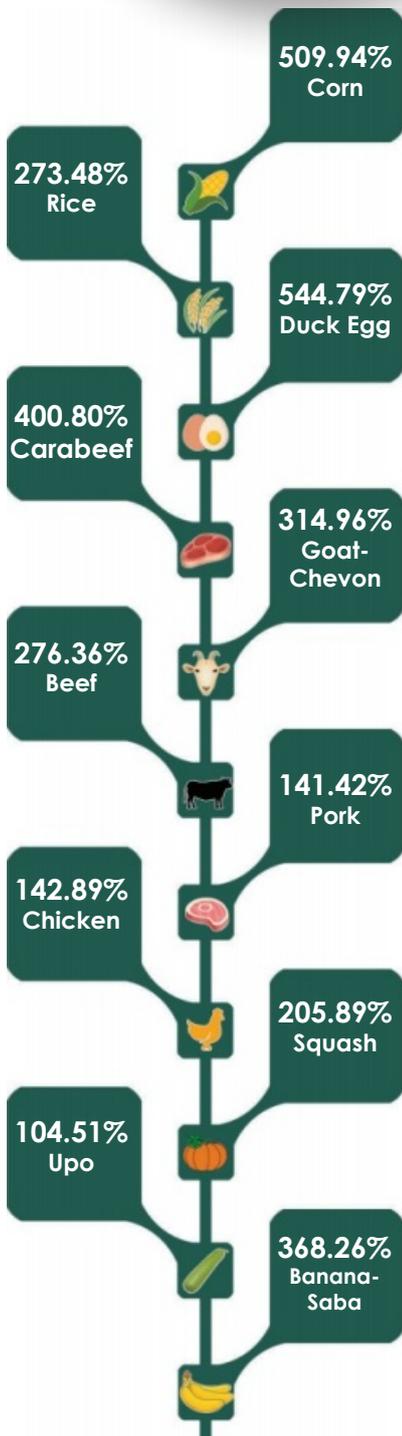
As part of the economic recovery in the agriculture sector, unhampered movement of agriculture and fisheries goods and products was ensured through efficient transport and logistic system. Urban agriculture and continuous agriculture production with the use of appropriate technologies were promoted to improve the productivity of the agriculture and fisheries sectors and to ensure food security. The sector’s performance in 2020 remained strong and resilient amidst the challenges and threats of various calamities.

Source: Cagayan Valley Regional Development Report, CY 2020 Philippine Statistics Authority



2nd Rank
Regional Rice
Producer Constituting
14.06% to National Rice
Production

1st Rank
Corn
Producer Constituting
23.39% to National
Production



Relative to sufficiency levels on staple crops, the following commodities exceeding 100% sufficiency level like Corn (509.94%), Rice (273.48%), Duck Egg (544.79%), Carabeef (400.80%), Goat-Chevon (314.96%), Beef (276.36%), Chicken (142.39%), Pork (141.42%), Squash (205.89%), Upo (104.51%), and Banana-Saba (368.26%) are the region's comparative advantage in terms of production both in volume and area. Cagayan Valley Region has been consistent as 1st rank corn producer and 2nd rank rice producer in the entire Philippines contributing about 14.06% of rice and 23.39% of corn to national overall production.

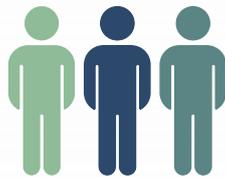
As we are guided and challenged to become better and more relevant in responding, engaging, and delivering our products and services, DA Cagayan Valley planned and executed new strategies to fulfill our obligation aligned with our Secretary's New Thinking to Level-Up the Agriculture Sector and refocused our interventions as measures to mitigate losses and adopt to the "New Normal" due to the pandemic.

Cagayan Valley Region's share of budget from the DA's total allotment for CY 2020 is Php 3,679,228,645.83 inclusive of the General Appropriations Act (GAA), Special Purpose Fund, and Bayanihan We Heal As One Act (I and II).

TOTAL BENEFICIARIES



89,323
INDIVIDUALS



1,274
GROUPS

Through our flagship and banner programs and various services, DA Cagayan Valley was able to look for ways that help us attain our vision and improve our staff's capacity while delivering services. As a result, our programs and various services have manifested positive performance in 2020 with a total of 89,323 individuals and 1,274 group beneficiaries served, all satisfied with the interventions/services delivered based on the results of our Client Satisfaction Feedback survey conducted.



We were able to deliver efficient services resulting to satisfied clients both internal and external, with the continuous certification to

ISO-9001:2015 of our Quality Management System (QMS).

One of our most important goals was to become more accountable to the delivery of desired performance. We ended the year with recognition from the Civil Service Commission (CSC) for obtaining

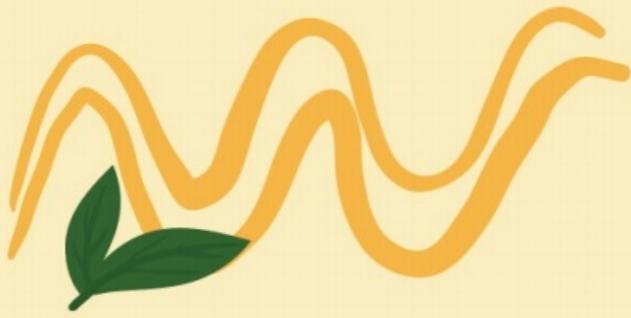
PRIME HRM Maturity Level 2

DA RFO 02 continues to aim higher as it works towards Maturity Level 3 in 2021.





HIGHLIGHTS *of Accomplishments*



RICE

Program

RICE INDUSTRIALIZED REGION

Strategic Objectives:

1. Increase in Productivity (Ani)

- a. Increase average yield per hectare from 4.49 MT/ha to 4.87 MT/ha in 2022.
- b. Contribute by at least 2.8 MT to the national production in 2022

2. Increase Income (Kita)

- a. Increase income from Php 42,293 to Php 46,946.00
- b. Reduce average farm production cost per kilogram from Php 10.48 to Php 10.08/kg
- c. Diversify existing farming system and encourage value-adding and processing among Farmer Cooperatives and Associations (FCAs)

PRODUCTION SUPPORT SERVICES

Provision of Hybrid Seeds. The provinces of Cagayan, Isabela, Nueva Vizcaya and Quirino were covered under this project wherein seeds of hybrid varieties were distributed as yield-boosting technologies. A total of 1,298,596.73 kg seeds of hybrid varieties were distributed covering 72,144.26 hectares benefiting 63,171 farmers.

Seed Production and Distribution. Under this project, 16 hectares were established to produce 55,800 kg registered seeds (RS) and another six (6) hectares to produce 27,160 kg certified seeds (Adverse) which were distributed to 1,308 farmers and 704 farmers, respectively.

Disaster Risk Reduction and Management. A total of 10,000 kg registered seeds (RS), 1,458,025 kg certified seeds (CS), 231,920 kg certified seeds (adverse) and 1,520 kg special rice varieties were procured and distributed to calamity-affected areas in the region under the Seed Reserve for Quick Rehabilitation Response.

Three (3) monolithic domes and 12 conventional warehouses were maintained to be used for the maintenance of seed reserves and storage for the protection of seeds from natural calamities.

Five (5) agricultural chemicals storage facilities for epidemic mitigation and agricultural supplies/production inputs storages were also maintained.





EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

Provision of Incentive Allowance. Incentives were given to four (4) Provincial Agriculturists, 67 Municipal Agriculturists, four (4) Rice Provincial Coordinators, 288 Agricultural Technicians, 208 Local Farmer Technicians, four (4) Provincial Agriculture and Fisheries Council Coordinators and 48 Municipal Agriculture and Fisheries Council Coordinators. These AEWs have been consistently providing assistance in the implementation of rice-related programs, projects, and activities in the Local Government Units (LGUs).

Deployment of Rice Crop Manager (RCM) Recommendations. A total of 103,243 Rice Crop Manager Recommendations were generated and distributed to farmers as basis in applying fertilizers in their farms.

Dissemination of IEC Materials. Radio, print, advertisement, and audio-visual presentations (AVP) were used as media to facilitate the transfer of technology and information to farmers. Radio programs and plugs, and jingles, were aired through the DZDA educational radio station. Moreover, 10,000 copies of info-advocacy materials were produced and distributed to farmers.



RESEARCH FOR DEVELOPMENT SERVICES

The R4D projects implemented are attuned on the updated Rice Regional Integrated Research & Development/Extension Agenda Program (RIRDEAP) and on the guidelines set during the National Rice R&D, to wit:



**Yield
Enhancing**



**Productivity
Enhancement**



**Ease of use of
technology**



**With economic
impact and
resilient**



**Adaptive to
Climate Change**

Most of the R&D projects were conducted by the Research Centers/Experiment Stations. These R&D projects in the region were categorized as follows:

National Rice R&D Project

1. DA-IRRI Partnership in Support to FSSP Sustaining Rice and Self Sufficiency in the Philippines
2. Strategic Rice R&D/E FSSP Support Projects

Regional Rice R&D Project

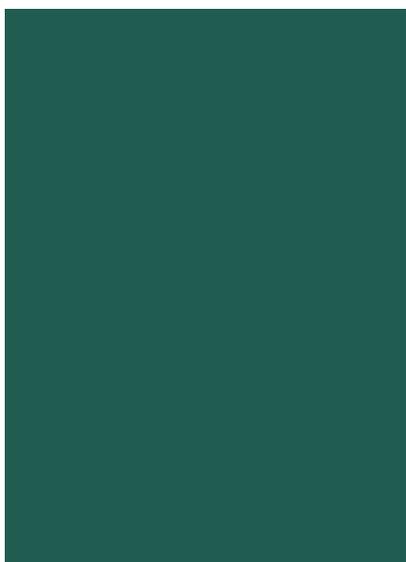
1. Production-related
2. Policy-related
3. Irrigation-related
4. Postharvest-related
5. Market-related
6. Collaborative R&D with other institutions

There were 41 R&D projects conducted for the CY 2020. Three (3) R&D projects were implemented under the DA-IRRI Partnership in Support to Food Staples Sufficiency Program (FSSP) Sustaining Rice Self Sufficiency in the Philippines, namely, Next Gen, Pest Risk Identification and Management (PRIME) and Rice Crop Manager (RCM). For the Regional Rice R&D projects, 38 projects were implemented. These projects were categorized as production, market, postharvest, policy, irrigation and collaborative R&D with other institutions. Under the R&D Support to facilities, only one (1) research facility was currently constructed.





AGRICULTURAL AND FISHERY MACHINERIES, EQUIPMENT AND FACILITIES SUPPORT SERVICES



Farm Production-related Machineries. Four (4) types of farm production-related machineries were distributed to farmer cooperatives and associations (FCAs), namely, four-wheel drive tractor, precision seeder, seed spreader/fertilizer applicator, walk-behind transplanter with seedling trays and combine harvester with bailer.

There were two (2) units four-wheel drive tractor distributed to two (2) FCAs; one (1) unit precision seeder distributed to one (1) FCA; four (4) units of seed spreader or fertilizer applicator distributed to four (4) FCAs; three (3) units walk-behind transplanter distributed to four (4) FCAs in Cagayan.

In Isabela, there were five (5) units four-wheel drive tractors distributed to five (5) FCAs; two (2) units precision seeder distributed to two (2) FCAs; seven (7) units of seed spreader or fertilizer applicator distributed to seven (7) FCAs; four (4) units walk-behind transplanter with seedling trays to four (4) FCAs.

For the province of Nueva Vizcaya, the following were distributed: one (1) unit four-wheel drive tractor to one (1) FCA; one (1) seed spreader or fertilizer applicator to one (1) FCA; one (1) unit walk-behind transplanter with seedling trays to one (1) FCA.

In Quirino, there were also one (1) unit four-wheel drive tractor distributed to one (1) FCA; one (1) seed spreader or fertilizer applicator distributed to one (1) FCAs; one (1) unit walk-behind transplanter with seedling trays to another FCA.

Postharvest Machinery and Equipment. One (1) unit rice combine harvester with bailer was distributed to one farmer cooperative and association (FCAs) in each province (Cagayan, Isabela, Nueva Vizcaya and Quirino).

Postharvest Facilities. To provide drying facility for the palay, 30 Multipurpose Drying Pavements (MPDP) were also constructed in the region. A total of 10 units MPDP were constructed in Cagayan; 10 units in Isabela, five (5) units in Nueva Vizcaya and five (5) units in Quirino.

IRRIGATION NETWORK SERVICES

Construction of Small Water Impounding Projects (SWIP). Five (5) units SWIP were constructed in Piat, Cagayan (Aquib SWIP), Naguilian (Cabaruan SWIP & Balera SWIP) and Mallig, Isabela (Mallig SWIP), generating 130 hectares irrigated rice area.

Installation of Solar Powered Irrigation System (SPIS). Construction of two (2) units SPIS in Lallo, Cagayan and in San Agustin, Isabela were undertaken with expected 20 hectares service area generated.



Rice Resiliency Project (RRP)

2020 Wet Season. Under the RRP I, 69,457 bags hybrid seeds and 19,276 bags inbred seeds were distributed to 76,269 farmers. Moreover, 413,390 bags inorganic fertilizers were also distributed through reimbursement scheme benefiting 149,048 farmers.

2020-2021 Dry Season. Under the RRP II, 176,000 bags hybrid seeds and 42,300 bags inbred seeds were distributed to 147,732 farmers.





CORN & CASSAVA

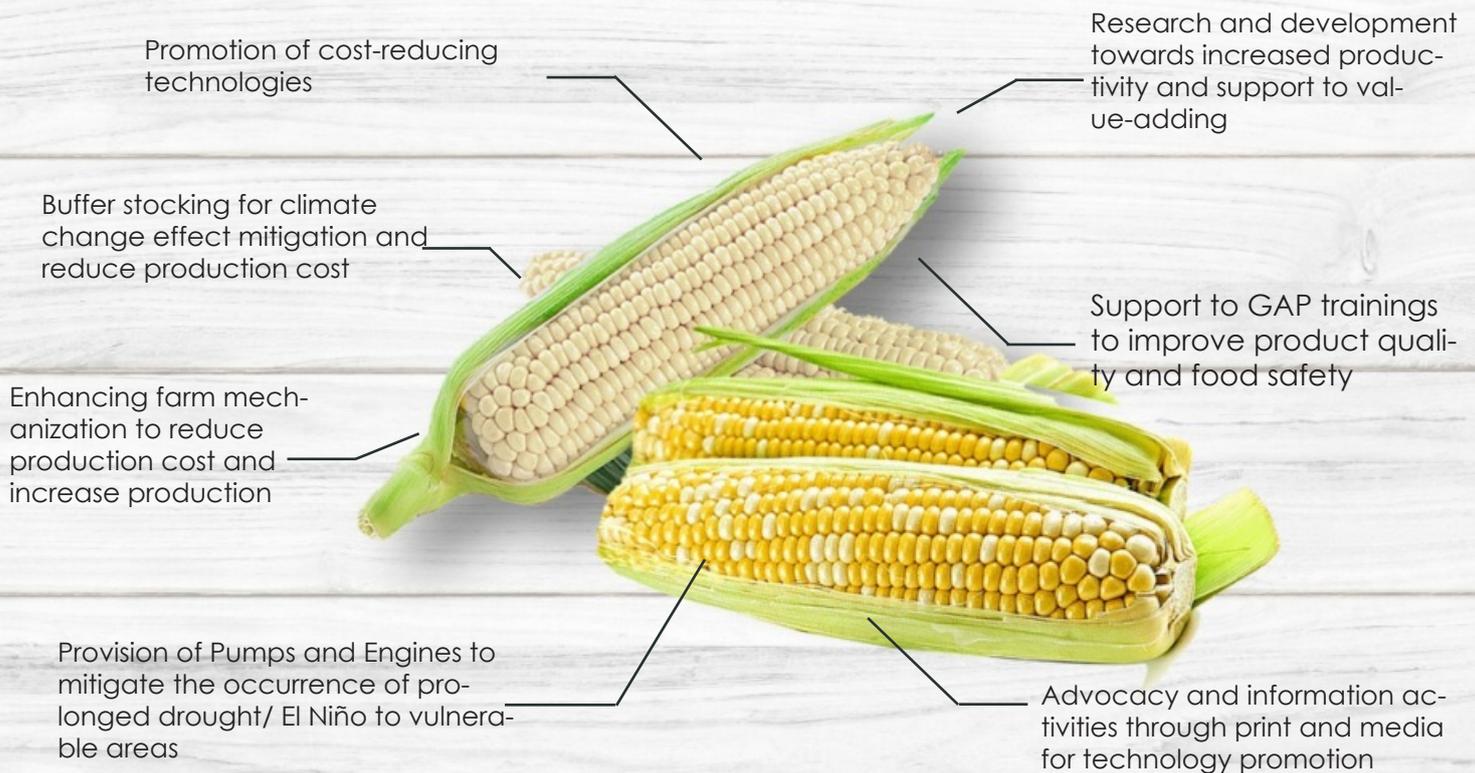
Program

THE PREMIER PROVIDER AND LOCAL EXPORTER OF REFINED CORN AND FEED-FOOD PRODUCTS IN THE PHILIPPINES

Cagayan Valley Region focuses its Corn Development Program on two (2) objectives:

- 1. Increase in Productivity from 4.36 MT/ha to 4.44 MT/ha.**
- 2. Improve quality of production and reduce post-harvest losses**

PROGRAM STRATEGIES



PRODUCTION SUPPORT SERVICES

1. Established 10 ha on-station registered seed production for Open Pollinated Variety (OPV) white flint and glutinous corn, with a production of 20,100 kilograms and 20,050 kilograms that were distributed to 1,097 farmer-beneficiaries. This is to ensure that there are readily available raw materials in support to rice-corn blend and to promote OPV white corn production in support to food safety and sufficiency.
2. Established 14.0 ha of OPV yellow corn with 28,045 kilograms produced and distributed to 1,528 farmer-beneficiaries.
3. Distributed on time 1,055.5 bags of white, 314 bags of OPV yellow and 9,108 bags of Genetically Modified (GM) hybrid yellow corn seed reserve to drought-affected areas covering 5,665.5 ha in Cagayan, Isabela, and Nueva Vizcaya. While 6,393 bags of GM hybrid yellow corn seed were distributed to the Province of Isabela under the roll-over scheme program benefitting 6,403 farmer-beneficiaries.
4. Increased the available cassava seed pieces and utilization of location-specific and market-preferred improved varieties of cassava through on-station and on-farm planting materials production of 27.0 ha (nursery) and distributed 1,984,000 seed pieces quality planting materials to 155 farmer-beneficiaries.



EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

1. Established 50 ha model farm for corn in Caniugan Norte, Sto. Tomas, Isabela, 20 ha model farm for sorghum in Villaluna, Cauayan City, Isabela and 30 ha model farm for cassava in Aromin, Echague, Isabela. The project showcased new technologies aimed at increasing the productivity of farmer-cooperators and improving the quality of grains and planting materials.
2. Capacitated/improved technical know-how of corn growers/farmer associations to produce high-yielding and quality corn through the conduct of four (4) Bantay Peste Brigade trainings and three (3) Good Agricultural Practices (GAP) trainings, four (4) livelihood trainings, and four (4) Gender and Development (GAD) related trainings participated by 493 participants.
3. Served as instrumental in the development of entrepreneurial skills of cassava farming households which was carried out in the conduct of four (4) GAP trainings, four (4) livelihood trainings, four (4) production technology trainings, four (4) postharvest, quality improvement, farm business and profitability trainings and four (4) cluster development trainings participated by 656 participants from cassava farmers, Rural Improvement Clubs (RICs), AEWs and DA Staff.
4. Extended support-incentives to the extension related services/undertakings of four (4) Provincial Corn Coordinators, 15 Municipal Agriculturists, and 127 Agricultural Extension Workers from the Provincial and Municipal Local Government Units; hence, the facilitative submission of needed reports relative to project field implementation and monitoring.
5. Improved technology access by corn farmers/stakeholders to appropriate technologies/information through distribution of 35,000 pieces IEC materials/flyers/booklets to corn and cassava farmers in Region 02 with the following titles:
 - For corn, namely; “Fall Army Worm”, “FAW Poster”, “Corn Silage”, “Corn Plant Hopper”, “Stop the cause of Bacterial Stalk Rot”, “Corn-bi Cost Structure”, and “Processing Techniques on Maize Silky Sip”.
 - For cassava, namely; “Cassava Photoplasma Disease”, “Cassava Recipes” and “Cassava Measures of Arthropods Pests”.



RESEARCH FOR DEVELOPMENT SERVICES

1. Implemented three (3) continuing studies under production-related through the different Research Centers and Experiment Stations with the following project and study titles:

- “Development and Improvement of OPV Corn Varieties in Region 02”
 - Study 1. Population Improvement
 - Study 2. Variety Maintenance and Improvement
 - Study 3. Preliminary Yield Trial-On Station and On-Farm

2. Implemented three (3) completed studies under production-related through the different Research Centers and Experiment Stations with the following project and study titles:

- Evaluation of open-pollinated white flint corn varieties in support to corn-rice blend product commercialization in Region 02.
- Evaluation of open-pollinated white flint corn varieties in support to green corn and cornik industry.
- Assessment on the performance of Genetically Modified Organism (GMO) corn varieties in Region 02.



FARM MECHANIZATION AND POSTHARVEST FACILITIES

Enhanced mechanization on land preparation, planting, harvesting and post-harvesting/processing to reduce production cost. Distributed seven (7) units four-wheel drive tractors for corn and cassava areas, four (4) units combine harvester with baler, 10 units cassava chipper, and 10 units Multi-Crop Drying Pavement (MCDP). A total of 31 FCAs were benefited from these interventions.



IRRIGATION NETWORK SERVICES

Allocated and distributed 97 units Pump Irrigation System-Open Source (PISOS) to corn farmers serving drought-prone production areas covering 291 hectares.



HIGH VALUE CROPS

Development Program

A FOOD SECURE & RESILIENT CAGAYAN VALLEY WITH PROSPEROUS HIGH VALUE CROPS FARMERS

To support the recovery and growth of the agriculture and fishery sector amidst the corona virus pandemic, the DA HVCP will focus on the following goals from CY 2020 and onwards:

1. Increase in Productivity (Ani)

- Contribute to increase production of 5% per commodity per year
- Contribute at least 4% to the country's total output for High Value Crops

2. Increase Income (Kita)

- Expansion of 5% in areas for High Value Crops in Cagayan Valley
- Increase income of farmers up to 15%



PRODUCTION SUPPORT SERVICES

Seed Distribution

In support to the booming legume, spices and vegetable industries in Region 02 quality vegetable seeds were distributed.

A total of 3,965 kgs of mungbean seeds were distributed in the province of Cagayan and Isabela. This was distributed to three (3) LGUs, two (2) FCAs and six (6) individual farmers, planted to 160.1 hectares. Another 3,500 kgs quality seeds of peanut was distributed in the municipalities of Enrile, Alcala and Solana, Cagayan. The distributed seeds were planted in 35.0 hectares and able to produce 44.0 mt.

The procurement of 22,700 kgs of quality garlic seeds was undertaken. This was distributed and planted to 32.43 hectares in the provinces of Batanes and Nueva Vizcaya. Also, a total of 200 kgs of Red Onion seeds were distributed in the province of Nueva Vizcaya to support the Onion farmers in the province. There were seven (7) LGUs and two (2) FCAs benefited on the procured seeds and planted to 50.0 hectares with 618.0 MT production.



For lowland vegetable seed, a total of 886.025 kgs was distributed to 64 FCAs/LGUs in the province of Batanes, Cagayan, Isabela and Quirino; and for Upland vegetable seed, a total of 349.09 kgs was distributed to 25 FCAs in the provinces of Batanes, Nueva Vizcaya and Quirino.

The procurement of assorted seed vegetable of 683 kilograms of lowland (573kg) and upland (110kg) buffer stock seeds was intended to be distributed during calamities. During the pandemic this was also planted to support every household to sustain their food requirements.

Planting Materials Distribution

Citrus

To support the citrus industry in the region, a total of 29,680 pc of citrus seedlings were distributed in the provinces of Cagayan, Isabela and Nueva Vizcaya. These were planted to 179.88 hectares and expected to produce 899.4 Mt of citrus. A total of 38 FCAs received and were benefited on the said intervention.

Industrial Crops (Cacao)

Cagayan province was the focus for the dispersal of quality planting materials for 2020. A total of 21,180 pc were distributed to nine (9) FCAs in the province and planted to 42.36 hectares expected to produce 84.72 Mt of cacao in the future. In addition, fertilizer was provided to the cacao farmers who have unproductive cacao trees to increase their production. A total of 50,000 trees were fertilized in the province of Cagayan and Isabela. And to help our farmers to properly engage in the proper technology rejuvenation, technical briefing was conducted before the application of fertilizer.

Coffee

A total of 30,125 pcs of coffee planting materials were distributed to 16 FCAs in the province of Cagayan, Isabela, and Nueva Vizcaya. These were planted to 30.13 hectares and expected to produce 15.07 MT. Also fertilizers were provided to the coffee farmers with 171,240 coffee trees fertilized in the province of Cagayan, Isabela, Nueva Vizcaya, and Quirino. Necessary technical briefing on the proper usage of the fertilizer was also undertaken.

Rootcrops (Sweet Potato)

A total of 780,000 cuttings were distributed to the province of Batanes in support to the farmers engaged in sweet potato production as one of the top priority commodities in the province.



EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

Peanut

In support to the peanut industry in the region, the conduct of technology demonstration entitled “Technology Demonstration on the use of Boron Fertilizer for Peanut Production” in Lanna, Enrile, Cagayan was spearheaded to increase the production and quality of the peanut produce by the farmers.

Coffee and Cacao Technology Demonstration Project

DA RFO 02, through the High Value Crops Development Program (HVCDP), demonstrated technologies on pruning and fertilization to coffee and cacao by providing pruning saw and controlled released fertilizer with micro-elements. The technology demonstration project for coffee and cacao also known as rejuvenation and rehabilitation project was aimed at increasing the productivity and profitability for both coffee and cacao farmers in Region 02. This project had a dramatic increase in yield and quality of beans produced with 175% increase in yield from 10 Mt in 2019 to 57 Mt in 2020 in Quirino Province.

AGRICULTURAL AND FISHERY MACHINERIES, EQUIPMENT AND FACILITIES SUPPORT SERVICES

Gulayan sa Likod Bahay

A total of 23 Barangays were assisted by the project. Each barangay received a set of vegetable seeds (pechay, okra, pole sitao, squash, bitter gourd, bottle gourd, sponge gourd, tomato and egg-plant), garden tools (shovel, rake, grab hoe, wheel barrow, sprinkler, garden hose, seedling tray) and potting media. Each barangay was required to have at least 250 sq.m. for the establishment of the garden. This was conducted in the different provinces of the region.

School Garden Program

A total of 500 schools were benefited from different provinces of the region by this project. Each school received a set of assorted vegetable seeds (pechay, okra, pole sitao, squash, bitter gourd, bottle gourd, sponge gourd, tomato and eggplant), garden tools (shovel, rake, sprinkler, seedling tray) and potting media. Each school was required to have at least 200 sq.m. for the establishment of the garden. Another activity conducted in support to the implementation of the school garden program was the virtual meeting about Gulayan sa Paaralan under the New Normal thru the Parents-Pupils tandem.

The program aims to:

- Extend the Gulayan sa Paaralan Project (GPP) into backyard gardening under the new normal,
- Come up with the new ideas and initiate new activities to inspire and encourage the target clients most especially the young learners, and
- Encourage the young learners on the importance and benefits of agriculture.



Urban Agriculture

There were two (2) sites of urban agriculture established located in Carig Sur, Tuguegarao City, Cagayan and Baculud, City of Ilagan, Isabela. The two (2) cities received a set of assorted vegetable seeds (pechay, okra, pole sitao, squash, bitter gourd, bottle gourd, sponge gourd, tomato and egg-plant), garden tools (shovel, rake, grab hoe, wheel barrow, sprinkler, garden hose, seedling tray) including potting media and a nursery. Each city committed and maintained 2,500 sq.m. for the establishment of the garden.

Plastic Crates

To reduce post-harvest losses, a total of 1300 pc crates were distributed to 17 FCAs in the provinces of Cagayan, Isabela, Nueva Vizcaya, and Quirino.

IRRIGATION NETWORK SERVICES

Small Scale Irrigation Project (SSIP)

To help our farmers to provide sufficient water requirement on their crops, and to prevent water shortage on the field, a total of 12 units spring development project were constructed in the provinces of Isabela and Nueva Vizcaya. The constructed project generated a total of 24.0 hectares. There were eight (8) solar powered-irrigation system constructed in the provinces of Cagayan and Isabela. The project generated a total of 18.0 hectares service area. Another 71 units of pump and engine were distributed to different FCAs in the provinces of Cagayan, Isabela, and Quirino. These units generated a total of 142.0 hectares service area.



Ahon Lahat, Pagkaing Sapat (ALPAS)

The region just like other regions in the country experienced the massive impact brought about by the COVID 19 pandemic but this did not hamper DA RFO 02 particularly the High Value Crops Development Program (HVCDP) to implement the projects and programs for 2020 with the Plant Plant Plant Program (PPPP) strategies. The Revitalized Gulayan Project was implemented regionwide. Vegetable Seeds - 7 in 1 pack around 55 grams (tomato, eggplant, pechay, kangkong, okra, pole sitao) were distributed to all 93 municipalities of Region 02 with 15,435 household beneficiaries. Also, a total of 232,678 vegetable seedlings were distributed to 5,601 households. The sources of fund were the vegetable seed stocks and the rehabilitation fund for Typhoon “Tisoy and Quiel”.

As part of the massive promotion of the PPPP, DA RFO 02 launched the “Garden Mo, Iflex Mo Challenge” through social media. It was open to all households of Cagayan Valley by posting their gardens and other related activities online. This was done to reach out to everyone and ensure food availability by producing food at household level.

The said launching was in line with the mandate of Secretary William Dar to address the Ahon Lahat, Pagkaing Sapat (ALPAS) Kontra COVID-19 of the agency. These were conducted in different locations in the region. All households in the identified barangays were given assorted vegetable seeds, seedlings, and 5 kg organic fertilizer (vermicast). Mushroom production technology was also introduced to the community. Compost Fungus Activator (CFA) were distributed so that kitchen waste will be turned into organic fertilizer for sustainability purposes.

The HVCDP of DA RFO 02 initiated the distribution of seeds not only for the consumption of a single household. Also government offices in the entire region were provided with assorted seeds and seedlings.

To date, 43 regional offices like DTI, DOST, DOH-Tuao, DOH-Quirino, Pag-ibig, CSC, TES-DA-Ilagan, PIA, ATI-Isabela, DENR-EMB, PCIC, BIR, BPI, NTA, PIA, BFAR, PNP-Cagayan and SAF, and Philippine Marine Corps were assisted by the program.





DA RFO 02 – Bangon Magsasaka Operation Tulong

Typhoon Ulysses brought a huge damage in Cagayan Valley most especially in the agriculture sector. Many crops were damaged due to heavy rains coupled by severe flood.

The HVCDP of DA RFO 02 was able to distribute vegetable seeds to the affected households/farmers in the following municipalities:

| BARANGAY/ MUNICIPALITY | No. of Packs distributed | No. of Household benefited | No. of kgs. distributed |
|---------------------------|-----------------------------|-------------------------------|----------------------------|
| Iraga, Solana | 2,000 | 2,000 | 100 |
| Mocag, Baggao | 400 | 400 | 24 |
| Nannarian, Peñablanca | 350 | 350 | 17.5 |
| Palayag, Amulung | 350 | 350 | 17.5 |
| Alibago, Enrile | 500 | 500 | 25 |
| TOTAL | 3,680 | 3,680 | 184 |

Relief goods to the affected households comprising of assorted vegetables, groceries, vitamins and used clothes were given.

LIVESTOCK Program

CAGAYAN VALLEY AS A MAJOR SOURCE OF CATTLE, GOAT, SHEEP, IMPROVED NATIVE PIG, DUCK, AND FREE RANGE CHICKEN OF GLOBAL STANDARDS

Enterprise development and promotion of cattle, goat, sheep, improved native pig, duck, and improved free-range chicken in corn and rice-based farming system as sources of quality and safe meat, milk, and egg.





PRODUCTION SUPPORT SERVICES

The Livestock-based Livelihood Assistance Project specifically aims to contribute to food security and supply. It seeks to ensure meat and egg availability, accessibility, and affordability amidst the present crisis.

The Department of Agriculture implemented re-focused programs to address food security concerns amidst the country's coronavirus disease (COVID-19) outbreak. The "Plant, Plant, Plant Program" or "Ahon Lahat, Pagkaing Sapat (ALPAS) Kontra sa COVID-19" program aimed at increasing agriculture and fishery sufficiency level. One of the projects under the "Plant, Plant, Plant Program" is the Livestock-based Livelihood Assistance.

The project involved the distribution of animals to qualified farmer-beneficiaries. It enabled farmer households to produce their own food as an alternative source of livelihood and the opportunity to increase their income.

DA RFO 02 distributed various animal modules in African Swine Fever-affected areas and drought-affected corn farmers, governed by national and regional guidelines. These interventions were funded under the Regular GAA, refocused and later release funds of the department.

| Commodity | Distributed (Head) | Beneficiaries |
|--------------------|--------------------|------------------------------|
| Cattle | 85 | 4 groups |
| Goat | 120 | 2 groups |
| Free Range Chicken | 13,843 | 3 groups and 760 individuals |
| Duck | 6,346 | 3 groups and 454 individuals |
| Sheep | 60 | 2 groups |



The Breeder Loan Program

DA RFO 02 had established and maintained four (4) nucleus farms in the four (4) provinces nationwide which serve as source of purebred and genetically superior breeder stocks for the improvement of phenotypic and genotype of native and upgraded animals such as goat, cattle, and sheep to increase productivity. Moreover, these stock farms serve as learning sites where raisers are updated on production and management practices and capacitated on various technologies in value-adding and producing agricultural products for increased income.

1. DA-Nueva Vizcaya Experiment Station (NVES) in Villaros, Bagabag, Nueva Vizcaya, tagged as the nucleus farm for dairy goats where qualified applicants can obtain dairy goat breed namely; Anglo Nubian, Saanen and French Alpine. The station has distributed 51 heads of Anglo Nubian buck to 51 farmer-beneficiaries.
2. DA-Quirino Experiment Station (QES) in Dunggo, Aglipay, Quirino is tagged as the Nucleus Farm for Brahman Cattle, a beef type cattle. To date, 22 heads cattle were availed of by 22 recipient farmers. Also, the station was able to produce strains of dairy cattle using bull from the F1 bulls crossed to original stocks known as the “Quibac” or Quirino breed adaptable Cattle. The developed breed is in the process of refining as the station needs more time to test its performance in terms of beef and dairy production.
3. DA-Isabela Experiment Station (IES) in Upi, Gamu, Isabela is the identified nucleus farm for sheep and the station has distributed 71 heads of quality breeder sheep released to 25 qualified breeder loan applicants.
4. DA-Southern Cagayan Research Center-Cagayan Breeding Station (SCRC-CBS) in Maguirig, Solana, Cagayan promotes goat meat and chevon utilization. For CY 2020, the station distributed 43 heads Boer to qualified and identified 29 farmer-beneficiaries.

In summary, there were 127 heads of various breeder commodities such as cattle (Brahman), full blooded sheep (St. Croix, Dorper, Katahdin), dairy goat (Anglo-Nubian), and meat goat (Boer, Kalahari Red), that were distributed nationwide.

A letter of request with endorsement of the LGU concerned is one of the requirements to avail of breeders depending on the applicant’s choice. An evaluation team composed of technical staff from the DA RFO 02 Livestock Program, livestock station and concerned Local Government Unit (LGU) concern evaluated and validated the status and readiness of the farm and capability of the applicants.

Unified National Artificial Insemination Program (UNAIP)

The Unified National Artificial Insemination Program is a proven strategy to breed improvement in livestock and poultry. Cattle and goats were the focus commodities of the Department of Agriculture Regional Field Office No. 02 for this program. It is designed to improve genetic composition of breeder stocks in the region. A total of 3,860 of Cattle Semen Straws and 380 Goat Semen Straws were distributed in 22 different municipalities nationwide. Artificial insemination services were provided to 2,610 heads cattle and 224 heads that resulted to calf drop of 764 and kid drop of 71 obtained from previous year’s insemination activities.



Animal Disease Prevention Program

A healthy livestock and poultry industry contributed to a robust economy. Among the mandate of the office is to ensure a healthy animal population to achieve food security in a balanced ecological system. The office implemented provision of drugs and biologics to the 5 provinces of Region 02, namely, Cagayan, Isabela, Nueva Vizcaya, and Batanes. Accomplishments include the following:

| Province | Antibiotics (doses) | Dewormer (doses) | Vitamins (doses) | He-mosept (doses) | NCD-Lasota (doses) | Anti-Rabies |
|---------------|---------------------|------------------|------------------|-------------------|--------------------|-------------|
| Cagayan | 540 | 3,866 | 660 | 8,000 | 216,000 | 8,440 |
| Isabela | 7,700 | 26,530 | 8,420 | 22,800 | 157,500 | 26,180 |
| Nueva Vizcaya | 140 | 850 | 320 | 4,050 | 57,000 | 2,530 |
| Quirino | 130 | 1,250 | 440 | 10,000 | 64,000 | 2,810 |
| Batanes | 90 | 450 | 380 | - | 33,000 | 2,520 |

The vaccination, vitamin supplementation, and deworming services were provided yearly by Provincial Veterinary Office, and Municipal Agricultural Office per province in the region. There has been no alarming incidence of domestic animal disease outbreaks, which is attributed to the proper implementation of vaccination program, proper management and Information, Education and Communication (IEC) campaign activities that have been regularly conducted by DA RFO 02 in coordination with PLGUs and MLGUs. The Philippines received official recognition as a country free from Foot and Mouth Disease (FMD) without vaccination in May 2015 from the World Organization for Animal Health (OIE). This status further enhanced the delivery of veterinary services, strengthened Public-Private Partnership and improved opportunities for exports of livestock and livestock products. To maintain FMD-free status, monitoring of livestock, disease surveillance, and strict border control measures were conducted regularly in coordination with the Regulatory Division and Bureau of Animal Industry Regional Office No. 02.

African Swine Fever (ASF) is considered as one of the most dreaded diseases of swine. Unlike most transboundary animal diseases (TADs), no vaccines or drugs were available to prevent or treat ASF infection. Therefore, it was particularly important that ASF-free areas were monitored vividly through strict prevention and control measures. Measures can be taken at the institutional or at the individual level, e.g. the farmer, the middleman, the butcher, etc. In response to ASF incidence, DA-RFO 02 provided electric power sprayer and disinfectants to PLGUs and MLGUs for biosecurity at checkpoints located in every boundary (Entrance and Exit points) of each provinces in the region.



Organic Agriculture Program



PREMIER PRODUCER OF ORGANIC RICE, GARLIC, AND LEAFY VEGETABLES IN THE COUNTRY. CAGAYAN VALLEY REGION AIMS TO INCREASE ITS PRODUCTION AREA DEVOTED TO ORGANIC AGRICULTURE FROM 3.85% (20,813 HA) TO 4.57% (24,730 HA) OF THE TOTAL REGIONAL AGRICULTURE AREA.





Produce and promote the use of organic rice, corn, and assorted vegetable seeds



Maintain organic demonstration farms and promote the production of native breed for livestock/poultry and crops



Continue info-dissemination on benefits of organic food/advocacy on organic agriculture



Provide farm facilities/infrastructure and farm inputs to support organic crop production

Strategies that were implemented to address the program goals and objectives



Provide assistance for 3rd party certification and registration for organic producers and processors

PRODUCTION SUPPORT SERVICES

On-station Seed Production and Distribution

The DA RFO 02 Research Centers/Experiment Stations (RC/EC) continued to ensure that their field operations on seed production conform with the Philippine National Standards on Organic Agriculture (PNS-OA). This was evidenced by the issuance of the renewal of their 3rd Party Organic Certifications by the Organic Certification Center of the Philippines-Inspection and Certification Services Inc. (OCCP-ICSI). The research centers and experiment stations that already renewed their certificate include the following:

1. Nueva Vizcaya Experiment Station (DA-NVES), Bagabag, Nueva Vizcaya;
2. Cagayan Valley Research Center (DA-CVRC), San Felipe, City of Ilagan, Isabela;
3. Southern Cagayan Research Center (DA-SCRC), Iguig, Cagayan;
4. Quirino Experiment Station (DA-QES), Dungo, Aglipay, Quirino;
5. Northern Cagayan Experiment Station (DA-NCES), Lucban, Abulug, Cagayan, and;
6. Batanes Experiment Station (DA-BES), Basco, Batanes.

The said RC/ES produced and distributed 10,945 kilograms of organic seeds to 1,558 farmer-beneficiaries.

In addition, the program also procured and distributed 330 liters of organic pesticides, 330 liters of foliar fertilizer, and 53,630 kilograms vermicompost. These inputs were distributed to organic practitioners to support the production of organic vegetables, organic rice, and OPV corn.

It is also very important to note that the production and distribution of organic assorted vegetable seeds, Open Pollinated Variety (OPV) Corn, and traditional rice varieties totaling to 10,945 kilograms to 1,558 farmer-beneficiaries with a total area of 423 hectares produced an estimated volume of 94,164 kilograms of organically grown assorted lowland vegetables; 550,000 kg of organically grown glutinous corn and 329,872 kilograms of organically grown pigmented rice.

The production provided the families with quality and safe food during the time of pandemic and the surplus were marketed in the locality which provided additional income to the families.

EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

To further promote the implementation of organic farming and encourage more practitioners, both print materials and media were used. As of this reporting period, 2,511 IEC materials were produced and distributed. In addition, four (4) radio plugs were regularly aired not only through the DZDA radio station but also through other local radio stations with a wider area of coverage.

Moreover, the eight (8) technology demonstration sites situated at the DA RFO 02 Experiment Stations and Research Centers were maintained. These demonstration sites showcased organic farming technologies on crop and livestock production, mushroom production, organic fertilizer production, and production of Natural Farming Inputs (NFIs). These served as effective learning sites on organic farming for students, farmers, and other organic agriculture stakeholders and enthusiasts. Despite the COVID-19 Pandemic, there were 1,288 farmers who visited the area and were briefed and trained on their specific interest in organic farming.



In addition, DA RFO 2 assisted six (6) private farms for Third Party Certification. As a result, the renewal of Third Party Certification was issued to the following farms:

1. Willy's Integrated Farm
2. Agrizkaya Cooperative Federation
3. Vizcaya Fresh! Organic Advocates Inc.
4. Gonzaga Center of Agronomy
5. Mataga-ay Coffee Growers Producers Cooperative
6. IT Pascua Agri-Products



AGRICULTURAL AND FISHERY MACHINERY, EQUIPMENT AND FACILITIES SUPPORT SERVICES

Agricultural facilities were established, equipment were procured and distributed to organic farmers to improve the productivity and profitability of the farm.

For 2020, five (5) units of small-scale composting facilities which are composed of shredder machines with tea brewer and siever machines were distributed to farmer's organization and academe involved in organic farming. These equipment facilitated the production of quality organic fertilizer as a basic requirement in organic farming. Moreover, two (2) units of greenhouse were also established to upscale the production of planting materials under controlled weather conditions.



Provision of Farm Supplies (Refocused Targets)

Conduct of National Organic Agriculture Congress (NOAC) and the Search for National Organic Agriculture Achievers Awards (NOAAA) were canceled due to the threat of Corona Virus (COVID-19). Relative to this, fund amounting to P4,000,000.00 was reprogrammed for the procurement and distribution of farm supplies in support to the organic practitioners in the region.

Sixty-five (65) rolls each of UV plastic polyethylene, insect net and mulch film polyethylene, and 7,500 pieces of seedling trays were already delivered and distributed to 51 farmer-groups in the region. The farm supplies were used by the recipients in the establishment of rain shelter and as mulch in the production of assorted vegetables.





FARM TO MARKET ROAD SERVICES



FARM-TO-MARKET ROAD (FMR)

The Department of Agriculture (DA) is mandated to undertake various infrastructure projects in order to provide better services to farmers by establishing roads for easy access and transportation of goods from remote areas to the market or various trading centers; hence, the establishment of Farm-to-Market Road (FMR) projects within the region. The DA-Regional Agricultural Engineering Division (RAED) is responsible in the review of plans, design, and cost estimates of proposed FMR and farm bridges, site validation, road tracking and geo-tagging and supervision/monitoring of projects implementation.

Under GAA 2020, FMR projects had a total budget allocation amounting to P302,000,000.00 which were implemented in partnership with the Department of Public Works & Highways (DPWH) as the Implementing Agency thru its District Engineering Offices in Region 02. There were 25 projects/sites targeted regionwide to be improved and rehabilitated that will benefit more or less 3,375 farmers which is equivalent to a total length of 26.043 km. There are two (2) in Batanes, six (6) for Cagayan, 12 for Isabela, three (3) for Nueva Vizcaya and two (2) for Quirino.

For the Bayanihan Act II CY 2020, the Department of Agriculture allocated a budget amounting to P474,000,000.00 which was fund transferred to Department of Public Works & Highways (DPWH) to be implemented by its District Engineering Office regionwide for the 39 projects/sites with a total length of 42.515 km. and will benefit more or less 5,556 farmers : one (1) in Batanes, 18 in Cagayan, 10 in Isabela, three (3) in the Province of Quirino and Nueva Vizcaya.





MARKET DEVELOPMENT SERVICES



MARKET DEVELOPMENT SERVICES

The Department of Agriculture – Regional Field Office No. 02 (DA RFO 02), through the Agribusiness and Marketing Assistance Division (AMAD), implements various market-related activities in support to agri-preneurship.

Market Linkage

Market linkage activities are continuously undertaken to assist farmers and fishers in marketing their produce and for eventually attain higher income because of the reduction in market layers.

A total of 718 Mt of different agri-commodities amounting to 23,503,396.00 through linkage made with various buyers and processors.

Table 1. Consolidated Market Linkage volume and value consummated`

| Type of Agri-commodities | Producer | Buyer | Volume (MT) | Value (Php) |
|--|--|---|-------------|-------------|
| Yellow Corn | DISADECO | Nacho King | 224 | 3,386,350 |
| | Villa Luna MPC | Nacho King | | |
| | | Region IV-A Feed Millers | | |
| Pigmented Rice | Sambaland ARB Cooperative | Organic Options Inc. | 6.2 | 418,850 |
| Brown & Red Rice | Sana Farm | KNC Rice Retailer and Wholesaler | | |
| Squash | Kasibu Farmers Cooperative | Rural Rising Ph | 82.23 | 3,372,382 |
| Tomato | Tomato Farmers in Nueva Vizcaya and Matiddi, Nagtipunan, Quirino | Corazon Calderon, LGU PM of Sta. Ana, Iguig, Amulung, Solana, City of Ilagan, DA MPC, DA CVRC, DA IES, Firm Foundation Cooperative, CVLMROS | | |
| Cabbage | Satur Lagiwa | CVLMROS, Firm Foundation Agri. Cooperative, Ruben IV Online Food Store | | |
| Sayote | Maribeth Mariano | Organic Options Inc. | | |
| Organic/ naturally grown vegetables and spices | Bintawan Norte Farmers Associations | Organic Options Inc. | 58.9 | 96,800 |
| Pineapple | Caviteño Agriculture Cooperative | Eric Simon Willianda Tumbali-KADIWA | | |
| Mandarin | Josue Balderama Farm | Various buyers from Ilocos | | |
| Watermelon | Rodolfo Gabutan | DA MPC and employees | | |
| Calamansi | Aurora Citrus Farmers Marketing Cooperative | Mama Sitas | 1.7 | 79,300 |
| Peanut | 6 Individual Farmers of Enrile | Buenavista MPC | | |
| Rice, Chicken, Egg | Christian Farmers MPC | Food Subsidy for Marginal Farmers and Fishers Program | 347 | 15,284,396 |
| | DISADECO | | | |
| | Villa Luna MPC | | | |
| | NMI | | | |
| | MB Decena Jr. Livestock | | | |
| TOTAL | | | 718 | 23,503.078 |

Tradefairs and Exhibits

The conduct of trade fairs and exhibits is a strategy that provides direct market access to producers thus reducing market layers or middlemen, increasing accessibility of affordable fresh farm products to the consumers. The DA RFO 02 AMAD conducted trade fairs on March 16-17, 2020, and March 24-25, 2020 at DA RFO 02 – Multi-Purpose Cooperative, Tuguegarao City, Cagayan. A total of five FCA exhibitors participated in the tradefair and generated a total sales of P408,832.90.

The KADIWA ni Ani at Kita is a project implemented to directly help farmers and consumers, and to facilitate direct marketing scheme. Three KADIWA ni Ani at Kita Market Outlets were launched, namely Firm Foundation Agriculture, Sampaguaita, Solana, Cagayan; CVLMROS Cooperative, Minanga Norte, Iguig, Cagayan and Capitol Peoples Mart, Cabarroguis, Quirino.

During the Enhanced Community Quarantine (ECQ), the KADIWA ni Ani at Kita on wheels was undertaken by AMAD and Research Center/Experiment Stations to provide fresh farm products at affordable price to the affected barangays. A total of 16 FCA suppliers were tapped as source of agri-commodities. The Kadiwa ni Ani at Kita market outlets and on wheels sold a total volume of 166.77 Mt agri-commodities valued and generated a total sales of P20,096,140.00, and served 41,326 households from 208 barangays regionwide.

Through the KADIWA ni Ani at Kita, the AMAD assisted two (2) exhibitors during the locally sourced trade fair on October 24 to November 2, 2020 at Robinsons Place Tuguegarao City that generated total sales of P900,785.00. The Valley Harvest Fair featuring KADIWA ni Ani at Kita was conducted last November 20-30, 2020 at SM Tuguegarao City Downtown where five (5) FCA and five (5) individual agri-entrepreneurs participated in the activity. The trade fair generated a total sales of P674,458.00.

As a strategy to enrich the knowledge and skills of agri-entrepreneurs, capability building/ trainings were conducted:

1. Food Processing Training

To address the request of the Solano Merchants Multi-Purpose Cooperative (SMMPC), the Food Processing Training on the production of fruit wine and vinegar and catsup processing using banana-saba and tomato as raw materials and processing of several meat products such as tapa, tocino, siomai, and embotido was conducted on February 10-11, 2020 at DA Nueva Vizcaya Experiment Station, Tapaya, Villaros, Bagabag, Nueva Vizcaya. The training was attended by 30 participants and staff of DA-NVES.

2. Agri-Entrepreneurial Training

The AMAD conducted a series of training for agri-enterprises as ASPIRE enrollees to become market-oriented and sustainable. The training was conducted on February 26-27, 2020 at DA SCRC, Minanga Norte, Iguig, Cagayan which was attended by five (5) cooperatives, 19 associations, representative from the LGU, and staff of DA Research Center/Experiment Stations.

The lecture covered the following topics:

- Entrepreneurial Mindset, the rewards of going into business and also the risks of going into business;
- Entrepreneurial Mindsetting and Values Formation and Awakening the Entrepreneurial Spirit;
- Financial Management;
- Organizational Management, and
- Marketing

3. Training on Good Manufacturing Practices (GMP) for the Agri-Entrepreneurs in Region 02

The training was attended by 55 participants who are officers/members of cooperatives and/or associations, and staff of DA Research Center/Experiment Stations with Resource Person from DOST.

The topic was divided into three segments:

- Basic Food Hygiene which covered permits, establishments, operations, sanitation, personnel hygiene, and transportation;
- Food Safety Hazards which highlighted the importance of knowing and understanding food safety hazards and how to minimize and prevent these hazards.
- Current Good Manufacturing Practices which emphasized the importance of complying with the requirements and understanding the benefits that may be derived from the proper and appropriate implementation in the food business.



4. Packaging and Labeling Training

The topic included the roles and importance of proper packaging as well as the mandatory labeling requirements which make the packaging useful not only to the manufacturer but also to the customers. It is important to consider the competitors in order to gain advantage from similar products.

After the lecture, one-on-one consultation with the processors was conducted to assess their products and to provide suggestions for the improvement/enhancement of their packaging and labeling.

5. Orientation on the Requirements and Registration for FDA-License to Operate (FDA-LTO) and Certificate of Product Registration (CPR)

The Food and Drug Administration (FDA) is mandated to inspect manufacturers/processors and to provide licenses/permits based on standard criteria.

The topics dealt on purpose of acquiring License to Operate (LTO) and the importance of the certification especially to processed products/food which concerns the security and safety of the general public health were discussed. It is needed to ensure the implementation of standard sanitary practices and environment for the production and distribution of food supply.

A part of the topic was the LTO Online Registration. This strategy eases the process of registration of processors and facilitates efficient transaction covering payments and securing/submission of documents.

Certificate of Product Registration ensures the customers of the safety and quality of the product. Mandatory information and requirements of all pre-packaged food products whether manufactured locally or imported into the Philippines must be indicated in the label.

6. Orientation on the Requirements and Registration on Trademark, Branding, and Intellectual Property Rights (IPR)

Intellectual Property Rights (IPR), Trademark and Patents are the exclusive rights granted to a product and/or produce that are registered which distinguishes one product or enterprise from the other.

The IPR serves as a business tool because it has value just like money since it can be bought or transferred. It also serves as protection in order to prevent others from copying or imitating the product.

7. Capacity Enhancement/ Training on Enterprise Capacity Development Plan (ECDP)

The Training-Workshop on ECDP was conducted on March 10-13, 2020 at DA RFO 02 – Southern Cagayan Research Center Station, Minanga Norte, Iguig, Cagayan. The training was attended by 30 technical staff from Agribusiness Development Center (ADC) technical staff of the experiment station, research centers, and AMAD.

During the training, the Capacity Development Plan was formulated using of proper assessment tools and forms as follows:

- Enterprise Profiling Template
- Enterprise Assessment Tool (Business Enterprise Process Review)
- Training Needs Assessment
- Internal and External Assessment

Foodlane Project Orientation

The Foodlane Project aimed to encourage agri-fishery truckers to apply for accreditation in order to have smooth flow delivery of agri-fishery products through the designated foodlane routes.

The Foodlane Project is being implemented by the Department of Agriculture in collaboration with the Metropolitan Manila Development Authority (MMDA), Department of the Interior and Local Government (DILG) and the Philippine National Police (PNP). This project aimed to institutionalize the efficient distribution of agri-fishery products from the production sites to the major demand center in Metro Manila and other regions aims to ensure the speedy delivery of agri-fishery commodities, reduce trading layers reduce postharvest losses and reduce transportation cost and other informal cost.

During the Foodlane Project Orientation, the criteria and requirements to avail the Foodlane project and roles and responsibilities of partner-agencies to include MMDA, DILG, and PNP in the implementation of the project were discussed. Further, the orientation also tackled the traffic rules and regulations in major fares within Metro Manila.

Cauayan Grains Center Inc. (CGC Inc.) applied for the accreditation of 10 trucks for the delivery of milled rice from Cauayan City, Isabela to Metro Manila. Overall, there are currently 11 trucks accredited the DA RFO 02.

Food Pass Issuance

In support to the continuous provision of food to the community affected by the Enhanced Community Quarantine (ECQ), Food Pass is provided to truckers. The AMAD together with Research Centers/Experiment Stations evaluated and reviewed requirements prior to the issuance of food pass to qualified applicants. A total of 10,416 food pass were issued for the year.

Price Monitoring

In relation to price monitoring, this activity is being jointly undertaken by AMAD with Research Centers/Experiment Stations. Monitoring of prices of basic commodities is done at least twice a week particularly, every Tuesday and Thursday.

Kadiwa ni Ani at Kita

1. Provision of Crates, Weighing Scale, Meat Grinder, and Sealer

The pandemic affected the implementation of some of the targeted activities thus refocusing of funds in support and strengthening of the Farmers Cooperatives and Associations (FCAs). The provision of crates, weighing scale, meat grinder, and sealer aims to help the FCAs to operate smoothly their marketing activities despite the pandemic. The identified beneficiaries were the suppliers of fresh vegetables, fruits, fish, and meat in the KADIWA ni Ani at Kita activities.

There were 18 and 17 FCAs assisted through provision of crates and weighing scales respectively in support to KADIWA ni Ani at Kita. Meanwhile, there are two (2) Rural Improvement Clubs (RICs) awarded a meat grinder and sealer as response to their letter and in support to KADIWA ni Ani at Kita.



The Enhanced KADIWA ni Ani at Kita seeks to ensure food commodities are made available and accessible in high consumer demand areas, particularly among the poor and low-income families, by harnessing private sector participation, capacity enhancement of farmers' cooperatives and associations and engaging community organizations' participation in food supply distribution system.

2. Provision of Logistic Facility to FCAs under Enhanced KADIWA ni Ani at Kita Food Supply Chain Program

Under the Bayanihan Act I and II, a total of 20 FCAs were assisted through provision of logistic facility under Enhanced KADIWA ni Ani at Kita Food Supply Chain Program. There are seven (7) FCAs from Nueva Vizcaya, five (5) each from Cagayan and Isabela, and three (3) from Quirino. The program aims to strengthen the marketing capabilities and capacities of FCAs.



3. Provision of Processing Facilities under Enhanced KADIWA ni Ani at Kita Food Supply Chain Program

Under the Bayanihan Act II, funds for Multi-Crop Processing Facilities to Nueva Vizcaya Agricultural Terminal (NVAT) was provided amounting to P40,000,000.00. The processing facilities aim to utilize excess or over-supply causing the crop prices to drop.

Cash and Food Subsidy for Marginal Farmers and Fishers Program (CFMFFP)

Under the Bayanihan Stimulus Package for Agriculture Sector, the DA shall implement Social Protection and Social Amelioration Projects where the Cash and Food Subsidy for Marginal Farmers and Fisherfolk (CFMFF) was part of the priority intervention. The CFMFF aims to provide direct cash and food assistance in the amount of Php 5,000.00 (3,000-Cash, 1,000-Rice, 600-Chicken, 400-Egg) to eligible beneficiaries from the different sectors in agriculture and fisheries registered in the Registry System for Basic Sectors in Agriculture (RSBSA). The food subsidy distributions were undertaken by AMAD and accredited KADIWA Food Suppliers. From December 2-29, 2020, a total of 7,008 farmers and fishers in 19 municipalities in Region 02 already received their food subsidy assistance composed of 25 kg of rice, 4 kg of chicken and 2 trays of eggs.





**INTEGRATED
LABORATORY**
SERVICES

Department of Agriculture – RFO 02 – Integrated Laboratories Division with its Cagayan Valley Integrated Agricultural Laboratory (CVIAL) was established to provide a comprehensive and state of the art facility and one-stop shop laboratory. The Integrated Laboratory Division integrates the services of the four agricultural laboratory services for easier and faster access of our farmers and other stakeholders in the agriculture sector.



Despite the COVID-19 Pandemic, the four laboratories were able to meet its annual target with significant accomplishments and milestones. ILD served 1,014 walk-in clients with payment generated approximately P600,000.00 pesos.

The **Regional Soils Laboratory (RSL)** and its satellite laboratory, Ilagan Soils Laboratory (ISL), is mandated to provide technical information, analysis and ameliorant recommendations relative to soil condition and plant nutrient requirements to aid farmers in attaining optimum yield from their crops, reduce cost of inputs, and maintain soil health. It also provides technical assistance through soil, water, plant tissue and fertilizer analysis in support to research, development, and extension. The provision of quality bio-fertilizers are also included in the major functions of the laboratory.

Thirty-two (32) Soil Fertility Maps for Rice, Corn and High Value Crops were developed based on the 9,000 soil report of analysis for posting in Local Government Units (LGUs) regionwide in collaboration with the Regional Agricultural Engineering Division (RAED). Soil Fertility Mapping help farmers increase crop yield and reduce production cost based on fertilizer recommendation as a guide to individual farmers.

The Mobile Soils Laboratory was able to serve 880 soil report of analysis (Rice, Corn & HCV) to five municipalities in Nagtipunan, Diffun, Maddela, Alcala and Aparri, Cagayan. High accomplishment despite of the COVID-19 pandemic was reported because of the continuous communication with the LGUs/Municipal Agriculturist. Onsite analysis was suspended because of travel restriction in some municipalities, but soil samples were hauled from those municipalities who extended their willingness to avail Mobile Laboratory Services in order to meet and surpass the target.

RSL exceeded its annual target for plant tissue, fertilizer and water analysis. Also, walk-in clients for soil analysis were also accommodated. RSL accomplished over 100% of its target on the provision of bio-fertilizers with 3,030 packs legume inoculant, 10,776 Bio-N and 107,070 packs of Compost Fungus Activator (CFA) distributed across the Region.

Farmers awareness to “Plant Plant Plant Program” of DA and impartation of the importance of using legume inoculant, Bio-N and CFA during the conduct of farmers briefing, also continuous communication with the LGUs/ Municipal Agriculturist was implemented in order to achieve the target amidst COVID19 pandemic. Demand for CFA was also increased as it aids in the decomposition of rice straws and other agricultural residues wherein it supports RA 9003: Ecological Solid Waste Management Act of 2000.

The Regional Soils Laboratory participated in FFTC Proficiency Testing Program of Sol & Plant Tissue analysis and based on the performance report, it shows that the laboratory is in “Good confidence level”.



FFTC 2020 Proficiency Testing Program of Soil and Plant Tissue Analysis

AMENDED REPORT
Date of Issue: November 05, 2020

Thank you for participating in FFTC 2020 proficiency testing (briefing as PT) program. In light of maintaining and improving the quality of soil/plant testing laboratories in Asia-Pacific region, this PT program is designed to offer the participating laboratories the opportunity of comparing their analytical results with those of other laboratories. The program is co-conducted by the Food and Fertilizer Technology Center (FFTC) and Taiwan Agricultural Research Institute (TARI).

In this PT program, the test sample contains two soil samples, two plant tissue samples, and one organic fertilizer sample. The test items originally planned are shown in Tables 1 and 2. Test samples were distributed to participating laboratories on August 30, 2020, and final PT results were received on October 15, 2020.

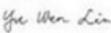
The assigned value for each test item is derived from the consensus, i.e. the average, of the results submitted by the participants. The performance evaluation of participants was based upon the z-score, where z was calculated by the following formula:

$$z \text{ score} = (\text{result} - \text{average}) / \text{standard deviation}$$

Outliers (determined by box plot) are not included in the calculation of assigned value.

The statistical evaluation of results from amended data are shown in "Summary PT Performance Evaluation Report". As a general rule, the z-score within the range of -2 to 2 indicates a satisfactory result, while the z-score outside the range of -2 to 2 indicates a questionable result.

If you have any comments or questions about this PT program, please feel free to contact us by email at zchen@fftc.gov.tw. We are looking forward to your feedback and suggestions for this PT program. Thank you again for participating in FFTC 2020 Proficiency Testing Program.

Sincerely,
Coordinator:


Contact: Mr. Chu-Chung Chen
Taiwan Agricultural Research Institute
Address: No.189, Zhongzheng Rd., Wufeng Dist., Taichung City 41362, Taiwan (R.O.C.)
E-mail: zchen@fftc.gov.tw
Tel: (+886)4-2303-2374 ext. 7434

Summary PT Performance Evaluation Report

Laboratory code: 12

Table 1: Results and z-scores of soil sample No.1 (S01) and No.2 (S02).

| Testing item | S01 | | S02 | |
|--------------|--------|---------|--------|---------|
| | result | z-score | result | z-score |
| pH | 7.84 | 1.63 | 4.53 | -0.997 |
| TOC (%) | 0.810 | -1.68 | 0.570 | -1.98 |

Table 2: Results and z-scores of plant sample No.1 (P01) and No.2 (P02).

| Testing item | P01 | | P02 | |
|--------------|--------|---------|--------|---------|
| | result | z-score | result | z-score |
| P (mg/kg) | 800 | -2.53 | 2325 | 0.132 |

Table 3: Results and z-scores of fertilizer sample No.1 (F01).

| Testing item | F01 | |
|--------------|--------|---------|
| | result | z-score |
| P (mg/kg) | 59167 | 0.119 |

The **Regional Animal Disease Diagnostic Laboratory (RADDL)** is an existing research and development facility tasked to:

1. Provide efficient animal disease diagnostic services to livestock farmers
2. Perform variety of disease diagnostic surveillance and procedures
3. Generate information and technologies on prevention and control of priority livestock diseases

RADDL’s vision is to become a center of excellence committed to provide quality veterinary diagnostic services compliant to international standards and responsive to the needs of a dynamic animal industry. Its mission is to improve farmer’s productivity and income thru efficient and affordable disease diagnostic services.



Consistent with the mandate, the RADDL displayed an overall accomplishment of 139.92% for 2020 as shown below:

1. Blood samples for PCR assay drastically increased due to re-emerging African Swine Fever affecting the hog industry in the region.
2. Samples for rabies examination using Direct Fluorescent Antibody Test (DFAT) increased due to efficient Rabies Awareness Program of the organization and catering of samples from CAR.
3. Serum samples for blood parasite examination increased due to surge of samples from National Dairy Authority as part of its animal health status monitoring activity.
4. Samples for necropsy increased due to re-emerging poultry diseases such as Newcastle disease, Mycotoxicosis, and Infectious Bronchitis.

The **Regional Feed Chemical Analysis Laboratory (RFCAL)** is a facility mandated to provide analysis to ensure compliance to animal feed product standards for consumer safety and product acceptability both locally and globally. Regional Feed Chemical Analysis Laboratory provided and facilitated release of accurate analysis on mixed feeds samples of 183 establishments submitted by the Regulatory Division to ensure standards for consumer safety and product acceptability with about 68% of the sample within standard level.

The RFCAL, accommodated 18 walk-in clients for feed analysis and assisted 11 students/researchers in the conduct of their experiments for their research studies.

During the calendar year of 2020, a total of 1000 corn samples for aflatoxin monitoring were collected within the vicinity of Region 2. Corn samples were specifically collected within the provinces of Cagayan (Piat, Tuao, Alcala, Solana, Gonzaga, Peñablanca, Baggao, Iguig, Gattaran, Lasam, Sto. Niño, Abulug), Isabela (Cabagan, Roxas, Mallig) and Quirino (Diffun, Maddela, Cabarroguis, Aglipay).

With the result of aflatoxin analysis, this has been used for the processing of FDA-LTO of peanut products from Alcala (SQA Food Products) & Enrile's Pride (Enrile).



The **Regional Food Technology and Incubation Center Services (RFTDIC)** is designed and established to provide modern sustainable processing technologies, ensure product quality and food safety in Cagayan Valley.

The RFTDIC is now capable of Proximate Analysis for Nutritional Content, Sensory Evaluation, Packaging Assessment, Trainings on Meat Processing, Technical Assistance on Product and Process Development/Improvement for walk-in clients.

Most products from ASPIRE enrollees were one of the clients of RFTDIC thru Feed Laboratory. The center caters nutritional facts computation for product label because some of the walk-in client were not be able to comply with one of the mandatory requirements of food labeling. Other services such as sensory evaluation, packaging assessment and product development were also served to clients.

Packaging Assessment involves evaluation of existing packaging whether it is appropriate, in terms of functionality, in ensuring safety and quality of the food being developed/processed and evaluates information declared in the food label. The team was able to advise the client what to do and what are the mandatory packaging requirements needed in order to have a presentable and ready for licensing by Food and Drug Administration (Philippines).

The products developed by the center were also passed through sensory evaluation and packaging assessment. Presented here were the products developed by RFTDIC team. The fruit wine from pineapple fruit, chili oil with garlic bits and herbs like turmeric powder and dried basil leaves harvested from the “Gulayan sa Opisina” of RFTDIC, calamansi concentrate with blue pea also from Foodtech’s Gulayan and from the calamansi concentrate, the team produced calamansi fruit juice (Ready-to-Drink).



Training on Meat Processing was also conducted by RFTDIC. The total 424.2 kilograms of raw meat were processed by the Center to different walk-in clients and different organizations. These individuals were mandated to observe proper quarantine protocols.

The **Regional Crop Protection Center-Plant Health Clinic (RCPC-PHC)** and its satellite laboratory RCPC-Ilagan is also an R&D facility mandated to provide products and services to address problems on plant pests, diseases, and pesticide residues to sustain sufficient, affordable, and safe food for every Filipino. Development of Chemical, Microbiology & Molecular Biology Laboratory is important in the analysis for plant pests and disease diagnosis and pesticide residue analysis in the RCPC-PHC. Establishment of Bio-control Agents (BCAs) Building and Mushroom Research and Development Center located at RCPC Ilagan was completed.

The center also supported the RA No. 10611 otherwise known as the “Food Safety Act of 2013”, an act to strengthen the Food Safety Regulatory System in the country.

The Regional Crop Protection Center - Plant Health Clinic Laboratory (RCPC-PHC) was able to meet its annual target for CY 2020 with a significant accomplishment for the laboratory which covers four components of the services, namely (1) Analysis and Confirmation of Pests and Diseases (2) Early Detection and Confirmation of Rice Tungro Virus (3) Pesticide Residue Analysis using Colorimetric Rapid Test Kit (RTK) in Region 02 and lastly, (4) Analysis and Confirmation of Organophosphate Pesticides using Gas Chromatograph Mass Spectrometry (GC/MS).

Under Various Support Services (VSS), the laboratory met its annual target for CY 2020 with an average accomplishment of 103% that covers the two components of the services which are (1) Pest Management and (2) Expansion of Mass Production of Biological Control Agents (BCAs).

With the current status of the region on the incidence of insect pests, particularly the occurrence of new invasive pests such as fall armyworm (FAW) and rice black bug (RBB), there is a need of attention in pest management in order to control massive infestation. The conduct of technical briefings covers the management of these invasive pests and all insect pests and diseases of major crops: rice, corn, and high value crops. A total of 30 batches of technical briefings were conducted in four provinces (Cagayan, Isabela, Quirino and Nueva Vizcaya) attended by a total of 1,050 participants.

Technology transfer was undertaken to 180 participants from five (5) batches of technical briefings conducted in Nueva Vizcaya, 185 participants from five (5) batches conducted in Quirino, 430 participants from 10 batches conducted in Isabela, and 389 participants from 10 batches of technical briefings conducted in Cagayan.

The **Regional Crop Protection Center (RCPC)** is deeply involved in the implementation of the Integrated Pest Management (IPM) programs on rice, corn, high value crops and in applied researches geared towards development of integrated control approaches of major pests of different crops in the region.

Pest Surveillance

- Monitored and validated a total of 19,485 hectares of corn, rice and high value crops commodities in the region. Insect pest and diseases incidence monitored and validated are Fall Armyworm, True Armyworm, Rice Black Bug, Brown Plant Hoppers, bacterial blight and other pest and diseases of corn, rice and high value crops.
- Procured and distributed 30 light traps and conducted series of light trapping for Rice Black Bug monitoring.
- Produced, distributed, and released Biological Control Agents (BCAs) in key production areas.

Bio-control agents were distributed and released as management for insect pests and diseases of different crops.

1. ***Trichogramma spp.*** 205,500 cards were produced and 204,500 trichogramma evanescens cards were distributed covering 2,045 hectares of corn and farmer-beneficiaries. While Trichogramma japonicum, 51,400 cards were produced and 51,100 cards were distributed covering 511 hectares of rice and farmer-beneficiaries. P15,850 cards produced and 51,100 cards distributed for Trichogramma chilonis with 154 hectares of vegetables and 156 farmer-beneficiaries and 100,000 cards with 1,000 hectares of corn and 1,001 farmer-beneficiaries.
2. ***Earwig*** 1,614 colonies produced and 1,602 colonies were distributed to 810 farmer-beneficiaries good for 810 hectares..
3. ***Green muscardine fungus or Metarhizium*** 11,114 kilograms produced and 10,921 kilograms distributed covering 1,434 hectares and farmer-beneficiaries.
4. ***Trichoderma harzianum*** 1,325 kilograms produced and distributed 1,273 kilograms and 162 farmer-beneficiaries good for 169 hectares.



RESEARCH FOR DEVELOPMENT *SERVICES*



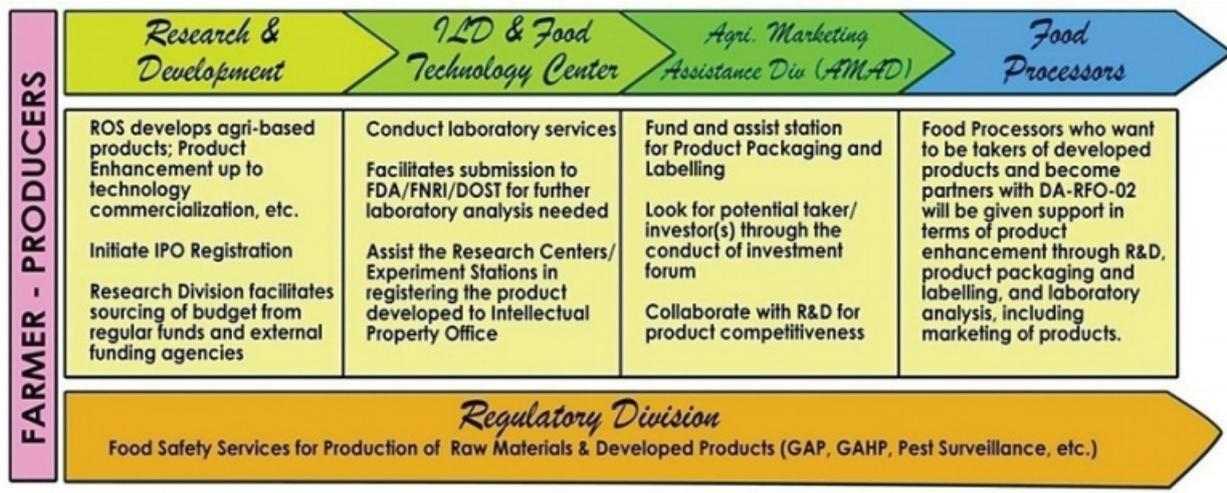
RESEARCH FOR DEVELOPMENT (R4D)

The Research Division mandates to perform the decentralized functions of Department of Agriculture-Bureau of Agricultural Research (DA-BAR) in R4D planning, orchestration of project implementation, monitoring and evaluation of the integrated R4D programs in Region 02.

The Research for Development framework is centered on the Regional Integrated Research and Development/Extension Agenda Program (RIRDEAP). Matured technologies are generated, verified, adapted and demonstrated/commercialized for promotion to stakeholders thru the collaboration of Research Division, Research Centers/Experiment Stations, DA RFO 02 R4D Implementing Divisions/Sections and Regional Research Development and Extension Network (RRDEN) Members with the financial support of R4D Funding Agencies such as DA-BAR, Department of Science and Technology-Philippine Council for Agriculture, Aquatic Resources Research and Development (DOST-PCAARRD), among others. Technologies/products attuned to the needs of farmers in the region proven effective are transferred to Field Operations Division (FOD) for inclusion in their Extension Support, Education and Training Services (ESETS), Agricultural Training Institute (ATI), and Local Government Units and Agriculture and Fishery Council (AFC). These innovations industrialized supports production of prioritized commodities, accessibility of support services and promotion of agricultural-based products.



DA-RFO-02 PRODUCT DEVELOPMENT FRAMEWORK



Linkages with SUCs and attached agencies are forged in implementing R4D projects. Collaborative projects and exchange of expertise during review of proposals/projects serve as an venue for capacity building of researchers.

Number of joint R4D projects and endorsed R4D projects to DA-BAR

| Institutions | No. of Collaborative Projects with Research Division | No. of R4D/RFDG Projects endorsed to funding agencies | Funding Agency |
|--------------------------|--|---|----------------|
| Cagayan State University | 2 | 6 | DA-BAR |
| Isabela State University | 3 | 2 | DA-BAR |
| Quirino State University | 1 | - | |
| PhilRice | 2 | - | |
| Total | 8 | 8 | |

With good partnership with SUCs and attached agencies, eight (8) R4D/RFDG Project proposals were endorsed to DA-BAR for possible funding.

Research Centers/Experiment Stations continue to tie-up with the Department of Trade and Industry (DTI) and Farmer Cooperatives to promote technologies and services. The following are active cooperatives that have adopted and taken R4D technologies.

1. Providers MPC –Naguilian, Isabela
2. Flow of Pariir Agriculture Cooperative – Cabatuan, Isabela
3. Holy Trinity Agro-Forestry Multi-Purpose Cooperative – City of Ilagan, Isabela
4. Asosasyon ng MagSAKAbataan – Tumauni, Isabela
5. Alcala Women Rural Improvement Club (AWRIC) – Alcala, Cagayan
6. Quirinian Youth in Action – Quirino, Isabela

R4D STRATEGIC ACTIVITIES

For CY 2020, a total budget of Php173,118,623.60 is utilized for the implementation of 53 regular and 18 externally R4D/RFDG projects. Likewise, there were 44 technologies/breakthroughs identified during the Annual R4D Agency In-House Review. The following are the technologies for transfer to Field Operations Division for further promotion:

Rice

- NEXTGEN Plus varieties in irrigated, rainfed, adverse ecosystems (inbred & hybrid, special purpose rice)
- Commercialization of GSR 8
- Commercialization of Aringay varieties
- Commercialization of Zinc fertilization
- Alternate Wetting and Drying as water-saving technology
- Systems of Rice Intensification Technology
- Direct seeding using mechanized palay seeder
- Free flow/artesian well as irrigation source for rainfed rice production
- Crop diversification: rice-mungbean , rice-off-season onion production, rice-vegetables, rice-OPV glut corn, rice-fish ,rice –poultry/livestock integration, rice-SAP/fruit trees, corn-mungbean/peanut
- Modified mechanized seeder in upland areas
- Use of Lowland inbred rice (NSIC RC 27 and NSIC RC 25) for upland production

Mushroom

- Rice hull, corn husk and cogon grass as substrate for mushroom production
- Rice straw as substrate for indoor mushroom production
- Pure culture production
- Mother spawn production
- Grain spawn production
- Fruiting bags production
- Mushroom products
- Vermicompost

Corn

- Recommend IES Glut 7, IES Glut 10, and CVRC Glut 12 for corn processing
- CVRC Glut 18-14 variety registration
- Application of Carrageenan to increase yield of corn
- Silage production as roughage for small and large ruminants
- Double-Row Planting Technology in Corn
- Sustainable Corn Production in Sloping Areas
- SALT Technology in Corn - Banana-based production
- Map of Fall Armyworm occurrence in Region 02
- Control of FAW: Application of insecticide
- Corn storage: Chemically treated corn seeds in hermetic plastic bags

High Value Crops

- Improved peanut varieties
- NSIC Pn 11 or Namnama-1
- NSIC Pn 14 or Namnama-2
- NSIC Pn 15 or Asha
- NSIC Pn 17 or GD Lasama Pride
- NSIC Pn 19 or Namnama-4
- Mungbean varieties suited in Region 2
- BPI Mg9 or Taiwan Green
- UPLB Mg7 or Pag-asa 7
- NSIC Mg12 or Pag-asa 19
- NSIC Mg13 or Pag-asa 21 tion of Carrageenan to peanut and mungbean
- Application of Boron (Solubor Borax) to peanut
- Off-Season Onion Production –Technologies

Livestock

- Biodewormer
- Probiotic Supplementation for sheep
- Fermented Feeds for native pig

Product Development

- Mushroom miki & bakery products
- Rice coffee
- Nana oryza
- Mangbean brand
- Mangi-Maxi brand
- Neeruma brand

R4D RESULTS UTILIZATION

To make information more viable to stakeholders, the division is packaging the results of R4D projects into Information, Education and Communication (IEC) materials like audio visual presentations (AVPs) of matured technologies, and informative two-fold fan and calendar of innovations. Another mode of transfer is thru technology commercialization. The following are R4D projects ready for commercialization.

- Off-season onion production
- Rice + Muscovy duck
- Rice + Free-range chicken

- Upland rice + vegetables – corn+ vegetables
- GSR 8 and Aringay varieties
- Sustainable Corn Production in Sloping Areas (SCoPSA)
- Alternate Wetting & Drying (AWD)
- Container straw mushroom
- Food products (Gourmix, Mushroom miki and bakery products, rice coffee, Nana Oryza products, Mangbean products, Mangi Maxi products, Neeruma products, Soybean TVP, panderise)
- Production of quality planting materials (banana, ginger, garlic, sweet potato, lowland vegetables, upland vegetables, indigenous vegetables and legumes)

Technologies were also transferred thru various extension modalities to make information readily available to partners and stakeholders. Information are transferred thru prints (Quarterly Digest, Technology Books and Compendium), farmer field days, radio broadcast, inception meetings, AVPs, trade fairs and exhibits.

Two of the product lines promoted and developed namely Neeruma Brand and Nana Oryza Rice Delicacies were registered under Intellectual Property Rights.

AWARDS AND RECOGNITION

The determination of researchers to promote innovation to the farmer-beneficiaries by properly implementing projects was able to generate worthy and notable results that were recognized in the field of Research and Development.

| Awards/Recognition/Distinction | Recipient | Awarding Body |
|---|--|--|
| Regional Awardee 2020 CSC Pagasa Team Category | Rose Mary G. Aquino Minda Flor M. Aquino Ma. Rosario U. Paccaran-gan Remedios A. Dela Rosa Herlinda I. Tulauan | Civil Service Commission |
| 2020 Gawad Saka Awardee for Outstanding Agricultural Researcher | Roynic Y. Aquino | Department of Agriculture |
| 31st Cagayan Valley Agriculture and Aquatic Resources Research and Development Regional Symposium on Research, Development & Extension Highlights (CVAARRD RSRDEH) Research Category | | Cagayan Valley Agriculture, Aquatic and Resources Research and Development |
| 1st Place Best Paper • Performance Evaluation of Mechanized and Conventional Transplanting using New Release Varieties of Inbred Rice under Different Local Conditions in Cagayan | DA RFO 02 SCRC | |
| 2nd Place Best Paper • Open-Pollinated Corn Varietal Development in Region 02: A continuing effort to boost the corn industry thru market-driven breeding | DA RFO 02 SCRC | |

| Awards/Recognition/Distinction | Recipient | Awarding Body |
|---|---|--|
| <p>31st CVAARRD RSRDEH Development Category</p> <p>2nd Place Best Paper</p> <ul style="list-style-type: none"> Processing Technology Improvement and Commercialization of Peanut Food Products in Region 02 <p>3rd Place Best Paper</p> <ul style="list-style-type: none"> Community-based Participatory Action Research on Off-Season Onion Production and Enterprise Development in Aritao, Nueva Vizcaya | <p>DA RFO 02 CVRC</p> <p>DA RFO 02 Research Division/NVES</p> | <p>Cagayan Valley Agriculture, Aquatic and Resources Research and Development</p> |
| <p>31st CVAARRD RSRDEH Poster Category</p> <p>1st Place</p> <ul style="list-style-type: none"> Processing Technology Improvement and Commercialization of Peanut Food Products in Region 02 <p>3rd Place</p> <ul style="list-style-type: none"> Community-based Participatory Action Research on Off-Season Onion Production and Enterprise Development in Aritao, Nueva Vizcaya | <p>DA RFO 02 CVRC</p> <p>DA RFO 02 Research Division/NVES</p> | <p>Cagayan Valley Agriculture, Aquatic and Resources Research and Development</p> |
| <p>32nd National Symposium on Agriculture & Aquatic Resources R&D of DOST-PCAARRD</p> <p>2nd Place Best Paper Development Category:</p> <ul style="list-style-type: none"> CPAR on Sustainable Corn Production in Sloping Areas (SCoPSA) in Barangays Divisoria Sur and Divisoria Norte, Maddela, Quirino | <p>DA RFO 02 Research Division/QES</p> | <p>DOST-Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD)</p> |
| <p>1st Regional Agriculture, Fisheries and Natural Resources, Engineering and Technology (RAFNNRET) Virtual Research Conference Engineering and Technology Category</p> <p>2nd Place Best Paper</p> <ul style="list-style-type: none"> Development of Package of Technology for Direct Seeding using Mechanical Palay Seeder in Cagayan | <p>DA RFO 02 SCRC</p> | <p>Cagayan State University</p> |
| <p>1st RAFNNRET Virtual Research Conference</p> <p>Paper Agriculture, Fisheries and Natural Resources Category</p> <p>2nd Place Best Paper</p> <ul style="list-style-type: none"> Soil Loss Assessment on Watershed of Small Water Impounding Projects in Cagayan | <p>DA RFO 02 SCRC</p> | <p>Cagayan State University</p> |
| <p>3rd Place Best Paper</p> <ul style="list-style-type: none"> Collection and Characterization of Philippine Native and Traditional Corn Varieties in Region 02 CPAR on Water Management of Rice-based Cropping System in Lucban SWIP in Barangay Lucban, Benito Soliven, Isabela | <p>DA RFO 02 SCRC</p> <p>DA RFO 02 SCRC</p> | <p>Cagayan State University</p> |



REGULATORY *SERVICES*



REGULATORY SERVICES

The Regulatory Services were implemented under the Regulatory Division which has the mandate on enforcement of policies on food safety and quality including the regulation of animal and plant materials and by-products movement in the region, and promotion of Philippine National Standards such as Good Agricultural Practices and Good Animal Husbandry Practices. It also promoted the observance and adherence to Republic Act (RA) 8485 (Animal Welfare Act of 1998), licensing and registration of feed and VDAP establishments, transport carriers and handlers license in consonance with RA 1556, RA 3720 and DA AO 08.

In collaboration with the various operating units, the following milestones on regulatory services were attained in 2020.

Implementation of Good Agricultural Practices (GAD)

Recognition of the importance of having a healthy lifestyle, the Department of Agriculture Regional Field Office No. 02 motivates and encourages farm owners/farmers to practice GAP and apply for PhilGAP certification.

Amidst the pandemic, 19 technical briefings were conducted through focused-group discussion, including requests from the Local Government Units (LGUs) and other agencies. These were attended by 640 participants, composed mostly of vegetables growers. Likewise, the increasing demand of GAP-certified and pesticide-safe vegetables in the market led to the inspection/evaluation of 110 farms, wherein previously trained vegetable farm owners/farmers applied for farm inspection and certification. With this, the region endorsed 41 farms from individual farmers and one vegetable association with 50 member-applicants to the Bureau of Plant Industry (BPI) for certification.

To date, Region 2 still maintained its status as the most numbered GAP-certified farms in the country with 187 farms composed of the following:

- Vegetables – 73 farms
- Rice – 30 farms
- Yellow corn – 82 farms
- White corn – 2 farms

Implementation of Animal Welfare Act (AWA) and Good Animal Husbandry Practices (GAHP)

Production of high quality meat and meat by-products, milk and eggs is one of the main concerns of the Department of Agriculture's Food Safety Program in the country. Livestock will not produce a quality meat or milk if they are living constantly in a stressful environment. Same with poultry animals – layers will not produce eggs and broilers will not produce good quality meat, if the environment is not suited for their development. Likewise, pet animals (dog, cat, rabbit, hamster etc.) must also be protected from cruelty. With this, the enforcement of RA 8485, known as the Animal Welfare Act of 1996 and Good Animal Husbandry Practices were intensified by the department.

For CY 2020, trainings under AWA and GAHP were all conducted through a focused-group discussion wherein a group of five (5) to 10 persons holds a face-to-face meeting and guidelines on AWA and GAHP registration and certification were discussed. On the other hand, inspection of establishment/facilities recorded a 152% increase (38 farms), which could be attributed to the Memorandum Circular No. 2020, dated September 18, 2020, from the DILG Secretary for the mandatory registration of animal facilities from all over the country.

This year also brought the region's first GAHP certified farm, the Golden Feather Poultry Farm, Inc. from Brgy. Cabisera, Jones, Isabela. Additional five GAHP applicants were endorsed to the Bureau of Animal Industry and scheduled for inspection next year. All in all, a total of 38 establishments/facilities were endorsed for AWA and GAHP registration and certification.

Animal Disease Surveillance

To ensure the health and welfare of animals, the Animal Disease Monitoring & Surveillance Unit provides services for the development of policies and strategies which involved prevention, control and eradication of priority livestock and poultry diseases and zoonosis.

Other strategies include the following:

- Establishment and maintenance of animal quarantine checkpoints to ensure effective implementation of RA 8485, implement;
- Implementation of standard operating procedures (SOPs) and guidelines for animal disease control; and
- Conduct of extension support, education and trainings and consultative meetings on matters related to animal health and welfare development for LGU personnel and other stakeholders.

This year, intensification of monitoring and surveillance of highly pathogenic priority diseases such as Avian Influenza (AI), Foot and Mouth Disease (FMD) and African Swine Fever (ASF) in the region. A total of 1,889 blood samples from poultry species for AI and 2,965 blood samples from hogs for FMD and ASF were collected for analysis. As a result, the region remains FMD and AI-free despite all the recorded cases in neighboring province of Nueva Ecija on March 16, 2020.

Bigger challenges also await CY 2021 after the widespread of ASF cases starting from January 2020 which continuously affect the hog industry in the region. As of December 2020, a total of 38,192 hogs were depopulated, affecting 58 municipalities in 4 provinces of the region. Out of this cases, DA RFO 02 distributed a total indemnification fund amounting to P13,790,000.00 to 448 affected farmers during the first semester of the year, succeeding indemnification for the later affected farmers still awaiting approval of P169,730,000.00 requested indemnification fund from DA-Central Office. Furthermore, DA RFO 02 intensified its surveillance activities by deploying additional manpower to the region's major checkpoints to secure the inflow and outflow of safe and disease-free livestock and poultry products. Consequently, the LGUs showed their support to this endeavor by establishing their local checkpoints in their respective areas of responsibility.



Plant Pest Surveillance

Pest surveillance is an important aspect in pest management. It is an official process which collects and records data on pest presence or absence by survey, monitoring or other procedure. Results of this method are used to forecast the potential threats of pest infestation where management actions are decided, planned, and implemented. Hence, fast and reliable information are needed for effective and efficient pest management.

In support to the pest surveillance activities of RCPMC, a total of 10,306.05 hectares were surveyed from 52 municipalities, wherein 6,405.55 hectares were corn farms, mainly due to the intensification of fall armyworm monitoring in the region. The remaining 3,900.50 hectares came from rice, vegetables, sugarcane, and coconut farms.

Destructive pests were reported for various commodities and after their detection, Fall Armyworm (FAW) appears to be the main insect pest observed in corn farms for this year affecting a number of corn growers in the region. Based on monitoring result, FAW can cause 30-100% incidence/damage

to open-pollinated varieties, 15-75% to hybrid varieties and 6-50% to GMO (Bt) varieties. However, this depends on the cultural management applied by farmers. A higher pest incidence was observed in farms with limited and/or no management strategies employed compared to farms where early monitoring, prevention and control were practiced; hence, lowering the incidence of said pest.

On the other hand, the Rice Pest Surveillance System under the Pest Risk Identification and Management (PRIME) Project has now on its fourth year of implementation. It is a special project spearheaded by the International Rice Research Institute, Philippine Rice Research Institute, and Bureau of Plant Industry in collaboration with DA Regional Field Offices. The system uses information and communication technology (ICT) in data gathering – from field data collection to reporting. With this system, pest information from the field reaches experts and policy makers in shortest time possible, thus decisions are given immediately. As of this date, PRIME Project in the region covers 11 municipalities, 107 barangays, and 186 monitoring fields.

With continuous monitoring, forecast on possible occurrence of pest in the region was established.

| Pests | Cropping Season | |
|---|---------------------------------|---------------------------|
| | Dry Season | Wet Season |
| 1. Insect Pests/ Systematic Diseases/ Plant Damage | | |
| BPH (hopperburn) | March-April | September |
| GLH (tungro) | February | September |
| RBB** (bugburn) | March-May | September-October |
| Stemborer (deadheart/ whitehead) | DH: Feb/April WH: April/June | DH: August WH: October |
| Rice Bug (empty panicle) | April | September-October |
| 2. Diseases | | |
| Rice Blast | February | August |
| BLB | February | August-September |
| BLS | February | August-September |
| 3. Rodents | February/April | August/October |

**except Cagayan



Strengthening of the Food Safety Program

After the launching of Pesticide-Safe Certification in 2019 in Santiago City, four municipalities had extended their interest in acquiring a “Pesticide-Safe Certification” for their vegetable growers this year. The assurance of quality and safe vegetable in the market attracted the public who are health-conscious.

To date, there are 12 vegetable growers associations acquired the “Pesticide-Safe Certification” in the region. With the continuous effort of the department in collaboration with LGUs, Region 02 will gradually decrease the selling of adulterated vegetables in the market.

Registration and Licensing

Registration and licensing of feed and VDAP establishments, livestock handlers and transport carriers are carried out by the Department yearly. This is in line with RA 1556 of 1956 (an Act to Regulate and Control the Manufacture, Importation, Labeling, Advertising and Sale of Livestock and Poultry Feeds), RA 3720 (Act to Ensure the Safety and Purity of Foods, Drugs and Cosmetics being made available to the Public) and DA-AO No. 08 directing for the registration and licensing of all handlers of livestock, poultry, and its by-products as well as the accreditation of transport carriers in the country.

For this year, the Registration and Licensing Unit was able to register 577 feed and VDAP establishments which consists of the following:

- 11 Feed Manufacturers
- 15 Feed Distributors
- 451 Feed Retailers
- 100 VDAP establishments

On the other hand, there was an increased in registration of handler’s license and transport carriers with 200 handlers and 178 carriers. This was brought by the influx of applicants for food pass lane and as additional requirements for AWA registration.

One of the highlights done by the unit was the issuance of DA-registration plates to registered feed dealers and establishments and DA-sticker for licensed livestock handlers and transport carriers which serve as identification of registration. This intervention was the first in the whole country.

In addition, 1,311 samples were collected subject to laboratory analysis. Report on the result of analysis were endorsed to the Bureau of Animal Industry and to respective feed dealers for information and immediate action.





CLIMATE CHANGE - ADAPTATION AND MITIGATION INITIATIVE IN AGRICULTURE (CC-AMIA)



CLIMATE CHANGE - ADAPTATION AND MITIGATION INITIATIVE IN AGRICULTURE (CC-AMIA)

The Department of Agriculture has launched the Climate Change-Adaptation and Mitigation Initiative in Agriculture (CC-AMIA) in 2014, with an overall vision of a Philippine agri-fisheries sector that enables local communities to manage climate risks while pursuing sustainable livelihoods. As its overall approach, CC-AMIA develops and promotes climate-resilient agriculture (CRA) through implementing technologies and practices, introducing institutional and social innovations, and accessing climate-relevant support services.

As of 2020, there are four (4) AMIA villages established in:

1. Lucban, Benito Soliven, Isabela
2. Sta. Victoria, City of Ilagan, Isabela
3. Calamegatan, Buguey, Cagayan
4. Nararagan, Ballesteros, Cagayan



CLIMATE RISK VULNERABILITY ASSESSMENT (CRVA)

The workshop for Climate Risk Vulnerability Assessment in the Province of Quirino was conducted on September 29 - October 1, 2020 which was funded and assisted by the Philippine Rural Development Project-Investment for Agriculture and Fisheries Modernization Planning at the Local and Regional Levels (PRDP-IPLAN), while in the Province of Nueva Vizcaya on December 8-11, 2020, was funded by the Climate Change-Adaptation and Mitigation Initiative in Agriculture (CC-AMIA).

The activity aimed to identify and prioritize region-specific climate risks that threaten the resilience of agri-fishery communities in line with establishing AMIA village in the area. CRVA is a science-based tool that would guide policy-makers and planners in identifying the most vulnerable communities with different climate hazards. Meanwhile, participants submitted outputs on commodity map towards the end of the workshop.

This map, which will present the climate risk vulnerability of six (6) municipalities of Quirino's and 5 municipalities of Nueva Vizcaya, can aid its people in addressing the effects of climate change in their area,

Rapid Participatory Rural Appraisal (RPRA)

To assess climate risk and prioritize CRA innovations, AMIA program conducted Rapid Participatory Rural Appraisal (RPRA) in Brgy. Calamegatan, Buguey, Cagayan the pilot AMIA Village in the province where a new AMIA Village is set to be established. The activity aimed to assess the bio-physical, economic, socio-cultural, agricultural and institutional profile of the community through resource-based planning prior to the conduct of Community-based Participatory Rural Appraisal (CPAR).

This was participated by the Municipal Agriculture Office of Buguey headed by its Municipal Agriculturist Mr. Danilo P. Rumpon, and community members led by Punong Barangay Jefferson Arellano and Barangay Council.

Initial concerns identified by the participants include lack of irrigation system, poor road network and lack of processing equipment and facilities for product development of nipa (vinegar/wine made of nipa) and seaweeds.



Climate Information and Learning Center

Agriculture Secretary William D. Dar formally turned over the first ever Climate Information and Learning Center to AMIANan Farmers Entrepreneur Agriculture Cooperative (AFEAC) witnessed by Isabela Governor Rodolfo T. Albano III, and RED Narciso A. Edillo of DA RFO 02, and his staff as well as AMIA villagers in Sta. Victoria in December 2020.

“Ito ‘yung ibig sabihin, pag resilient ang mga istruktura kagaya nito at tsaka yung mga farming system, nandyan ang off-season vegetables, may vermiculture, organic agriculture, nursery production... lahat ‘yan ay magandang pangitain na itong AMIA Learning Center, ay ito ang kinabukasan ng ating mga magsasaka at tularan po nila ‘yung nakikita nila rito so kumpletuhin po natin hindi lang production,” said the DA Secretary.

“It was a dream come true! With the support of all the partner agencies and LGUs but most of all the cooperation of the AMIA villagers and the whole community made it a success,” noted Ms. Kay S. Olivas, PMED Chief, and AMIA Project Leader.

“I feel more than fulfilled and so honored as the DA Secretary himself with the Provincial Governor of Isabela, praised and congratulated us for a job well done. As the project leader of the Cagayan Valley Adaptation and Mitigation initiative in Agriculture, this is a huge milestone for me,” she added.

The DA-AMIA Cagayan Valley Region will also oversee the operation and maintenance of the structure to ensure that the generated baseline data will be used in weather forecast correctly and effectively in determining the impact outlooks and climate risk vulnerability practices in Region 2.



PROVISION OF SUSTAINABLE BUSINESS OPPORTUNITIES AND LIVELIHOOD PROGRAMS

AMIA Village in Lucban, Benito Soliven, Isabela produced vegetable seedlings of eggplant, pepper, and tomato. Some of the vegetable seedlings produced were sold to the farmers within and outside the village for one peso per seedling or 100 pesos per seedling tray.

Seedling production in AMIA Village also supported the Ahon Lahat, Pagkaing Sapat (ALPAS) Kontra COVID-19 or the Plant, Plant, Plant Program of our DA Secretary William Dar. The office provided five (5) vegetable seedlings per commodity to 82 households. The Office of Municipal Agriculturist of Benito Soliven thru Engr. Edmund Gauran, through the AMIA fund downloaded to MLGU, purchased Vegetable seeds (squash, string beans, bitter gourd and sponge gourd).



Communal organic vegetable gardening was also practiced within the village of Sta. Victoria. The area was divided into different commodity and managed per purok. The figure below shows the total production.

| Commodity | Tomato | Eggplant | Okra | Bush Sitao | Sweet Pepper | Cucumber | Total |
|---------------|--------------|------------|--------------|--------------|--------------|--------------|---------------|
| Kilogram (kg) | 59.75 | 16.83 | 46.33 | 18.58 | 31.78 | 19.33 | 192.6 |
| Amount | 4,055 | 865 | 2,015 | 1,065 | 1,680 | 1,125 | 10,805 |

AMIA Village of Sta. Victoria also served as a training ground for the youth in conducting Organic Agriculture Production National Certificate II headed by the Technical Education and Skills Development Authority (TESDA) staff with 32 trainees for the period of 3 months starting November 3, 2020 to January 11, 2021.

The AMIA Village of Lucban, headed by their SWISA President together with the several AMIA-cooperators sustained the SWIP-based tilapia production with the assistance of the Bureau of Fisheries and Aquatic Resources (BFAR) Provincial Fisheries Office. This project is part of the livelihood package of the DA RFO 02 AMIA in collaboration with Municipal Agriculturist Edmund R. Gauran of Benito Soliven, Isabela and BFAR RO2.



It was attested by the SWISA President that the SWIP with an abundant water at present, tilapia production is feasible, and while waiting for the base crop to be harvested, tilapias were reared for 4 months. This served as another source of additional income for the association. The cost per kilo was lower compared to market price.



Eighty Five (85) heads of swine were distributed to AMIA villages which was aimed in managing ecosystem and maintaining biodiversity. Crop-livestock integration increases diversity along with environmental sustainability. At the same time, it provides opportunities to the co-operators for increasing their overall production yield, wherein 31 in AMIA Lucban, and 54 in Sta. Victoria were recipients. Swine production in AMIA Village of Lucban already expanded to adjacent Brgy. Yeban Norte, Benito Soliven, Isabela.

Mushroom production using *Volvariella volvacea* were preferred to ramify inside the greenhouse using banana leaves as a substrate and trial production. Some of the villagers also practiced producing mushrooms within their backyard for food consumption.

The farmer cooperators in both AMIA villages in Lucban and Sta. Victoria were encouraged to lessen the excessive use of synthetic fertilizer by way of increasing the use of organic fertilizer. Vermicomposting/vermicast will be utilized in the vegetable seedling production in the AMIA villages while the remaining will be sold to any interested farmers, not just within the villages.

PROVISION OF CLIMATE-RESILIENT FACILITIES, AGRICULTURAL EQUIPMENT, AND MACHINERIES

AMIA Lucban and Sta. Victoria have provided or availed rice combine harvester and four-wheel drive tractor through the Department of Agriculture Region 02 Rice Program, AMIA and PhilMech. These contributed big impact not only to the farmers in the village but also in the adjacent barangays which were seeking assistance/services to lessen manpower requirement especially when calamity occurs or during peak season of farm activities. Solar Power Irrigation System (SPIS) established at AMIA Lucban at the tail end of SWIP was already operational which benefits 25 hectares of rice production area.

| Mechanization | Rate to Member | Rate to Non-Member |
|--------------------------|----------------|--------------------|
| 4WD Tractor | | |
| Lucban | 2,000 | 2,200 |
| Sta. Victoria | 2,500 | 2,800 |
| Combine Harvester | | |
| Lucban | 8% in sack | 10% in sack |

CLIMATE INFORMATION SERVICES (CIS)

One of the impacts of climate change is the variability of rainfall patterns – the onset of rain is shifting while their duration becomes increasingly unpredictable. Extreme weather events such as storms, droughts, and flooding are also increasing in frequency and intensity. With these phenomena, farmers’ yield and productivity decreases.

AMIA provided/submitted weekly and monthly Localized Climate Information Services and submitted to the Regional Executive Director, RTD for Research and Regulatory, and RTD for Operations and Extension; and Regulatory Division and Field Operation Division-Corn Program for their directions and recommendations.

This project aimed to provide a full range of advice regarding climate, its impacts on crops, live-stock, fisheries and management practices to be done to prevent, reduce and/or manage risks. Accurate and accessible rainfall information helps farmers decide not only when to plant and harvest, but when to dry the crops and look out for the outbreak of pests and diseases that can ruin yields. This information will help farmers in making management decisions to reduce the risks and benefit from the opportunities of the phenomena caused by climate change.

Seasonal Climate Outlook and Advisory

The DA RFO 2 in collaboration with DOST – Philippines Atmospheric Geophysical Astronomical Services Administration (PAGASA) launched a radio segment “Agri-Panahon Ngayon” on October 5, 2020. The said segment was aired over DZDA 105.3 Radyo Pangkaunlaran, DA-RFO 02’s educational radio station, during the 5 to 6 AM Directors Hour radio program of Regional Executive Director Narciso A. Edillo. The program aimed to discuss the 10-day weather forecast in Cagayan Valley forwarded by PAGASA Manila in order that farmers will be guided on their farm activities.

The AMIA staff was updating 10-Day Farm Weather Outlook and Advisories weekly while the Regional and Provincial Seasonal Climate Outlook and Advisories monthly using the impact outlook and Climate Resilient Agriculture (CRA) practices.

Date Issued: March 2020 DEPARTMENT OF AGRICULTURE SUPPORTS

- ✓ Pro-portioned planting materials and other farm inputs.
- ✓ Buffer stock for rice, corn and high value crops.
- ✓ Farm machineries stationed in the DA RFO 02 and Research Outreach Stations in every province.
- ✓ Climate Information Services.

SEASONAL CLIMATE OUTLOOK
& ADVISORY
REGIONAL

Building Climate-Resilient Livelihoods and Agrifisheries Communities March-August 2020

CLIMATE OUTLOOK SUMMARY

- La Niña is likely to continue through March-April-May 2020-21 (~55% chance), with a rising probability of returning to ENSO neutral during April-May-June (~60%)
- ENSO Alert System Status: LA NIÑA ADVISORY

WEATHER SYSTEMS THAT MAY AFFECT THE REGION

| Month | Tropical Cyclones | Provinces | Dry Days | | | | | |
|--------|-------------------|------------|----------|-------|-----|------|------|--------|
| | | | Mar | April | May | June | July | August |
| March | 0 OR 1 | Batanes | 23 | 25 | 21 | 20 | 20 | 15 |
| April | 0 OR 1 | Cagayan | 25 | 25 | 22 | 21 | 23 | 21 |
| May | 0 OR 1 | Isabela | 22 | 23 | 20 | 20 | 21 | 20 |
| June | 1 OR 2 | N. Vizcaya | 24 | 22 | 15 | 13 | 15 | 13 |
| July | 1 TO 3 | Quirino | 22 | 21 | 17 | 17 | 18 | 18 |
| August | 2 OR 3 | | | | | | | |

- NorthEast Monsoon
- Tail end of cold front
- Thunderstorms
- Ridge of High Pressure Areas (RHAs)
- Easterlies
- Intertropical Convergence Zone (ITCZ)
- Low Pressure Areas (LPAs)
- Tropical Cyclones
- Southwest Monsoon
- Transition to SW Monsoon (May-June)

FORECAST RAINFALL ANALYSIS

| Prov | March | | | April | | | May | | | June | | | July | | | August | | |
|--------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|
| | Normal (mm) | Forecast (mm) | % of Normal | Normal (mm) | Forecast (mm) | % of Normal | Normal (mm) | Forecast (mm) | % of Normal | Normal (mm) | Forecast (mm) | % of Normal | Normal (mm) | Forecast (mm) | % of Normal | Normal (mm) | Forecast (mm) | % of Normal |
| Bat | 63.5 | 70.7 | 111.7 | 53.7 | 71.2 | 132.9 | 227.7 | 196.5 | 86.6 | 245.1 | 224.5 | 91.6 | 246.1 | 183.6 | 75.6 | 372.4 | 377.8 | 104.2 |
| Cag | 38.4 | 47.8 | 120.3 | 56.3 | 72.3 | 117.0 | 156.2 | 172.4 | 110.3 | 181.9 | 164.7 | 90.0 | 215.7 | 162.2 | 77.5 | 264.3 | 246.7 | 91.4 |
| Isa | 64.2 | 99.3 | 165.8 | 83.5 | 100.5 | 109.7 | 185.3 | 225.6 | 121.1 | 176.1 | 191.1 | 108.8 | 227.0 | 190.2 | 86.7 | 249.9 | 252.1 | 102.0 |
| N. Viz | 54.7 | 91.0 | 160.5 | 82.2 | 122.7 | 120.3 | 231.1 | 299.0 | 123.0 | 282.6 | 283.0 | 103.9 | 492.0 | 330.7 | 77.5 | 467.0 | 487.6 | 110.3 |
| Qui | 104.2 | 150.2 | 160.1 | 127.2 | 163.1 | 118.0 | 227.7 | 283.9 | 121.7 | 221.6 | 244.7 | 111.2 | 283.7 | 218.3 | 81.4 | 257.4 | 280.2 | 112.2 |

All Climate Forecast/information is based on EL NIÑO & CLIMATE OUTLOOK, issued by PAGASA. Source: <http://bagong.pagasa.dost.gov.ph/climate>

LEGEND:

Way below normal (<41%)

Below normal (41%-80%)

Normal (81%-120%)

Above normal (>120%)



Establishment and Operationalization of Automated Weather Monitoring System (AWMS)

Two (2) sets of Automated Weather Station (AWS) were purchased under the AMIA fund. One (1) unit was awarded and established in the Municipal Local Government of Buguey, a pilot municipality of AMIA village in the Province of Cagayan and the other set was installed at the Department of Agriculture Regional Field Office No. 02 compound. The AWMS installed is used to generate baseline data and to fully utilize and equip the generated data it must be link to PAG-ASA to produce an accurate weather forecast to be used in making informed estimates that are predictive in determining the seasonal climate and farm weather outlook/advisories over the AMIA Village.



PHILIPPINE RURAL DEVELOPMENT PROJECT



I-PLAN COMPONENT

Status of the Value Chain Analyses (VCAs)

Priority Commodities with VCAs

| Updated Priority Commodities as of 2017 | Commodities with VCAs | Remarks |
|--|---|---|
| Dairy (Buffalo & Cattle) Coffee Mango Organic Garlic Mandarin Pineapple Onion Peanut Seaweeds (Gracilaria spp.) Tilapia Rice (A/P Rice) Corn (White Corn) | Upland Rice Dairy (Buffalo & Cattle) Mandarin Pineapple Coffee Banana Seaweeds (Gracilaria spp.) Whitecorn Organic Garlic | Other priority commodities have cluster wide VCAs |

Status of Regional VCAs

| VCA Commodity | Scope of VCA | Status |
|---------------------------|----------------------|---|
| Dairy (Buffalo & Cattle) | Regional | Issued with NOL on Mar. 6, 2017 (On-going updating) |
| Upland Rice | Regional | Issued with NOL on Sept. 21, 2016 |
| Mandarin (Satsuma) | Regional | Issued with NOL on July 14, 2017 |
| Pineapple | Regional | Issued with NOL on July 3, 2018 |
| Coffee | Regional | Issued with NOL on July 5, 2018 |
| Banana (Chips) | Regional | Issued with NOL on Nov. 16, 2018 |
| Seaweeds (Gracilaria spp) | Regional | Issued with NOL on Aug. 14, 2019 |
| Whitecorn | Regional | Issued with NOL on Oct. 4, 2019 |
| Organic Garlic | Provincial (Batanes) | On-going compliance |



Status of the Provincial/City Commodity Investment Plan (P/CCIP)

Cagayan Valley Region has existing five (5) Provincial Commodity Investment Plans which were already approved by their corresponding Sangguniang Panlalawigan (SP) and/or their Provincial Development Council (PDC). As an independent city, Santiago City had also crafted its own City Commodity Investment Plan (CCIP) which was approved by its City Development Council and Sangguniang Panlungsod. These five provinces and one city adopted their own priority commodity/ies. Their commodity investment plans were crafted through the initiative of RPCO2 IPLAN.

Recently, workshops in the Provinces of Cagayan and Nueva Vizcaya were spearheaded to update and enhance their PCIP for the inclusion of interventions for the original commodities and the Province of Isabela also updated its PCIP to include additional priority commodities as provided in the table below.

| Province/ City | Existing Commodities Included in the PCIP | Additional Commodities | Date of PDC/SP approval |
|-----------------------|--|--|---|
| Batanes | Garlic, Sweet Potato, Beef Cattle | | PDC: March 16, 2018 SP: March 22, 2018 |
| Cagayan | Dairy, Mango, A/P Rice, Peanut, Beef Cattle | | PDC: Oct. 5, 2020 |
| Isabela | Dairy, Mungbean, A/P Rice, Tilapia | Pineapple, White-corn, Beef Cattle, Banana | PDC: Sept. 10, 2020 |
| Nueva Vizcaya | Mandarin, Onion, Tomato, Pineapple, Coffee, A/P Rice, White corn, Sweet Potato, Banana | | PDC: Dec. 14, 2020 SP: Dec. 28, 2020 |
| Quirino | Coffee, Banana | | PDC: Aug. 6, 2014 SP: Dec. 8, 2014 |
| Santiago City | Peanut, Mungbean, Mango, Beef Cattle, Dairy, Tilapia | | PDC: March 21, 2019 SP: April 2, 2019 |

During the workshop, Provincial Planning, Monitoring and Implementing Unit (PPMIU) solicited the commitments of concerned entities/agencies and institutions for funding commitments of the other interventions under their concern for the upgrading of the commodity value chains.

Institutionalization and Mainstreaming of PRDP Tools into DA Regular Planning/ Programs and Processes

Some of the PRDP tools were already institutionalized/mainstreamed to DA Regular Planning/ Programs and Processes which was conducted last July 21, 2020 for the orientation and August 4-5, 2020 for the workshop wherein, the Division Chiefs and Research Center/Experiment Station Managers identified which PRDP tools will be adopted in the implementation of their respective plans/programs and activities (PPAs).

These tools are the following:

| | |
|----------|--|
| IPLAN | The VCAs & PCIPs are being used as reference for planning and targeting |
| M&E Unit | The ROMAT and RAEB are tools used for the monitoring and evaluation of regular programs and projects. |
| IBUILD | The DED & FS preparation utilized the FS simulation system. The requirements specifications required by PRDP projects were adopted in designing FMR and other infrastructures. |
| IREAP | The tools used in the identification and selection of Proponent Groups (PGs) will be utilized by the banner programs in the preparation of F2C2 target Farmers Cooperatives/Associations (FCAs) beneficiaries. |
| GGU | Geotagging and geomapping of projects will also be adopted to locate where the projects were established and to determine its implementation status thru the real time geotagged photo documentation. |

Assessment on the Performance of Agri-based Cooperatives in Region 02

| | |
|-------------------------------|---|
| Title of 1.2 Project/Activity | Assessment on the Performance of Agri-based Cooperatives in Region 02 |
| Type of SC 1.2* | Research |
| Commodity/ies covered | Cut across commodities |
| Status | Ongoing editing based on comments |
| Implementing Agency | NVSU |
| Date of approval** | August 7, 2019 |
| Date of completion | December 11, 2020 |

The Nueva Vizcaya State University (NVSU) Bayombong Campus was selected to be the Implementing Agency (IA) of this study which aims to identify the best practices of cooperatives in the region to be used for the enhancement of sustainability, financing and operational arrangement and also to find out and document the perceived factors influencing the failures of selected agri-based cooperatives. This is to support and enhance the PRDP proponent group profiling, operational guidelines and processing procedures

The result of study was presented by a research team from College of Business and Administration, headed by Dr. Cristina R. Salvosa on December 14, 2020. The study shows that the cooperatives related to agriculture had an increasing trend from 2015 to 2017. From eight (8) cooperatives in 2015, it increased to 124 by 2016, and exorbitantly increased to 455 in 2017 or a percentage increase of 1,450% and 266.93%, respectively. For cooperatives dealing with agriculture type of business, the study also shows that 92 out of the 111 cooperatives are found to be compliant, 62 of them were actually issued with Certificate of Compliance (COC). There were three (3) cooperatives issued with show cause order and 16 are found to be non-compliant, five (5) of the 16 non-compliant were issued with notice of non-submission of required reports while the remaining 11 were issued with show cause order.

Several inputs or factors are supposed to influence the performance of a cooperative, either its success or failure. It includes cooperative profile, support system/environment of cooperatives, access to technologies, risk management, regulatory system, market, competition, and opportunities, economy's growth and potentials, current issues and concerns and strategies employed to resolve these problems.

Climate Risk Vulnerability Assessment (CRVA)

A key step in the targeting and planning for CRVA of communities would be to assess climate-risk vulnerability at the proposed project sites. This would ensure that investments are cost-effectively channeled to support its overall goals and outcomes. This also addresses the inherent spatial and temporal variabilities within and across sites. The DA has undertaken vulnerability assessment focusing on key hotspots for risks and hazards in the country. Although this is a useful starting point for vulnerability assessment – representing exposure to climate risks – a combined analysis for sensitivity and adaptive capacity would result in a more comprehensive Climate-Risk Vulnerability Assessment.

| | |
|-------------------------------|--|
| Title of 1.2 Project/Activity | Climate Risk Vulnerability Assessment for Cagayan Province |
| Type of SC 1.2* | Research |
| Commodity/ies covered | Cut across commodities |
| Status | Completed: On-going finalization of narrative report |
| Implementing Agency | DA-RFO2 PMED |
| Date of approval** | August 29, 2019 |
| Date of completion | December 2, 2019 |



The result of this study was presented by Mr. Jonazon Jeff T. Factora on November 25, 2019 and attended by the Municipal Agriculturists of Cagayan with the following key findings:

- The study identified the exposure of the communities to climate risks (long term & recurring climate variability and extremes) which threaten their production systems and livelihood.
- Determined capacities of commodities to respond to climate-related threats.
- Identified pilot areas for DA intervention (short-term and long-term actions) to mitigate and adapt to climate risks.

CRVA for Quirino Province

| | |
|-------------------------------|--|
| Title of 1.2 Project/Activity | Climate Risk Vulnerability Assessment for Quirino Province |
| Type of SC 1.2* | Research |
| Commodity/ies covered | Cut across commodities |
| Status | On-going |
| Implementing Agency | DA-RFO2 PMED |
| Date of approval** | September 3, 2020 |
| Date of completion | January, 2021 |

The DA-RFO2 PMED and AMIA Team assisted the RPCO2 IPLAN in the conduct of orientation, training and workshop to attain the expected output of the assessment. These series of activities were conducted to orient and familiarize the participants on the concept of the study and to prepare and inform them on the data to be used in the workshop proper. These were attended by the Provincial and Municipal Agriculturists as well as Provincial and Municipal Planning and Development Coordinators on September 29, 2020. On the other hand, workshops were conducted to gather data on sensitivity, hazard, and adaptive capacity on September 30-October 1, 2020 and encoding and analysis of output were also conducted on October 21-22, 2020. The result of this assessment will be used in planning and designing climate-risk responsive research and development interventions to develop and build resilience among agri-fishery communities.



I-REAP COMPONENT

Pre-Business Planning Workshop

The activity was conducted last March, 2020 at the Provincial Cooperative Affairs' Office, Bayombong, Nueva Vizcaya. It was participated by the Proponent Group, Bugkalot Coffee Growers, RPCO2 I-REAP and Economist, and PPMIU Nueva Vizcaya. The workshop/activity aims to craft the Business Plan for the proposed Coffee Processing and Marketing Enterprise in the province.



Business Process Review/ Enterprise Assessment

The activity was facilitated by representatives from RPCO I-REAP and C/PPMIU. The objectives of the activity were to assess the current status of the enterprise operation in the aspects of management, marketing, technical, financial and sustainability; to determine strong and weak points of the enterprise management; to identify emerging positive results of the operation; and to prepare an action plan based on the result of the assessment.

It was administered through a face-to-face interview with the proponent group using a structured questionnaire devised by NPCO I-REAP. Based on the results of the assessment, SWOT Analysis and Capacity Development Plan regarding all aspects of the enterprise were developed.

The following enterprise were assessed:

| SP Name | PG Name | Date Conducted | Venue |
|--|--|------------------|--|
| Dairy Carabao Enterprise of Isabela | San Agustin Dairy Cooperative (SADACO) | May 27-29, 2020 | SADACO Office, San Agustin, Isabela |
| Mungbean Production and Marketing Enterprise | Farmers' Council Irrigators Association (FCIA) | August 3-5, 2020 | Diocital Hotel, Santiago City, Isabela |
| | G-10 Council of Irrigators Association | August 5-7, 2020 | |
| Tomato Processing and Marketing Enterprise | Federation of Aritao RIC | July 1-3, 2020 | FARIC Office, Aritao, Nueva Vizcaya |

Organizational Development Training

The activity is a three-day training facilitated by RPCO2 I-REAP Component Team. As a result of the Business Process review conducted for the identified enterprises, one offshoot activity is to conduct an Organizational Development Training to address the issues and concerns of the sub-project. It also aims to allow the proponent groups in determining the bottlenecks of enterprise operation and to enhance their capability as operators of the project.

The following were the topics presented and discussed during the training:

1. Basic Cooperative Course
2. Organizational Management
3. Operational Plan
4. Marketing
5. Enterprise Operations Manual (with workshop)
6. Financial Management

The Organizational Development Training was conducted for the following Proponent Groups:

| SP Name | PG Name | Date Conducted | Venue |
|--|--|-----------------------|--|
| Mungbean Production and Marketing Enterprise | Farmers' Council Irrigators Association (FCIA) | September 8-9, 2020 | Diocital Hotel, Santiago City, Isabela |
| | G-10 Council of Irrigators Association | September 10-11, 2020 | |
| Tilapia Production and Marketing Enterprise | FRamcor Farmers Multi-Purpose Cooperative | September 23-25, 2020 | RAMFARMCO Office, Ramon, Isabela |
| Tomato Processing and Marketing Enterprise | Federation of Aritao RIC | July 1-3, 2020 | FARIC Office, Aritao, Nueva Vizcaya |

Crafting/ Enhancement of Enterprise Operations Manual

Aside from the Business Plan, the Enterprise Operations Manual is a vital part of an enterprise that serve as a guide in business operations. During the activity, RPCO2 presented and discussed the EOM outline to be filled up by the PG. Draft EOM will then be presented to the Board of Directors (BODs) for finalization and approval. The proponent group, RPCO2 I-REAP, and PPMIUs were present during the activity.



| SP Name | PG Name | Date Conducted | Venue |
|---|--|----------------------|--------------------------|
| Coffee Production and Marketing Enterprise | Tiblac -Langak Farmers Association Inc. | October 21-23, 2020 | Bayombong, Nueva Vizcaya |
| Tilapia Production and Marketing Enterprise | FRamcor Farmers Multi-Purpose Cooperative | October 21-23, 2020 | Bayombong, Nueva Vizcaya |
| Aritao Onion Production and Marketing Enterprise | Federation of Aritao Onion Ginger Garlic Growers Association | October 21-23, 2020 | Bayombong, Nueva Vizcaya |
| Tilapia Fingerlings Production and Marketing Enterprise | Wigan Settlers' Multi-Purpose Cooperative | December 15-16, 2020 | Cordon, Isabela |



I-REAP Coordination Meeting

Series of I-REAP Coordination Meetings were conducted to address the issues and concerns of the proponent groups especially the ones that needed immediate action. During the region-wide activity, Banner Programs of the DA RFO 02 and attached agencies such as the Philippine Carabao Center (PCC) presented some interventions that would be beneficial in the operation of the enterprise and the sustainability of the subproject as a whole. M&E Unit of RPCO2 discussed as well the results of the conducted Operation and Maintenance Audit to these subprojects.

| Batch | Participants | Date | Venue |
|---------------------|---|--------------------|---|
| Dairy Group | DA, RPCO2 Component and Units, Philippine Carabao Center, National Dairy Authority, Livestock Program, PPMIU Cagayan, PPMIU Isabela, Integrated Farmers' Cooperative Rang Ay Ti Pussian Farmers MPC MLGU Mallig | September 18, 2020 | DA MPC, San Gabriel, Tuguegarao City, Cagayan |
| Isabela Group | DA, Livestock Program, Rice Program, High Value Crops and Development Program, RPCO2 Component and Units, PPMIU Isabela, Isabela Grains Production and Marketing Cooperative Cabatuan Savings and Development Cooperative | October 2, 2020 | DA MPC, San Gabriel, Tuguegarao City, Cagayan |
| Santiago City Group | DA, RPCO2 Components and Units, Livestock Program, High Value Crops Development Program, CPMIU Santiago City, Buenavista MPC, G-10 CIA FCIA SOSCCC | October 9, 2020 | DA-NVES, Bagabag, Nueva Vizcaya |



Dairy Stakeholders Meeting

The activity was conducted on December 10, 2020 at DA RFO2 Organic Conference Room, San Gabriel, Tuguegarao City, Cagayan. The meeting aims to gather information and to identify interventions needed by dairy stakeholders in support to the development of the dairy industry in the region. It was participated by different stakeholders in the dairy industry. Different interventions in support to the dairy industry in the region was also presented by the DA Station Managers of IES, QES, and CBS, PCC and NDA representatives.

The following dairy cooperatives participated during the meeting:

1. Rang Ay Ti Pussian Farmers MPC
2. Integrated Farmers Cooperative
3. Bagunot Marketing Cooperative
4. Timpuyog Dagiti Naballigui a Mannalon Association
5. Bauan West Carabao Owners Dairy Association
6. Dassun Dairy Producers and Farmers Coop
7. Bangag Farmers Dairy Cooperative
8. Bical Baliuag Agrarian Reform Beneficiaries
9. Quirino Dairy Cooperative
10. Malaya Development Cooperative
11. San Agustin Dairy Cooperative
12. Quezon Dairy Farmers Cooperative





I-BUILD COMPONENT

Among the four components of PRDP, the I-BUILD shares the biggest chunk of the project's budget allotment. As of December 2020, there are 41 approved I-BUILD subprojects with a total cost of 2,107,281,704.06. Since this component is expected to establish a network of strategic rural infrastructure linking priority value chains in targeted projects areas that are identified through the regional AFMPs. These infrastructure projects include Farm-to-Market roads (FMRs), Bridges, Communal Irrigation System (CIS), Small Water Impounding Projects (SWIP), Potable Water System (PWS), Production and Post-Production Facilities and other support infrastructure such as fish landings, fish sanctuary/Protected Area guardhouses and others.

Thirty three (33) subprojects are 100% completed. Thirteen (13) FMRs, two (2) from the province of Cagayan, six (6) from Isabela and five (5) from Quirino. Eight (8) SWIPs, one (1) diversion dam and four (4) warehouse with solar dryer from the Province of Isabela. Seven (7) civil works or infrastructure support, two (2) from Cagayan, two (2) Isabela and two (2) Quirino Province and one (1) from Nueva Vizcaya.

There are two (2) subprojects ongoing from the province of Cagayan FMR and CIS. Two (2) from Isabela, one (1) warehouse, and one (1) civil works or infrastructure support. Both have one (1) ongoing FMR from LGU Ambaguio, Nueva Vizcaya and Santiago City. Two (2) FMRs are ongoing from the province of Quirino.

Forty eight (48) subprojects are pipelined with a total cost of 4,106,385,619.57. Nineteen are for issuance of NOL 1, nine (9) are approved by RPAB and for endorsement to NPCO and 20 are under FS and DED preparation..

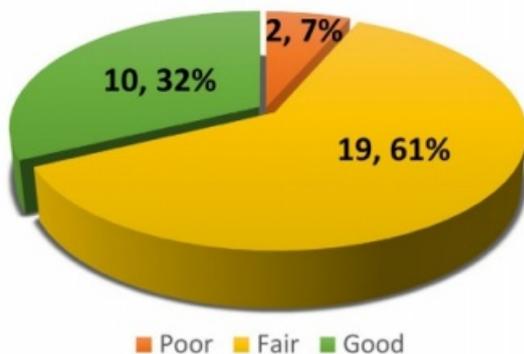
MONITORING AND EVALUATION (M&E)

Summary of Operation and Maintenance Audit Conducted in Region 02 for Completed Subprojects By Province



Figure 1.

The Regional Operation and Maintenance Audit Team (ROMAT) coordinated with the LGUs/organizations on the conduct of the semi-annual Operations & Maintenance (O&M) Audit using the O&M Audit System. The said team were conducted audit for the 31 Subprojects (SPs) in Region 02 this CY 2020, specifically seven (7) in Quirino, one (1) in Nueva Vizcaya, 19 in Isabela and four (4) in Cagayan, wherein, based on the findings of the team 10 SPs were rated “Good”, 19 were “Fair” and 2 SPs are rated “Poor” (Figure 1).



In percentage, out of 31 SPs audited by the team, seven percent (7%) are rated “Poor”, 32% rated “Good” and most of the audited SPs or 61% were rated as “Fair” (Figure 2).

Figure 2.



Figure 3.

The 31 SPs audited includes the following subproject type with the ratings of the team; the Warehouse with solar dryer rated as “Good”; for the 11 Civil works for I-REAP Enterprise, four (4) SPs rated as “Good”, five (5) SPs rated as “Fair” and two (2) SPs rated as “Poor”; while the 8 CIS SPs were all rated as “Fair”; and lastly for FMR SP, five (5) rated as “Good” and six (6) rated as “Fair” (Figure 3).

These audit activities of ROMAT, aimed at assessing the effectiveness and timely implementation of the Operation and Maintenance Plan as committed in the Implementation and Management Agreement (IMA) of the completed subprojects. Pursuant to IMA under Article 7, other covenants in Section 7.06 states that “upon the issuance of the Certificate of Completion, the PLGU shall operate and maintain, or cause to be operated and maintained properly, the structures, systems and facilities constructed, installed or established under the subprojects and shall pass an appropriation ordinance providing for the funds, facilities, services and other resources required for the purpose for the next ten (10) years after subproject completion. The DA-RFO shall be copy furnished with the copy of the Appropriation Ordinance for monitoring purposes.”

The team recommends that the Operation and Maintenance Plan shall be strictly and timely implemented to sustain efficient and effective usage of the subproject and to avoid “Poor” rating in the succeeding O&M audit, that may hamper the possible issuance of NOL 1 for the pipelined subprojects in the municipality/city/province.



KABUHAYAN AT KAUNLARAN *NG KABABAYANG KATUTUBO (4K) PROJECT*



KABUHAYAN AT KAUNLARAN NG KABABAYANG KATUTUBO (4K) PROJECT

The Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) Project is a three-year special project of the Department of Agriculture (DA) which followed the directives of the President to provide assistance to the Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) in the Cagayan Valley Region. Therefore, it focuses on the following objectives:

1. Develop the Ancestral Domain of the ICCs/IPs in order to improve its productivity by developing sustainable agricultural enterprises and profitability by increasing their income in consideration of their customs, traditions, values, beliefs, and interest;
2. Capacitate the ICC/IPs through community participation, agricultural skills training and workshops to increase knowledge and productivity;
3. Increase the number of ICCs/IPs farmers and fisherfolk with access to Department of Agriculture assets and services;
4. Improve the income of the ICCs/IPs through culturally responsive and environmental sustainable livelihood activities; and
5. Provide various agri-fishery assistance such as agri-inputs, tools, machineries/equipment and facilities for production, post-harvest, processing and packaging to improve the economic condition of the ICCs/IPs in the country.

The following strategies are being implemented to address the program goals and objectives:

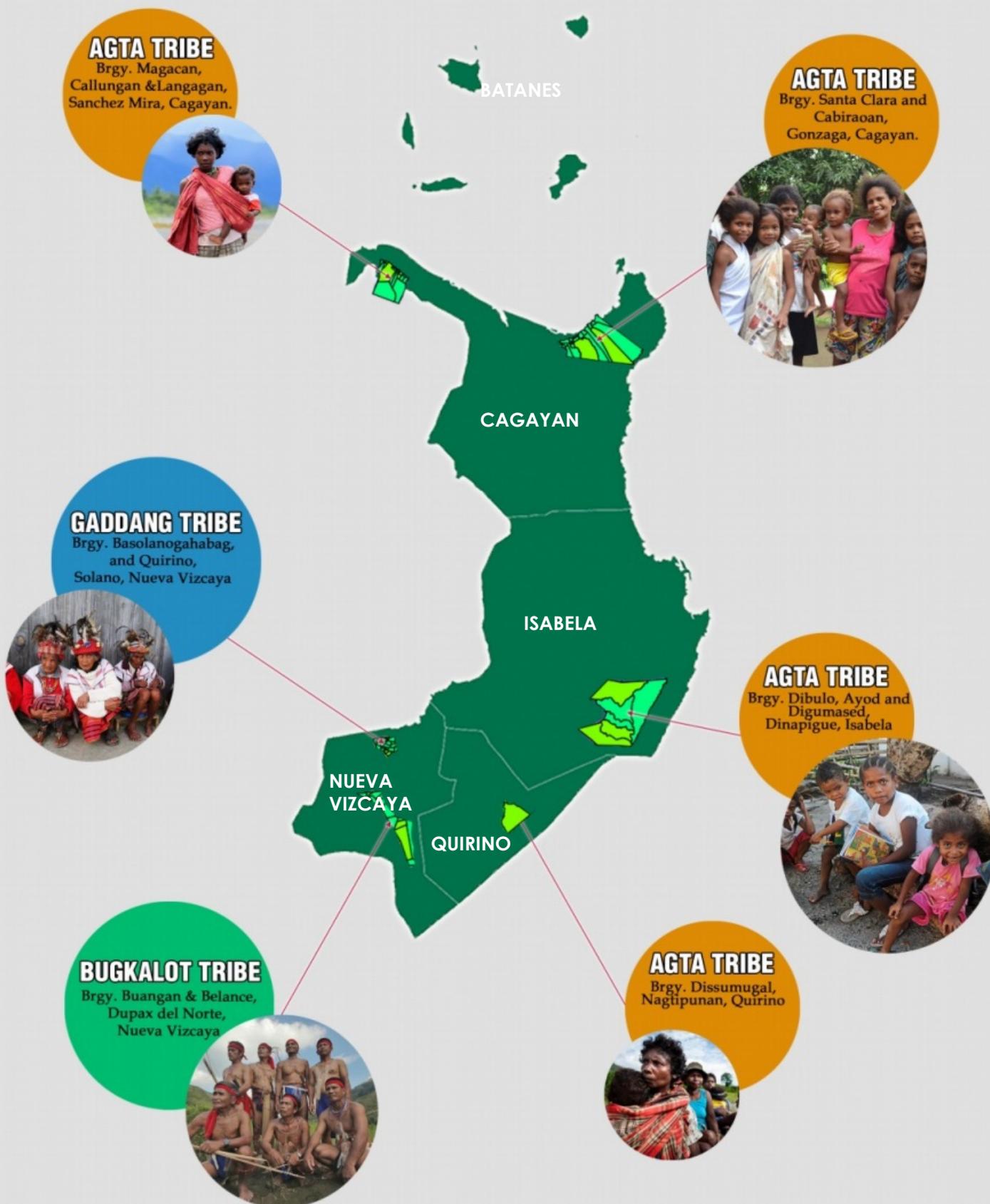
1. Provision of agricultural and fisheries related livelihood, investments, and services for the development of indigenous communities.
2. Conduct of briefings, orientations, and trainings to increase knowledge of IPs on the aspect of agricultural and fisheries production.

Social Preparation Component

1. The 4K Project conducted consultative meeting and dialogue with the National Commission on Indigenous Peoples (NCIP) regarding the project objectives and guidelines to the IP Leaders; Briefings, orientations, consultative meetings and community needs-assessment were also conducted to discuss the concept of Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) Project and to identify the status of the community as well as the existing IPs, and to properly address the needs and request of the community. These were conducted at Agta (Isigiran) Tribe – Callungan, Sanchez Mira, Cagayan ; Agta (Ilaben) Tribe – Cabiraoan, Gonzaga, Cagayan ; Bugkalot Tribe – Belance, Dupax Del Norte, Nueva Vizcaya; Gaddang Tribe – Quirino, Solano, Nueva Vizcaya; Agta Tribe – Digumased, Dinapigue, Isabela; and Agta Tribe – Disimungal , Nagtipunan, Quirino.



KABUHAYAN AT KAUNLARAN NG KABABAYANG KATUTUBO (4K) IN REGION 02



2. The 4K Project conducted site validation to ensure the feasibility of various agricultural interventions on the communal area of the ICCs/IPs.
3. The 4K Project conducted capacity building activities through trainings and workshops to guarantee the competence of the ICCs/IPs in developing their Ancestral Domain (AD) and increase knowledge of IPs on the aspect of agricultural production. Trainings and workshops include rice, corn, high value crops, livestock, poultry, and organic vegetable production.



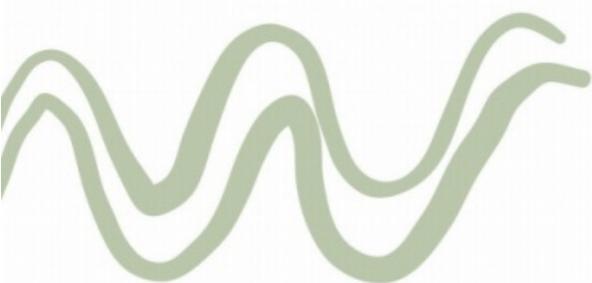
Production and Livelihood Component

Allocated and distributed various agricultural inputs, poultry/livestock and machinery to create additional livelihood and increase the income of the IP Communities and improve the nutrition status of the community. 250 IP households were benefited with 16,500 assorted fruit-bearing tree seedlings; 139 kg assorted lowland vegetable seeds; 78 kg of assorted upland vegetable seeds; 50,000 kg of organic fertilizer; 1,200 heads free-range native chicken; 1,000 heads muscovy duck; 185 bags commercial poultry grower feeds; 6 heads carabao; 2043 kg hybrid yellow corn seeds; 26,400 kg of inorganic fertilizer and one (1) unit hand tractor with planter.





OTHER Milestones





ISO 9001:2015 *QUALITY MANAGEMENT SYSTEM*



ISO 9001:2015 QUALITY MANAGEMENT SYSTEM

DA RFO 2 is now on its 4th year in the institutionalization of ISO 9001:2015 Quality Management System implementing process-oriented approach, customer focused, risk-based decision making and continuous improvement

The Department of Agriculture - Regional Field Office 02 successfully retained its certification to ISO 9001:2015 Quality Management System awarded by the Certification International Philippines Inc. (CIPI) under certificate No. CIP/5310/17/11/1015 valid until December 2023 for the design, development and provision of regional agricultural policies and programs, products and support services related to research and development, agribusiness and marketing, irrigation and farm-to-market road networks, agricultural equipment and facilities, and regulation of agricultural product quality and safety.

The ISO 9001:2015 certification covers the entire DA RFO 02 and its seven (7) Research Centers and Experiment Stations as follows:

1. Southern Cagayan Research Center
Iguig, Cagayan, Philippines
2. Northern Cagayan Experiment Station
Abulug, Cagayan, Philippines
3. Batanes Experiment Station
Basco, Batanes, Philippines
4. Cagayan Valley Research Center
City of Ilagan, Isabela, Philippines
5. Isabela Experiment Station
Gamu, Isabela, Philippines
6. Quirino Experiment Station
Aglipay, Quirino, Philippines
7. Nueva Vizcaya Experiment Station
Bagabag, Nueva Vizcaya, Philippines

THE ISO RE-CERTIFICATION WAS AWARDED AFTER THE THREE-DAY RE-ASSESSMENT AUDIT CONDUCTED BY THE CIPI ON NOVEMBER 23-25, 2020 THRU VIRTUAL PLATFORM; HEADED BY THE REGIONAL EXECUTIVE DIRECTOR, NARCISO A. EDILLO.





Certificate of Registration

This is to certify that
Department of Agriculture – Regional Field Office No. 2
 Nursery Compound, San Gabriel, Tuguegarao City, Cagayan, Philippines
 operates a management system which has been assessed as conforming to
ISO 9001:2015
 for the scope of activities

Design, development and provision of regional agricultural policies and programs, products and support services related to research and development, agribusiness and marketing, irrigation and farm-to-market road networks, agricultural equipment and facilities, and regulation of agricultural product quality and safety.

Certificate No: **CIP/5310/17/11/1015**
 Issue Date: **25 January 2021**
 Valid Until: **18 December 2023**
subject to adherence to the agreed ongoing audit programme, successful endorsement of certification following each audit and compliance with CI Regulations.
 Date of Original Issue: **19 December 2017**

Josello C. Soler
 Josello C. Soler
 President & Managing Director

The current status of certificates can be verified by scanning the QR code or by sending a verification request to e-mail address info@certintph.com



Certification International Philippines, Inc.
 8th Floor, Outer-City Building, San Miguel Avenue, Origa Center, Palig City, Metro Manila, Philippines 1603
 www.certificationinternational.ph



Appendix to Certificate

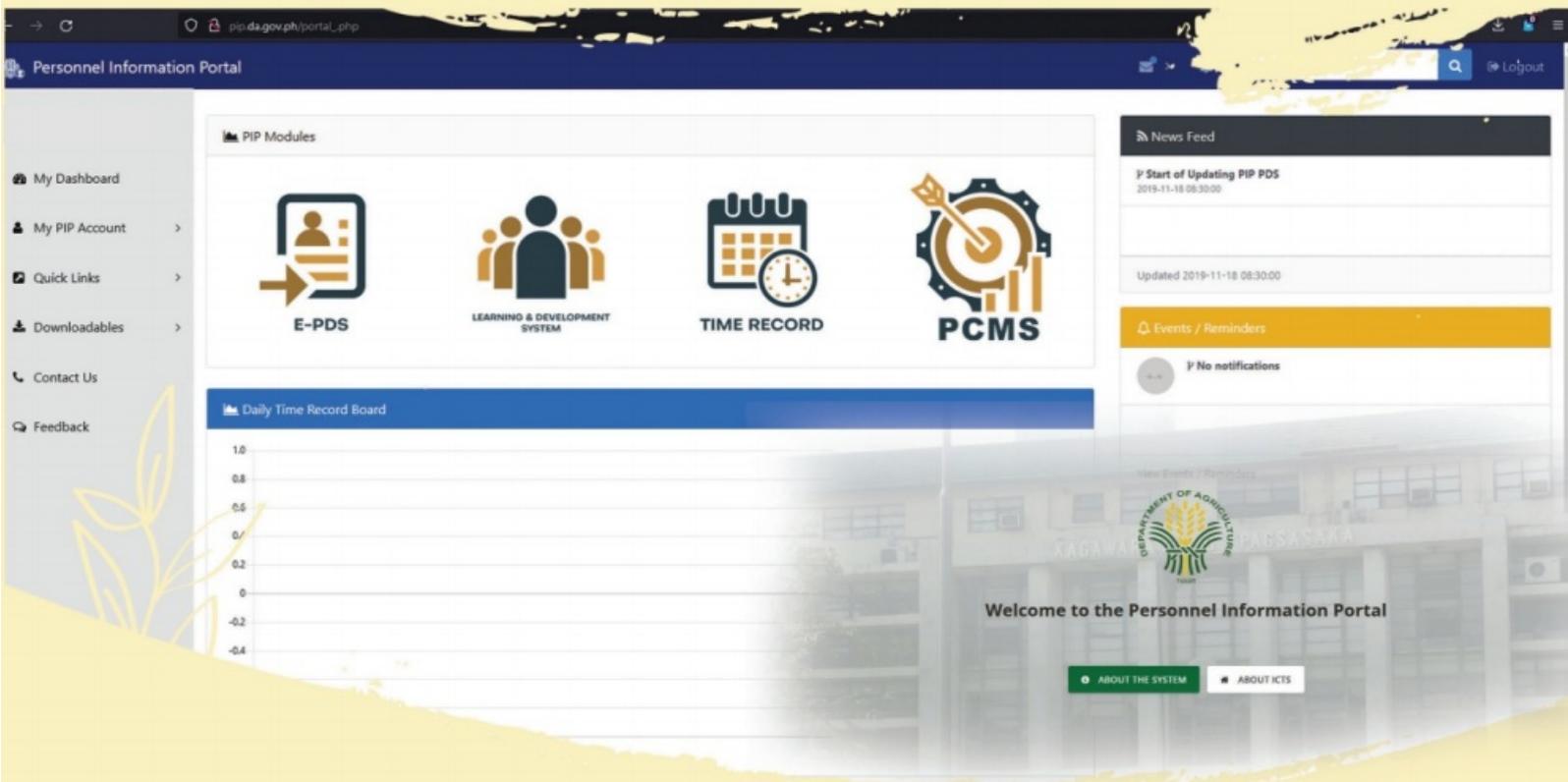
Department of Agriculture – Regional Field Office No. 2
 Certificate No : **CIP/5310/17/11/1015**

- Southern Cagayan Research Center**
Iguig, Cagayan, Philippines
- Northern Cagayan Experiment Station**
Abulug, Cagayan, Philippines
- Batanes Experiment Station**
Basco, Batanes, Philippines
- Cagayan Valley Research Center**
City of Ilagan, Isabela, Philippines
- Isabela Experiment Station**
Gamu, Isabela, Philippines
- Quirino Experiment Station**
Aglipay, Quirino, Philippines
- Nueva Vizcaya Experiment Station**
Bagabag, Nueva Vizcaya, Philippines

Josello C. Soler
 Josello C. Soler
 President & Managing Director

Certification International Philippines, Inc.
 8th Floor, Outer-City Building, San Miguel Avenue, Origa Center, Palig City, Metro Manila, Philippines 1603
 www.certificationinternational.ph



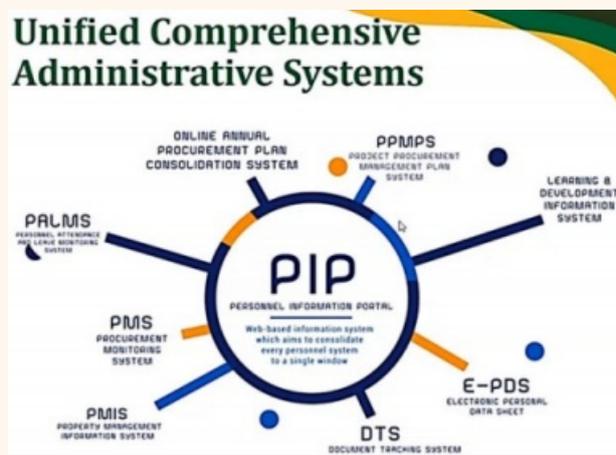


DEPARTMENT OF AGRICULTURE UNIFIED COMPREHENSIVE ADMINISTRATIVE SYSTEMS (UCAS)

DEPARTMENT OF AGRICULTURE UNIFIED COMPREHENSIVE ADMINISTRATIVE SYSTEMS (UCAS)

The Department of Agriculture - Regional Field Office No. 02 is the first region to be deployed with the five (5) components of the Unified Comprehensive Administrative Systems (UCAS) namely, the Property Management Information System (PMIS), Project Procurement Management Plan (PPMP), Annual Procurement Plan Consolidation (APP) Electronic Personal Data Sheet (EPDS) and Document Tracking System (DTS). They are a part of numerous information systems being developed intended for internal transactions within the DA bureaucracy.

The deployment of the UCAS was initiated by the DA – Information and Communications Technology Service (DA-ICTS) assisted by the DA RFO 02 ICT Team which involved the installation of the systems to its corresponding server and assigned an internal IP for proper access. The deployment was made possible with the presence of a server room, creating virtual servers thru VMWare, readily available public IP addresses that came along with our subscription from our internet service provider.

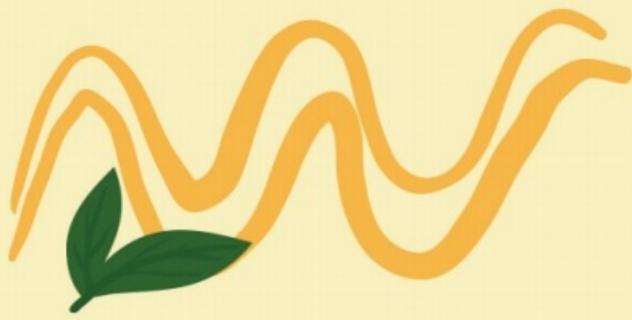


Orientation on the different systems was conducted. First was the ePDS, an electronic version of the Personnel Data Sheet (Form 212) issued by the Civil Service Commission. These database acts as the backbone database for all the systems being integrated piece by piece to the UCAS because information of all DA employees are being structurally complied and stored.

The second system is the PMIS, the system acts as repository of assets or property of the department that are assigned to specific DA personnel. This would identify accountable person to such DA property. The PPMP system is the yearly Project Procurement Management Plan database that is a requirement of the Government Procurement Policy Board (GPPB) as a basis of the agency for its procurement. This is being consolidated to another system, the APP system, being managed by the Bids and Awards (BAC) Committee of the agency. This system is the basis of the BAC in identifying items approved by the agency for procurement via public bidding or thru alternative means.

Lastly, the DTS monitors the flow of any document within the operating unit. This tracks the whereabouts of an identified document along the process flow and detects what office delays the process. This would deter delay in the flow of documents.





Certificate of Recognition

This certificate is presented to

**Department of Agriculture
Regional Office No. 02**

For obtaining Maturity Level 2 in

- **Recruitment, Selection and Placement**
 - **Learning and Development**
 - **Performance Management**
 - **Rewards and Recognition**

*as a result of their determination and invaluable efforts
to promote people excellence in their agency
for efficient and effective public service delivery.*

*Awarded this 30th day of September 2020
at Tuguegarao City, Cagayan.*

NERISSA B. CANGUILAN
CSC REGIONAL DIRECTOR

HUMAN RESOURCE ON CHALLENGES AND CHANGES



HUMAN RESOURCE ON CHALLENGES AND CHANGES

The year 2020 was a year unlike any other. From the COVID-19 pandemic to world shifting events, many of us scrambled to adjust our lives to uncertainty. For the Human Resource Management Office, CY 2020 is yet another milestone for DA RFO 02 as we continuously adopt to new challenges in fulfilling our mandate to recruit, retain, develop and reward our employees through excellence.

This narrative report will serve as a snapshot of the major HRMO activities for 2020. Through innovations and partnerships with other operating units, the HRMO was able to attract, develop and retain a high performing workforce and foster a productive work environment for employees despite the threats of the pandemic.

The HRMO provides support to employees through the four core systems of PRIME HRM: (1) Recruitment, Selection, and Placement (RSP); (2) Learning and Development (L&D); (3) Performance Management (PM); and (4) Rewards and Recognition (R&R).

The Department of Agriculture Regional Field Office No. 02 has successfully attained the PRIME HRM Maturity Level 2 - Process Defined HRM, that was awarded last September 30, 2020 by the Civil Service Commission Regional Office II.



Recruitment, Selection, and Placement

A total of 60 employees were promoted and appointed in 2020. Despite the travel restrictions that has affected face to face interactions including limited opportunities for interviews, the HRMO has now adopted the conduct of virtual interviews and a few in-person interviews with COVID prevention protocols followed. This is in order to continue the process of recruiting and selecting of personnel and attracting and retaining a talented and diverse workforce.

Four (4) oath-taking ceremonies have been conducted within the year. All of which had a blended set-up of face-to-face and virtual.

This year also paved the way for the first Virtual Onboarding Meeting for the newly appointed employees of the agency which was held last November 4, 2020. The participants were oriented on the benefits of permanent employees as well as the importance of Republic Act 6713 or The Code of Conduct and Ethical Standards for Public Officials.

| Appointments Issued for CY 2020 | | | |
|---------------------------------|-----------|-----------------|-----------|
| Month | Promotion | Newly Appointed | Total |
| February | 1 | 1 | 2 |
| August | 15 | 11 | 26 |
| October | 17 | 4 | 21 |
| December | 9 | 2 | 11 |
| Total | 42 | 18 | 60 |



Learning and Development

HRMO is committed to create opportunities for employee growth. Prior to the declaration of community quarantine status, the HRMO successfully conducted the Strategic Planning cum Team Building in Sta. Ana, Cagayan last March 12-14, 2020. This activity was attended by the Regional Executive Director Narciso A. Edillo, Regional Technical Director Rose Mary G. Aquino and Regional Technical Director Roberto C. Busania. They were also joined by the Division Chiefs, Research and Experiment Station Managers and those next in rank. A total 42 participants completed the three day training. This is the first strategic planning workshop that was conducted for the regional office through the expertise of Cole Hopkins Management Consultancy.

With the start of the lockdown and quarantine restrictions, training and seminars were greatly affected. With much consideration to the health and safety of the employees, the first in-house virtual training was conducted last October 14 & 28, November 4 & 11, 2020. The Integrated Presentation and Data Analytics Workshop was attended by a total of 47 employees from various operating units. Facilitated by Peirsson Strategic Management Consultancy, the training aimed at managing organizational information and turning them into high-value and actionable knowledge for effective and informed decision-making.

For CY 2020, a total of 276 employees were provided with learning and development interventions by attending in-house and external training, seminar and workshop.

Performance Management

Despite the threat of the pandemic and the hamper of transactions, DA RFO 02 has maintained a 100% Satisfaction Result for the Internal Customer Satisfaction Feedback Survey. A total of 3,311 ICSF form were collected from January to December. This is a proof that providing internal customer satisfaction resulted in a more efficient process in the agency and ultimately lead to more satisfied external customers.

| CY 2020 ICSF SUBMISSION | | | |
|-------------------------|----------|----------|-------|
| Month | Division | Stations | Total |
| January | 90 | 334 | 424 |
| February | 224 | 385 | 609 |
| March | 77 | 149 | 226 |
| April | 39 | 104 | 143 |
| May | 68 | 163 | 231 |
| June | 76 | 167 | 243 |
| July | 233 | 270 | 503 |
| August | 80 | 132 | 212 |
| September | 131 | 74 | 205 |
| October | 64 | 72 | 136 |
| November | 93 | 87 | 180 |
| December | 86 | 113 | 199 |
| Total | 1261 | 2050 | 3311 |

Rewards and Recognition

The HRMO has continuously recognized the exemplary service, and the unending loyalty of its employees. Last December 23, 2020, the first DA RFO 02 Employee Appreciation Day was sponsored by the HRMO. This is a four-in-one event showcasing the Mass Oath-taking Ceremonies, Tribute to Retirees, Loyalty and PRAISE Awards.

In recognition of their outstanding service and commitment, 14 employees were given Loyalty Awards. These employees have been with the department for 15 up to 40 years. Each loyalty awardee received a certificate of recognition, a token of appreciation and cash incentive.

As a tradition of DA RFO 02, the Tribute to Retirees honored 14 individuals for their contributions to the success of the agency. Each retiree received a plaque of recognition and cash incentive.



EDITORIAL ADVISERS

DIR. NARCISO A. EDILLO, M.A.Ed.
Regional Executive Director

DIR. ROSEMARY G. AQUINO
Regional Technical Director for Research, Regulatory and
Finance and Administrative Concerns

DIR. ROBERTO A. BUSANIA, DVM
OIC-Regional Technical Director for Operations and Extension

CONTRIBUTORS

Division Chiefs

Banner Program Focal Persons

**Regional Agricultural & Fisheries
Information Section (RAFIS)**

Operating Units

PREPARED & PRODUCED

Editor-in-Chief
KAY S. OLIVAS, MPA, MABE, EnP
Chief, Planning, Monitoring
& Evaluation Division

Associate Editors
BERNADETTE T. GALOSO
JONAZON JEFF T. FACTORA
BERNARDO M. MALAZZAB, JR.

Layout and Design
JAKE A. GUIYAB

Print and Distribution
GERSON G. ABAD
KEVIN DWAYNE P. NATIVIDAD

Planning, Monitoring & Evaluation Division (PMED)
Tel. No. : (078) 396-1527
Address: San Gabriel, Tuguegrao City, Cagayan
Email: pmed.rfo2@da.gov.ph
<http://cagayanvalley.da.gov.ph>

