ANNUAL REPORT DA-ILOCOS

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Department of Agriculture Regional Field Office No. 1 Aguila Rd., Sevilla, San Fernando City, La Union

ANNUAL REPORT

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the Planning, Monitoring & Evaluation Division from the reports submitted by the different Banner Programs and other Operating Units of DA-RFO I.

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FOREWORD



It has been a promising "bounce-back" year for the agriculture sector after a two-year struggle with the COVID-19 pandemic. Along with the gradual easing back of businesses and other vital activities that require full face-to-face interaction, the agri-sector is but one among other important sectors that stood resilient and adjusted its programs and projects to remain responsive to the needs of its clientele amid the pandemic.

Crucial in the recovery of the sector are the re-aligned strategies which carried out support programs for farmers and fisherfolk particularly on production, credit/financial, research and extension, marketing support through the KADIWA ni Ani at Kita, and logistics support, a among others. These programs form part of the OneDA Reform

Agenda that sought to achieve a 2.5% growth in agriculture by adopting the key strategies on consolidation, modernization, industrialization and professionalization.

The region has had its share of setbacks more so in the performance of the Department over the past two years. DA-Ilocos Region have struggled to keep afloat as it hurdled the challenges brought about by the African Swine Fever (ASF), crop pests and diseases, natural calamities such as strong typhoons, increasing price of inputs, and the constant challenges due to climate change, among others.

Unfazed by setbacks, I laud the determined spirits of our DA workforce and the invaluable support of our Local Government Unit partners, our attached agencies and bureaus, the private sector and more importantly the farmers and fisherfolk, who stood by our side as we successfully implemented our programs and projects in the region.

Worth noting, through our collective efforts, we have remained Food Sufficient in almost all of our major commodities and sustained our rank as among the top producing region for rice, corn, mango, garlic, tomato, onion, eggplant, peanut, mungbean, onion, goat and cattle.

This testament of our works as evidenced by our accomplishments documented through this report will hopefully solidify the trust and confidence of our clients in the sector and help strengthen our linkages so that we can achieve more through our combined resources, efforts, and strength.

As I thank everyone who were instrumental in our achievements for the year, I continually seek your support and commitment to stay focused and positive because our services does not end at every closing of our books during year-ends. Whatever changes our Department may undergo in the present or in the future, let us remain faithful in our sworn duties to serve, be loyal to the service, and keep aiming for that dream to have a Food Secured nation for our next generations.

All that we have achieved this year, in the name of public service, may the Lord be Glorified!

Dios ti Agngina!



EXECUTIVE SUMMARY

Amidst the challenges and changes faced by the Ilocos Region due to weather disturbances that brought disastrous effects on the agri-fishery sector, and of late the COVID-19 pandemic that put food production and marketing to a standstill, the region still managed to exude resilience as it continuously demonstrated noteworthy performance in support to the government's efforts to address food and nutrition security, and increase farm productivity and income.

The availability of basic food commodities was without question because the region continued to be the major producer of food supply as it consistently exhibited a strong comparative advantage in production. For rice, the region maintained its rank as the $4^{\rm h}$ top producing region contributing 9.53% to the national production of 19.29 Million metric tons. From 2016-2021, rice production registered positive growth by 5.39% from 1.81 Million metric tons in 2016 to 1.90 Million metric tons in 2021. Likewise, yield per hectare grew 6.31% or additional 0.28 metric tons from 2016 level.

Likewise, the region is a consistent major producer of the country's best quality corn grains, sustaining its rank as the 5th top producing region with 6.88% share to the total aggregates. Corn outputs on production, area harvested and yield continued to accelerate from 2016 level.

Moreover, the region maintained its rank as first in the production of mango, garlic, tomato, onion, eggplant, peanut and mungbean, and second in onion. In terms of livestock, llocos Region is the major producer of goat and cattle, ranking

2rd and 3rd top producing region respectively. The region was able to maintain its Foot-and-Mouth Disease-Free (FMD-Free) and Avian Influenza-free (Alfree) status. With the onslaught of the African Swine Fever (ASF), the region was able to mitigate its impact to the swine industry.

In terms of food sufficiency level, Region 1 is still more than sufficient in all basic commodities, except for rootcrops.

A total of 590,204 individuals and 7,951 groups were benefited from the various interventions of the DA RFO I.

These outcomes were the results of efficient and effective implementation of various programs, projects and activities funded from different sources such as GAA, Bayanihan I & II, Quick Response Fund (QRF), National Disaster Risk Reduction and Management Fund (NDRRMF), and the Philippine Rural Development Project (PRDP). These interventions are aligned with the different strategies, among others the Eight Paradigm, One DA Agenda, and the One DA Reform Agenda.

To consistently provide excellent, efficient and effective service, the DA RFO-I achieved certification to ISO 9001:2015 or Quality Management System (QMS) and ISO 14001:2015 or Integrated Management System (IMS).

TRANSFORMING PHILIPPINE AGRICULTURE

OneDA Reform Agenda:

KEY STRATEGIES:

CONSOLIDATION MODERNIZATION INDUSTRIALIZATION PROFESSIONALIZATION

The DA llocos Region continuously supported the One DA Reform Agenda approach in the implementation of various programs, projects and activities towards a modernized and industrialized Philippine agriculture.

The reform agenda is anchored on 18 key strategies with four pillars:, namely: consolidation, modernization, industrialization, and professionalization. The pillars and strategies aimed to boost productivity and competitiveness of farmers and fishers towards more productive and efficient value chain system.

The Consolidation pillar has six key strategies: Bayanihan Agri-Clusters (BACs), Collective actions or cooperative development, province-led agriculture and fisheries extension systems (PAFES), mobilization and empowerment of partners, diversification, and credit support.

"A food-secure and resilient PHILIPPINES with empowered farmers and fisherfolk"

2021 TARGET GROWTH: **2.5%**

PART I.

AGRICULTURE SECTOR OUTCOMES &

OUTPUTS

Gross Regional Domestic Product (GRDP) Food Self Sufficiency Commodity Production Performance

GROSS REGIONAL DOMESTIC PRODUCT

In 2021, Ilocos Region's Agriculture, Forestry and Fishing (AFF) sector output, at constant 2018 prices, was valued at PhP 107.3 Billion as shown in Figure 1. This value, contributing 17.63 percent to the regional output at PhP608.6 Billion, is lower by 4.9 percent than the 2020 output of PhP581.9 Billion.

The negative growth in the AFF was due to decreased production of crops and livestock commodities as a result of the occurrence of typhoons and infestation of pests and diseases in crops and livestock like the African Swine Fever (ASF) in 2021.

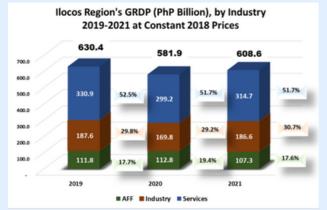


Figure 1. Gross Regional Domestic Product (GRDP) by Industry, Ilocos Region, 2019-2021.

FOOD SUFFICIENCY LEVEL

Figure 3 shows that the Ilocos Region continued to be sufficient in almost all basic commodities in 2021.

Rice registered 179% sufficiency level, decreased by negative 1.10 points from 2020 level of 181%. Rice production this year at 1.902 million metric tons is more than enough to cater the 645,271 metric tons of clean rice requirement of almost 5.39 million populace in the region.

Likewise, corn production is more than sufficient to cater the requirement of human

The Service sector contributed the largest share in the region's output at 51.7 percent. The sector recorded a positive growth of 9.2 percent in 2021 attaining a total value of PhP314.7 Billion. The sector was able to recover from the negative growth of 9.6 percent in 2020.

The Industry sector is also grew by 4.6 percent from PhP169.8 Billion in 2020 to PhP186.6 Billion in 2021. The Industry's output contributed 30.7% to the regional aggregates in 2017.

Only the AFF sector posted growth during the COVID 19 pandemic crisis in 2020.

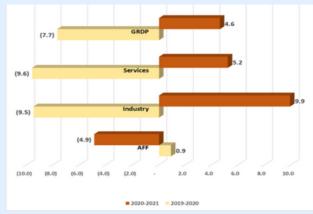


Figure 2. GRDP by Industry, Growth Rates (%) at Constant 2018 prices, 2019-2021.

and livestock consumption. Sufficiency level of corn attained 244% in 2021, higher by 15.64 points than the 2020 level of 211%. Corn production of 571,259 metric tons has surplus to meet the requirement of animals and human.

Sufficiency level of fruits is also more than sufficient. However, it went down by negative 2.78 points from 180% in 2020 to 175% in 2021. Mango, as the major fruit commodity in the region, contributed the biggest chunk of production supply in fruit.

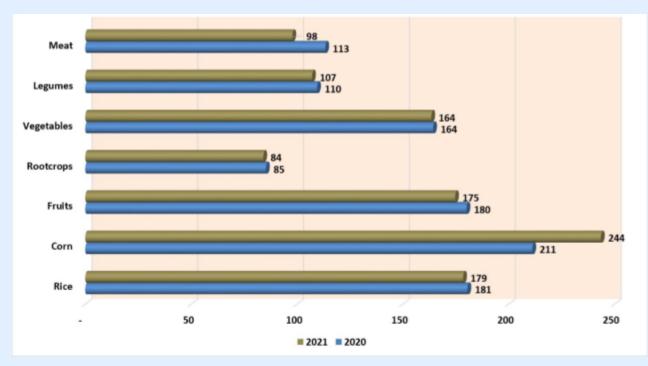


Figure 3. Food sufficiency level (%), llocos Region, 2020-2021.

Supply of vegetables in the region is also sufficient, attaining 164% both in 2020 and 2021.

Production of legumes, specifically, peanut and mungbean, has surplus in production achieving 107% sufficiency level in 2021. Rootcrops, which is still deficit in production, recorded 84% sufficiency level this year. On the other hand, meat sufficiency level decreased from 113% in 2020 to 98% in 2021. As shown in Figure 4, pork and beef production, with noted 99% and 69% sufficiency level, respectively, are not enough to cater the meat requirement. Pork deficit this year is due to occurrence of African Swine Fever (ASF) in the region.

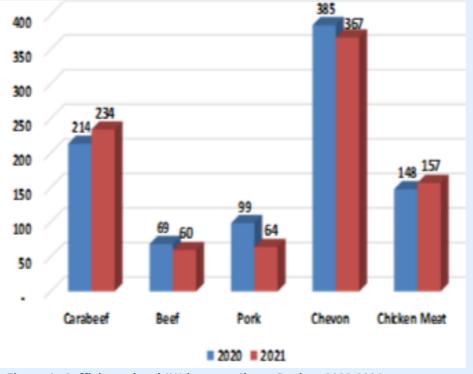


Figure 4. Sufficiency level (%) in meat, Ilocos Region, 2020-2021.

COMMODITY PRODUCTION PERFORMANCE

RICE

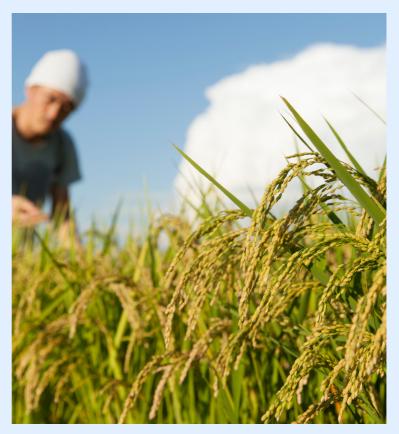
This year, Ilocos Region sustained its rank as the 4thrice producing region in the country contributing 9.53% to the national production of 19.96 Million metric tons.

However, this year's production level recorded a slight decrease of 0.02% or 319 metric tons from 1,902,662 metric tons in 2020 to 1,902,343 metric tons in 2021 as shown in Table 1. Among the provinces, only Pangasinan, the top producing province in the region and the 3rd rank in the country, posted a positive production growth at 2.4% from 2020 level.

Also, the over-all rice yield level per hectare decreased by 0.34% or 4.67 metric tons in 2020 to 4.65 metric tons in 2021. Yield of all provinces, except Pangasinan, decreased from last year's level. However, this year's level of yield recorded a 6.4% increase from 2016 level. The Ilocos Region is the 2nd top yielder among the regions, next to Central Luzon, surpassing the national average of 4.53 metric tons per hectare.

The negative growth in production and yield was due to the damages rice mostly in plantings, at vegetative, reproductive stages, cause by Typhoon Maring and Southwest Monsoons in the region. Nevertheless, the production and yield outputs this year, are still higher than the levels in 2017-2019 as shown in Figure 5. Outputs in 2020 is the highest ever recorded in the region.

In terms of area harvested, the region increased by 0.33% or 1,334 hectares from 2020 level.



The increment in production was attributed to the 2.63% increase in yield per hectare from 4.55 metric tons in 2019 to 4.67 metric tons in 2020. This year's yield surpassed the highest yield ever recorded in the region at 4.55 metric tons in 2017 and 2019 as shown in Figure 5.

The increase in vield was due the to constructed/rehabilitated Small-Scale Irrigation Projects (SSIP) and utilization of high quality and hybrid and inbred palay seeds, coupled with favorable weather condition. The distributed seeds were funded under the regular fund of the Program and the Rice Resiliency Project (RRP) of the Plant, Plant, Plant Program or ALPAS Laban sa Covid 19 - Stimulus Package Bayanihan 1.

The region sustained its rank as the 4th rice producing region in the country contributing 12% to the national rice production of more than 14.57 million metric tons as shown in Figure 5.

| Province | Production (MT) | | | Area (Ha) | | | Yield (MT/Ha) | | |
|--------------|-----------------|-----------|---------|-----------|---------|--------|---------------|------|--------|
| FIOVINCE | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| llocos Norte | 341,995 | 337,192 | (1.40) | 66,213 | 65,819 | (0.60) | 5.17 | 5.12 | (0.81) |
| llocos Sur | 249,171 | 244,634 | (1.82) | 51,082 | 50,486 | (1.17) | 4.88 | 4.85 | (0.66) |
| La Union | 176,117 | 157,881 | (10.35) | 38,869 | 38,353 | (1.33) | 4.53 | 4.12 | (9.15) |
| Pangasinan | 1,135,379 | 1,162,636 | 2.40 | 251,537 | 254,377 | 1.13 | 4.51 | 4.57 | 1.26 |
| Region | 1,902,662 | 1,902,343 | (0.02) | 407,701 | 409,035 | 0.33 | 4.67 | 4.65 | (0.34) |

Table 1. Rice Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), Region 1, 2020-2021.

By provincial distribution, Pangasinan is till the major producer of rice in the region with a production of 1,135,379 metric tons contributing 60% of the regional aggregates. Its production and productivity level increased by 2.78% and 2.63%, respectively.

Ilocos Norte, the second top rice-producing province, posted 3,75% growth in production from 2019 level. It recorded the highest increase in yield per hectare among the provinces at 3.4% from 5.00 metric tons in 2019 to 5.17 metric tons in 2020.

On the other hand, La Union, which has the lowest contribution to the regional output, exhibited the highest increase in production at 4.18% from 2019 level. The increment was attributed to the positive growth in yield per hectare and area at 2.82% and 1.32%, respectively.

Ilocos Sur contributing 3.01% share to the regional output, showed slight increase in production at 0.42% or 1,045 metric tons from 248,126 metric tons in 2019.

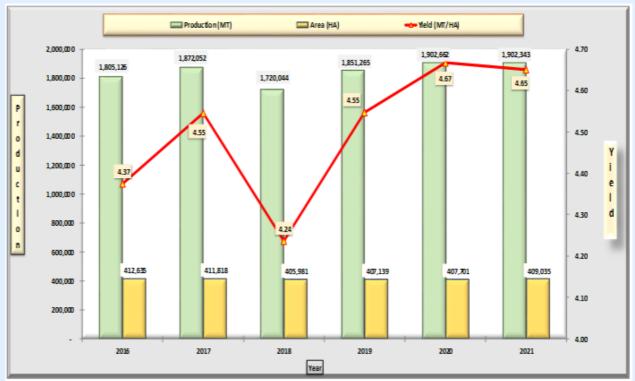


Figure 5. Rice Production (MT), Area, Harvested (Ha) and Yield (MT/Ha) in Region 1, 2020-2021.



Corn outputs in Ilocos Region continued to grow it exhibited 1.40% as increase in production or additional 7,891 metric tons from 563,388 metric tons in 2020 to 571,259 metric tons in 2020 as shown in Table 2. lts production level continued to accelerate. sustained as one of the major contributors of corn supply in the country.

The region shared 6.49% or 563,388 metric tons to the national aggregate production of 8.118 Million metric tons, maintaining its rank as the 5th corn producing region in the country.

Pangasinan dominated the corn production in Ilocos Region at 348,661 metric tons or 62% contribution. This is followed by Ilocos Sur at 19% share, and Ilocos Norte and La Union at 12% and 7%, respectively.

In terms of yield, the region continued to accelerate by 0.31 from 5.66 metric tons per hectare in 2016 to 5.97 metric tons per hectare in 2021 as shown in Figure 6. In 2021, yield per hectare grew by 0.77% or additional 50 kilograms from 5.92 metric tons in 2020 to 5.97 metric tons. This year's level the highest is ever recorded in the region for the past years.





Figure 6. Corn Production (MT), Area, Harvested (Ha) and Yield (MT/Ha) in Region 1, 2016-2021

| Province | Production (MT) | | | Area (Ha) | | | Yield (MT/Ha) | | |
|--------------|-----------------|---------|--------|-----------|--------|--------|---------------|------|--------|
| Province | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| llocos Norte | 66,508 | 65,496 | (1.52) | 11,842 | 11,615 | (1.92) | 5.62 | 5.64 | 0.40 |
| llocosSur | 108,606 | 110,736 | 1.96 | 18,953 | 18,903 | (0.26) | 5.73 | 5.86 | 2.23 |
| La Union | 39,613 | 36,794 | (7.12) | 7,264 | 6,848 | (5.73) | 5.45 | 5.37 | (1.47) |
| Pangasinan | 348,661 | 358,233 | 2.75 | 57,108 | 58,395 | 2.25 | 6.11 | 6.13 | 0.48 |
| Region | 563,388 | 571,259 | 1.40 | 95,167 | 95,761 | 0.62 | 5.92 | 5.97 | 0.77 |

Table 2. Corn Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), by Province, Region 1, 2020-2021.

MANGO

Mango is the top priority high value commodity in Ilocos Region. This year, the region contributed 23% or 127,469 metric tons to the national aggregate of 741,695 metric tons, sustaining its rank as the top producing region in the country as shown in Figure 7.

The mango production level in 2021 decreased by 3.24% from 178,244 metric tons in 2020. Among the provinces, Ilocos Sur posted growth in mango production and yield by 9.31% and 10.08%, respectively, from 2021 level.

As shown in Figure 7, mango recorded a declining production and yield from 2016-2021.



The decline was due to the adverse effects of different typhoons that occurred in the region coinciding with the flowering and fruit formation stages, and Cecid Fly infestation on mango fruits. In terms of provincial outputs, Pangasinan dominated the mango production in the region with 70.98% share or 122,421 metric tons. Ilocos Norte is the 2ndtop-producing province in the region with 14.61% share or 25,200 metric tons.

| Province | Production (MT) | | | Area (Ha) | | | Yield (MT/Ha) | | |
|--------------|-----------------|---------|---------|-----------|--------|--------|---------------|------|---------|
| | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| Ilocos Norte | 26,083 | 25,200 | (3.39) | 4,765 | 4,753 | (0.25) | 5.47 | 5.30 | (3.14) |
| Ilocos Sur | 9,628 | 10,525 | 9.31 | 1,312 | 1,303 | (0.70) | 7.34 | 8.08 | 10.08 |
| La Union | 17,369 | 14,324 | (17.53) | 2,476 | 2,476 | (0.01) | 7.01 | 5.79 | (17.52) |
| Pangasinan | 125,164 | 122,421 | (2.19) | 13,917 | 13,917 | - | 8.99 | 8.80 | (2.19) |
| Region | 178,244 | 172,469 | (3.24) | 22,470 | 22,448 | (0.10) | 7.93 | 7.68 | (3.15) |

 Table 3. Mango Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), by Province, Region 1, 2020-2021.

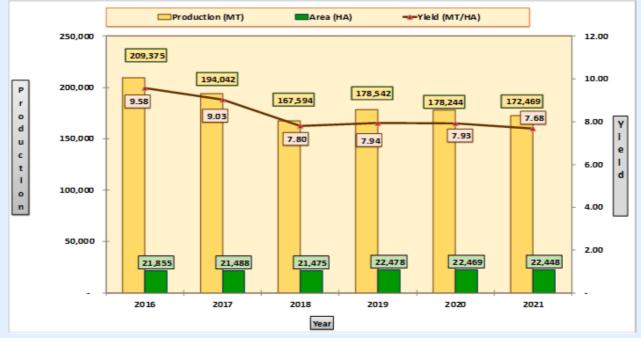


Figure 7. Mango Production (MT), Area, Harvested (Ha) and Yield (MT/Ha) in Region 1, 2016-2021.

GARLIC

Ilocos Region continued its rank as the top producing region of garlic contributing 78% or 4,571.08 metric tons to the total production of 5,890.14 metric tons in the country as shown in Figure 8.

In 2021, there was a slight decrease in production at negative 1.19% from 4,646.00 metric tons in 2020. (Table 3). Yield and area harvested also decreased by negative 1.01% and 0.18%, respectively. The reduction in outputs was due to smaller bulb produced and to the production losses caused by typhoons and pest and disease infestation.

For the past five years, yield level in garlic increased by 8.52% from 2.23 metric tons in 2020 to 2.42 metric tons in 2021. Ilocos Norte maintains its rank as the top-producing province and country's garlic capital contributing 75.16% to the national aggregates.



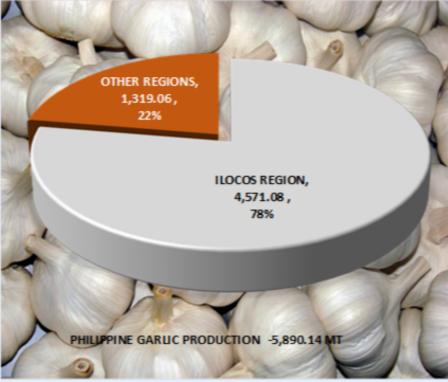


Figure 8. Ilocos Region's garlic production share, 2021.

| Commodity/ | Produ | uction (MT) | | | Area (Ha) | | Yie | eld (MT/H | la) |
|--------------|----------|-------------|---------|----------|-----------|--------|------|-----------|---------|
| Province | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| Garlic | 4,626.00 | 4,571.08 | (1.19) | 1,889.00 | 1,885.67 | (0.18) | 2.45 | 2.42 | (1.01) |
| Ilocos Norte | 4,465.00 | 4,427.08 | (0.85) | 1,823.00 | 1,819.67 | (0.18) | 2.45 | 2.43 | (0.67) |
| Ilocos Sur | 161.00 | 144.00 | (10.56) | 66.00 | 66.00 | - | 2.44 | 2.18 | (10.56) |
| La Union | - | - | - | - | - | - | - | - | - |
| Pangasinan | - | - | - | - | - | - | - | - | - |

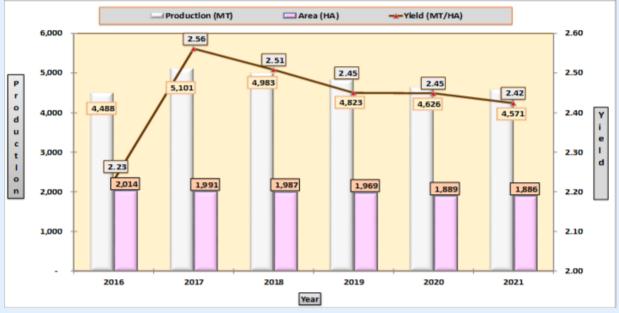


Figure 9. Garlic Production (MT), Area, Harvested (Ha) and Yield (MT/Ha) in Region 1, 2016-2021.

ONION

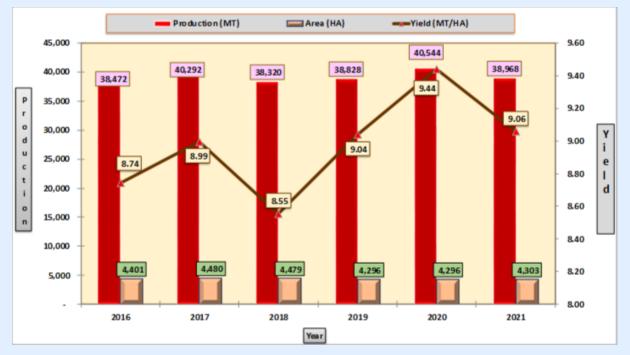
Production of onion also showed a slight reduction by 3.89% from 40,543.80 metric tons in 2020 to 38,968.45 metric tons in 2021 as shown in Table 4. Likewise, area harvested declined by 3.09% or a reduction of 137 hectares from the 2020 of 4,440.0 hectares. Yield level per hectare also declined by 0.83% or 7 kilograms from 9.13 metric tons in 2020 to 9.06 metric tons in 2021.

Among the provinces, only llocos Norte posted growth at 1.52% or additional 278.37 metric tons from 2020 level. This was attributed to the increase in area harvested and yield level. The province recorded an increase of 1.41% in yield and 0.11% in area harvested.



Ilocos Region is remains to be 2nd top onion producing region, next to Central Luzon Region, contributing 18% to the national output.

Figure 10 shows that onion production, area harvested and yield in the region increased from 2016 to 2021 level. There were downtrends in 2018 and 2021 due to damages brought by devastating typhoons during the period. From 2018, onion outputs recovered in 2020 due to adoption of appropriate production technologies coupled with favorable weather condition.





| Province | Production (MT) | | | Area (Ha) | | | Yield (MT/Ha) | | |
|--------------|-----------------|-----------|---------|-----------|----------|---------|---------------|-------|---------|
| FIOVINCE | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| llocos Norte | 18,354.12 | 18,632.49 | 1.52 | 2,119.46 | 2,121.73 | 0.11 | 8.66 | 8.78 | 1.41 |
| llocos Sur | 18,884.55 | 18,347.68 | (2.84) | 1,730.75 | 1,728.23 | (0.15) | 10.91 | 10.62 | (2.70) |
| La Union | 432.36 | 323.02 | (25.29) | 30.00 | 33.25 | 10.83 | 14.41 | 9.71 | (32.59) |
| Pangasinan | 2,872.77 | 1,665.26 | (42.03) | 559.83 | 419.83 | (25.01) | 5.13 | 3.97 | (22.70) |
| Region | 40,543.80 | 38,968.45 | (3.89) | 4,440.04 | 4,303.04 | (3.09) | 9.13 | 9.06 | (0.83) |

Table 5. Onion Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), by Province, Region 1, 2020-2021.

PEANUT & MUNGBEAN

The llocos Region sustained its rank as the top producing region of peanut and mungbean in the country.

As shown in Figure 11, peanut in the region shared 40% or 12,209.70 metric tons of the national production of 30,566.26 metric tons. Also, the region contributed 34% or 12,573.01 metric tons to the national aggregates of 35,482.23 metric tons.

This year, production of peanut grew by 1.68% from 2020 level of 12,008.45 metric tons as shown in Table 5. The growth was attributed to the increased level in yield per hectare at 1.21%. Among the provinces, Pangasinan and Ilocos Norte posted positive growth in yield at 7.13% and 1.19%, respectively.

On the other hand, mungbean production declined by 4.61% from 13,181.32 metric tons. The negative growth was attributed to decreased yield level per hectare at 4.23% from 1.37 metric tons in 2020 to 1.31 metric tons in 2021.

For the past five years, peanut and mungbean posted growth in yield as shown in Figure 8. Yield per hectare of peanut increased by 15.4% from 1.54 metric tons in 2015 to 1.64 metric tons in 2021. Likewise, mungbean's yield level increased by 9.17% from 1.20 metric tons in 2016 to 1.31 metric tons in 2021.

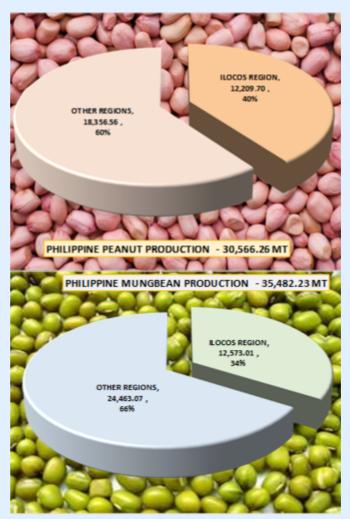


Figure 11. Peanut and mungbean production (MT) in Region 1 vs. Philippines.

| Commodity/ | Production (MT) | | | 1 | Area (Ha) | | Yield (MT/Ha) | | |
|--------------|-----------------|-----------|---------|----------|-----------|--------|---------------|------|---------|
| Province | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| Peanut | 12,008.45 | 12,209.70 | 1.68 | 7,484.60 | 7,445.18 | (0.53) | 1.60 | 1.64 | 2.21 |
| llocos Norte | 1,576.61 | 1,559.51 | (1.08) | 1,150.99 | 1,125.13 | (2.25) | 1.37 | 1.39 | 1.19 |
| Ilocos Sur | 1,966.70 | 2,037.82 | 3.62 | 1,278.25 | 1,337.85 | 4.66 | 1.54 | 1.52 | (1.00) |
| La Union | 3,182.54 | 2,914.44 | (8.42) | 2,101.20 | 2,007.83 | (4.44) | 1.51 | 1.45 | (4.17) |
| Pangasinan | 5,282.60 | 5,697.93 | 7.86 | 2,954.16 | 2,974.37 | 0.68 | 1.79 | 1.92 | 7.13 |
| Mungbean | 13,181.32 | 12,573.01 | (4.61) | 9,609.35 | 9,570.40 | (0.41) | 1.37 | 1.31 | (4.23) |
| llocos Norte | 5,477.07 | 5,497.68 | 0.38 | 4,565.90 | 4,545.52 | (0.45) | 1.20 | 1.21 | 0.83 |
| Ilocos Sur | 929.73 | 1,041.69 | 12.04 | 726.64 | 725.79 | (0.12) | 1.28 | 1.44 | 12.17 |
| La Union | 246.08 | 255.91 | 3.99 | 230.60 | 233.09 | 1.08 | 1.07 | 1.10 | 2.88 |
| Pangasinan | 6,528.44 | 5,777.73 | (11.50) | 4,086.21 | 4,066.00 | (0.49) | 1.60 | 1.42 | (11.06) |

Table 6. Peanut and Mungbean Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), by Province, Region 1, 2020-2021.



Figure 12. Peanut and Mungbean Yield (MT/Ha) in Region 1, 2016-2021.

PINAKBET VEGETABLES

Figure 13 shows that Ilocos Region dominated the production of pinakbet vegetables—the tomato, eggplant and ampalaya in the country.

The region is top producer of tomato contributing 33% of 75,127 metric tons to the national production of 150,325 metric tons. Likewise, the region ranks 1st in eggplant production with 40% share or 97,759 metric tons to the 244,035 metric tons national production.

On the other hand, the region is the 2nd top producer of amaplaya, next to Central Luzon, contributing 12% or 10,400 metric tons to the national output of 77,815 metric tons in 2021.

Tomato, eggplant and ampalaya are the major ingredients of pakbet or pinakbet vegetable dish that originated from the Ilocos Region. This umami-rich food is salty, sweet and bitter that's pleasing to the Filipino palate.

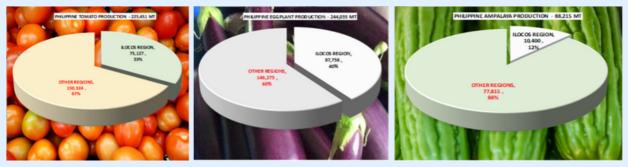


Figure 13. Ilocos Region's tomato, eggplant and ampalaya production share, 2021

Table 7. Tomato, Eggplant and Ampalaya Production (MT), Area, Harvested (Ha) and Yield (MT/Ha), by Province, Region 1, 2020-2021.

| Commodity/ | Pro | duction (MT) | | | Area (Ha) | | Yie | ld (MT/H | a) |
|--------------|-----------|--------------|--------|----------|-----------|--------|-------|----------|--------|
| Province | 2020 | 2021 | % GR | 2020 | 2021 | % GR | 2020 | 2021 | % GR |
| Tomato | 73,417.34 | 75,127.03 | 2.33 | 3,651.68 | 3,610.53 | (1.13) | 20.11 | 20.81 | 3.50 |
| Ilocos Norte | 27,456.47 | 26,910.21 | (1.99) | 1,351.59 | 1,307.53 | (3.26) | 20.31 | 20.58 | 1.31 |
| Ilocos Sur | 24,841.67 | 26,448.19 | 6.47 | 978.00 | 981.97 | 0.41 | 25.40 | 26.93 | 6.04 |
| La Union | 2,372.29 | 2,368.19 | (0.17) | 171.95 | 170.89 | (0.62) | 13.80 | 13.86 | 0.45 |
| Pangasinan | 18,746.91 | 19,400.44 | 3.49 | 1,150.14 | 1,150.14 | - | 16.30 | 16.87 | 3.49 |
| Eggplant | 95,443.66 | 97,759.14 | 2.43 | 5,069.13 | 5,072.62 | 0.07 | 18.83 | 19.27 | 2.36 |
| Ilocos Norte | 8,008.01 | 8,227.65 | 2.74 | 669.23 | 669.34 | 0.02 | 11.97 | 12.29 | 2.73 |
| Ilocos Sur | 6,728.03 | 6,886.41 | 2.35 | 397.25 | 397.27 | 0.01 | 16.94 | 17.33 | 2.35 |
| La Union | 2,506.44 | 2,507.68 | 0.05 | 220.65 | 224.01 | 1.52 | 11.36 | 11.19 | (1.45) |
| Pangasinan | 78,201.18 | 80,137.40 | 2.48 | 3,782.00 | 3,782.00 | - | 20.68 | 21.19 | 2.48 |
| Ampalaya | 10,521.17 | 10,400.11 | (1.15) | 1,288.88 | 1,295.35 | 0.50 | 8.16 | 8.03 | (1.64) |
| Ilocos Norte | 3,517.22 | 3,409.63 | (3.06) | 403.78 | 404.24 | 0.11 | 8.71 | 8.43 | (3.17) |
| Ilocos Sur | 2,317.90 | 2,330.69 | 0.55 | 162.00 | 161.98 | (0.01) | 14.31 | 14.39 | 0.56 |
| La Union | 2,098.57 | 2,075.00 | (1.12) | 316.46 | 322.49 | 1.91 | 6.63 | 6.43 | (2.97) |
| Pangasinan | 2,587.48 | 2,584.79 | (0.10) | 406.64 | 406.64 | - | 6.36 | 6.36 | (0.10) |

As shown in Table 6, Tomato production posted positive growth of 2.33% from 73,417.34 metric tons in 2020 level. Yield level per hectare also increased by 3.5% from 20.11 metric tons in 2020 to 20.18 metric tons in 2021.

Eggplant also showed positive growth in production with 2.43% increase from 2020 level of 95,443.66 metric tons. Area harvested and yield also showed positive growth at 0.07% and 2.36%, respectively.

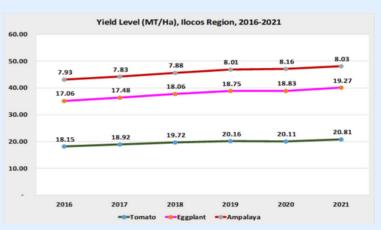


Figure 14. Tomato, Eggplant and Ampalaya Yield (MT/Ha) in Region 1, 2016-2021

On the other hand, ampalaya production showed slight decrease at 1.15% from 2020 level.

From 2016 to 2021, yield levels of the tomato, eggplant and ampalaya showed an increasing trend as shown in Figure 14. The growth in yield was attributed to the provision of high quality hybrid seeds and application of improved production technologies coupled with favorable weather condition.

LIVESTOCK & POULTRY

The over-all inventory of livestock and poultry registered 1.99% this year as shown in Table 7.

The total inventory of chicken and duck increased by 5.88% from 10,036,431 heads in 2020 to 10,953,791 in 2021. The growth in inventory was due to increased productivity and number of stocks disposition.

However, the livestock alone, which includes carabao, cattle, swine and goat, recorded negative growth in inventory from 1,608,129 heads in 2020 to 1,237,415 heads in 2021.

Swine showed the highest reduction in inventory at 48.61% due to continuous outbreak of African Swine Fever (ASF). The reduction of inventory of other livestock commodities was due to number of disposition as a result of COVID-19 quarantine.

In terms of production, livestock and poultry went down with an over-all reduction rate of 18.88% from 2020 level as shown in Table 8.

Table 8. Livestock and Poultry Inventory (Heads), Ilocos Region 2020-2021.

| Commodity | Inve | Inventory (Heads) | | | | | | |
|--------------|------------|-------------------|---------|--|--|--|--|--|
| commonly | 2020 | 2021 | % GR | | | | | |
| Livestock | 1,608,129 | 1,237,415 | (23.05) | | | | | |
| Carabao | 185,670 | 179,354 | (3.40) | | | | | |
| llocos Norte | 36,269 | 37,248 | 2.70 | | | | | |
| llocos Sur | 24,574 | 24,237 | (1.37) | | | | | |
| La Union | 43,661 | 49,622 | 13.65 | | | | | |
| Pangasinan | 81,166 | 68,247 | (15.92) | | | | | |
| Cattle | 318,079 | 262,075 | (17.61) | | | | | |
| llocos Norte | 74,617 | 75,872 | 1.68 | | | | | |
| llocos Sur | 59,679 | 60,708 | 1.72 | | | | | |
| La Union | 38,106 | 39,958 | 4.86 | | | | | |
| Pangasinan | 145,677 | 85,537 | (41.28) | | | | | |
| Swine | 586,344 | 301,301 | (48.61) | | | | | |
| llocos Norte | 181,698 | 147,319 | (18.92) | | | | | |
| llocos Sur | 76,241 | 47,746 | (37.37) | | | | | |
| La Union | 87,550 | 47,790 | (45.41) | | | | | |
| Pangasinan | 240,855 | 58,446 | (75.73) | | | | | |
| Goat | 518,036 | 494,685 | (4.51) | | | | | |
| llocos Norte | 95,007 | 101,557 | 6.89 | | | | | |
| llocos Sur | 114,807 | 122,010 | 6.27 | | | | | |
| La Union | 95,086 | 104,562 | 9.97 | | | | | |
| Pangasinan | 213,136 | 166,556 | (21.85) | | | | | |
| Poultry | 10,345,671 | 10,953,791 | 5.88 | | | | | |
| Chicken | 10,036,431 | 10,604,549 | 5.66 | | | | | |
| llocos Norte | 1,968,236 | 2,169,127 | 10.21 | | | | | |
| llocos Sur | 981,144 | 1,033,249 | 5.31 | | | | | |
| La Union | 1,602,527 | 2,480,996 | 54.82 | | | | | |
| Pangasinan | 5,484,524 | 4,921,177 | (10.27) | | | | | |
| Duck | 309,240 | 349,242 | 12.94 | | | | | |
| llocos Norte | 68,536 | 77,547 | 13.15 | | | | | |
| llocos Sur | 51,940 | 65,147 | 25.43 | | | | | |
| La Union | 51,929 | 67,605 | 30.19 | | | | | |
| Pangasinan | 136,835 | 138,943 | 1.54 | | | | | |
| Total | 11,953,800 | 12,191,206 | 1.99 | | | | | |

Table 9. Livestock and Poultry Production (MT), Ilocos Region 2020-2021.

| Commodity | Prod | luction (MT) | |
|--------------|---------|--------------|---------|
| commodity | 2020 | 2021 | % GR |
| Livestock | 133,980 | 100,847 | (24.73) |
| Carabao | 7,479 | 8,473 | 13.30 |
| llocos Norte | 1,078 | 1,517 | 40.79 |
| Ilocos Sur | 877 | 1,381 | 57.37 |
| La Union | 703 | 828 | 17.84 |
| Pangasinan | 4,821 | 4,747 | (1.53) |
| Cattle | 25,137 | 25,106 | (0.12) |
| llocos Norte | 6,351 | 6,326 | (0.39) |
| Ilocos Sur | 3,847 | 3,161 | (17.82) |
| La Union | 2,041 | 1,505 | (26.27) |
| Pangasinan | 12,897 | 14,113 | 9.43 |
| Swine | 92,223 | 57,660 | (37.48) |
| llocos Norte | 20,772 | 20,971 | 0.96 |
| Ilocos Sur | 14,441 | 13,139 | (9.02) |
| La Union | 15,411 | 5,877 | (61.87) |
| Pangasinan | 41,599 | 17,674 | (57.51) |
| Goat | 9,141 | 9,608 | 5.10 |
| llocos Norte | 1,150 | 1,245 | 8.27 |
| Ilocos Sur | 1,555 | 1,679 | 8.00 |
| La Union | 1,032 | 1,027 | (0.55) |
| Pangasinan | 5,404 | 5,657 | 4.68 |
| Poultry | 85,756 | 77,413 | (9.73) |
| Chicken | 84,475 | 76,280 | (9.70) |
| llocos Norte | 6,242 | 5,928 | (5.03) |
| Ilocos Sur | 5,719 | 5,129 | (10.32) |
| La Union | 13,396 | 14,785 | 10.37 |
| Pangasinan | 59,117 | 50,438 | (14.68) |
| Duck | 1,281 | 1,133 | (11.59) |
| Pangasinan | 129 | 160 | 23.88 |
| La Union | 77 | 129 | 68.79 |
| Ilocos Sur | 105 | 125 | 19.70 |
| llocos Norte | 971 | 718 | (26.02) |
| Total | 219,736 | 178,259 | (18.88) |

PART II.

STRATEGIES & INTERVENTIONS

CONSOLIDATION



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- 1. Bayanihan Agri Clusters
- 2. Collective Action/Cooperatives Development
- 3. Province-led Agriculture & Fisheries Extension Systems
- 4. Mobilization & Empowerment of Partners
- 5. Diversification
- 6. Credit Support

MODERNIZATION



- 7. Technology & Innovation including Digital Agriculture
- 8. Farm Mechanization & Infrastructure Investments
- 9. Climate Change Adaptation & Mitigation Measures
- 10. Food Safety & Regulations

INDUSTRIALIZATION



- 11. Agri Industrial Business Corridors
- 12. Global Trade, Export Development & Promotion
- 13. Postharvest, Processing, Logistics & Marketing Support

PROFESSIONALIZATION

- 14. Agriculture Career System
- 15. Education & Training: Agribusiness Management
- 16. Youth & Women Engagement
- 17. Ease of Doing Business & Transparent Procurement

The Modernization covers four strategies as follows: technology and innovation including digital agriculture, farm mechanization and infrastructure investments, climate change adaptation and mitigation measures, and food safety and regulations.

Meanwhile, the Industrialization has three strategies: agri-industrial business corridors; global trade, export development, and promotion; and post harvest, processing, logistics, and marketing support.

Lastly, professionalization comprised of four strategies: agriculture career system, education and training of agribusiness management, youth and woman engagement, and ease of doing business and transparent procurement. The strategy on strategic communications cut across all the strategies.

01 I CONSOLIDATION

Bayanihan Agri-Clusters

The Ilocos Region continued to support the Bayanihan Agri Cluster (BAC) strategy in order to optimize the provision of government interventions and assistance, and attain economies of scale in the sector. The strategy aims to boost productivity and competitiveness of farmers and fishers towards more productive and efficient value chain system.

This year, the region continued to support the 5 pilot cluster areas established in 2020 to include the newly established 40 cluster

areas in all the four (4) provinces under the Fisheries Clustering Farm and and Consolidation (F2C2) Program. A total of 19,355 individual farmers and fishers within 81 farmers organizations in the 47 cluster areas were benefited from the production support services, and various trainings and trainingrelated events such as briefing/orientation on Program guidelines and component interventions, Training of Trainers (TOT), inclusive agricultural production and entrepreneurial skill trainings, and leadership and organizational management training.



Collective Action/Cooperatives Development

The DA RFO I facilitates strengthening of partnership/linkage with the farmer-cooperatives, key Civil Society Organizations (CSOs) in the agri-fishery sector, for more efficient implementation of various programs and projects, and transfer of Technologies to increase farm productivity and income. These CSOs are accredited pursuant to Administrative Order No. 03, Series of 2022 entitled: Revised Guidelines on the accreditation of CSOs to be engaged by the DA as Partners in the Implementation of Agriculture and Fishery Projects.

As of CY 2021, 39 CSOs were accredited as partners of DA in the implementation of agri-fishery programs and projects as shown in Table 10.

| Provinces | No. of CSO/Cooperatives Accredited |
|--------------|------------------------------------|
| llocos Norte | 7 |
| llocos Sur | 8 |
| La Union | 5 |
| Pangasinan | 19 |
| Region | 39 |

Table 10. CSO Coops Accredited in Region 1. (no.)

Below are the lists of specific CSO-farmer-cooperatives that were accredited:

Table 11. Project Support Office (PSO)/CSO accredited in Ilocos Norte.

| Name of PSO/CSO | Address | Major Programs/Services |
|--|---|---|
| Lumbaan Weavers and Cotton Producers Cooperative | 24 Lumbaan Bicbica, Pinili, Ilocos Norte | Processing/Manufacturing of Agricultural Products, Selling of Processed Products |
| Catuguing Multipurpose Cooperative | San Guillermo, San Nicolas, Ilocos Norte | Credit/Lending and Rental of Postharvest Service Facilities |
| Alviar Multipurpose Cooperative | Brgy. P.F Alviar, Vintar, Ilocos Norte | Lending, Savings Deposit |
| Bagnos Multipurpose Cooperative | Brgy. Binacag, Banna, Ilocos Norte | Credit and Savings, Selling Goods, Trading of Agri Inputs, Palay Trading, Goat And Hog |
| Bacarra Zanjera Irrigators Mpc | Vintar Road Brgy. #40 Buyon, Bacarra, llocos Norte | Trading & Marketing; Lending |
| Rayuray Farmers Agriculture Cooperative | Brgy. 33-S, Rayuray, Batac City, llocos Norte | Palay Trading |
| Sarusar Federated Irrigators Association Incorporated | Brgy. Dancel, Dingras, llocos Norte | Financial and Technical Assistance, Manage, Establish, Maintain, Operate |

Table 12. PSO/CSO accredited in Ilocos Sur.

| Name of PSO/CSO | Address | Major Programs/Services |
|--|---|---|
| Talucama Federation of Irrigators Association Inc. | Brgy. Barangobong, Sta Lucia, Ilocos Sur | Provide Programs and Other Support Services, Machineries, Financial |
| Burgos-Sta Maria Irrigators Multipurpose Cooperative | Brgy. Poblacion Sur, Sta Maria, Ilocos Sur | Trading of Palay, Corn and Farm Inputs, Financial Services, and Farm Machineries Rentals |
| Sacred Heart Savings Cooperative | Poblacion, Galimuyod, llocos Sur | Loan Services, Business Support Services, Agro- Enterprise Program Services |
| Conconig East Farmers Multipurpose Cooperative | Sta Lucia, llocos Sur | Consumer Services, Savings and Loan Services, Farm Equipment/Machinery Rental and Marketing Services |
| Nueva Segovia Consortium Of Cooperative | Nueva Segovia St. Vigan City, Ilocos Sur | Financial Services, Agro Enterprise and Marketing Services, Capability Building Services, Tourism Services, Social Services |
| Suyo Multipurpose Cooperative | Brgy. Uso, Suyo, Ilocos Sur | Savings Deposit Services, Loan Services, Mutual Aid Services and SSS |
| Kailian Multipurpose Cooperative | Brgy Suysuyan, Lidlidda, Ilocos Sur | Lending |
| Arangkada Sto Domingo Federated Farmers' Association Inc. | Brgy. San Pablo, Sto Domingo, llocos Sur | Farm Equipment Rental Services |

Table 13. PSO/CSO accredited in La Union.

| Name of PSO/CSO | Address | Major Programs/Services |
|--|---|---|
| San Pablo Multipurpose Cooperative | Brgy. San Pablo, Balaoan, La Union | Rice/Palay Marketing & Trading, Consumer/Credit |
| Green Valley United Cooperative | Brgy. Natividad, Naguilian, La Union | Palay/Rice Trading, Basi And Vinegar Processing, Manufacturing And Marketing, Loan Production, Consumer Store |
| Lacong Multipurpose Cooperative | Bantuague, Lacong, San Gabriel, La Union | Egg Production and Agri Lending Service, Agri Equipment Rental, Consumer Store, HVC Production/Consolidation |
| Namaltugan Multipurpose Cooperative | Sudipen, La Union | Lending, Consumer Store |
| San Jose Multipurpose Cooperative | Brgy. San Jose, Caba, La Union | Palay Trading/Milling; Agri Trading & Consumer Store; Lending, Agri Equipment Rental, Food Processing |
| San Pablo Multipurpose Cooperative | Brgy. San Pablo, Balaoan, La Union | Rice/Palay Marketing & Trading, Consumer/Credit |
| Green Valley United Cooperative | Brgy. Natividad, Naguilian, La Union | Palay/Rice Trading, Basi And Vinegar Processing, Manufacturing And Marketing, Loan Production, Consumer Store |
| Lacong Multipurpose Cooperative | Bantuague, Lacong, San Gabriel, La Union | Egg Production and Agri Lending Service, Agri Equipment Rental, Consumer Store, HVC Production/Consolidation |

Table 14. PSO/CSO accredited in Pangasinan.

| | , | |
|--|--|--|
| Name of PSO/CSO | Address | Major Programs/Services |
| Progressive Cooperative of Oraan East Multi-Purpose Cooperative | Oraan East, Manaoag, Pangasinan | Lending, Rice Milling and Palay Trading, Agricultural Equipment Rental |
| SRT Alcala Multi-Purpose Cooperative of Pangasinan | Laoac, Alcala, Pangasinan | Marketing & Trading of Agri Products; Lending |
| Western Pangasinan Seed Growers Multi-Purpose Cooperative | Quezon Avenue, Poblacion, Alaminos City, Pangasinan | Procurement, Lending, Trading and Marketing of Agri Products |
| Capulaan Multi-Purpose Cooperative | Brgy. Capulaan, Villasis, Pangasinan | Trading and Agricultural Inputs & Outputs, Consumer, Marketing and Trading |
| Abasto Multi-Purpose Cooperative | Brgy. San Pedro Apartado, Alcala, Pangasinan | Trading, Marketing, Lending, Consumer and Other Agri Activities |
| Building Lives for Better Future Philippines Foundation Inc. | Brgy. Cablong, Pozzorubio, Pangasinan | Scholarship Programs and Livelihood Projects |
| Lambayan Multi-Purpose Cooperative | Brgy. Poblacion, Mapandan, Pangasinan | Credit and Savings, Marketing, Trading, Trucking, Warehousing |
| Movers Multi-Purpose Rice Processing Center | Brgy Calapugan, Natividad, Pangasinan | Provide Goods and Services, Engaged in Remittance, Transferring or Transmitting |
| Hillside Multi-Purpose Cooperative | Brgy. Unzad, Villasis, Pangasinan | Lending, Marketing of Farm Inputs, Palay, Rice Corn Trading |
| Balite Multi-Purpose Cooperative | Brgy. San Leon, Umingan, Pangasinan | Palay and Rice Procurement, Production And Marketing of Agricultural Products |
| Saint Paschal Baylon Multi-Purpose Cooperative | Poblacion Zone lii, San Quintin, Pangasinan | Lending Services |
| Laoac Siga Talaga Marketing Cooperative | Zone 1 Brgy. Nanbagatan, Laoac, Pangasinan | Marketing of Agricultural Products and By- Products |
| Alcala Livestock and Cassava Growers' Association, Inc. | San Pedro Ili, Alcala, Pangasinan | Production & Marketing of Lowland Vegetables, Corn Stovers Silage Production and Marketing |
| Casaba Multi-Purpose Cooperative | Toco-Barikir, Mangatarem, Pangasinan | Rice & Corn Production Trading |
| Cauplasan Luna Pinakbet Farmers Association | Sitio Cauplasan, Brgy. Luna, Mabini, Pangasinan | Rice & Corn Production & Trading |
| Barangay Laois Fishermen Association | Brgy. Laois, Labrador, Pangasinan | Fish Capture & Trading |
| Villacorta Mabini Farmers' Association Incorporated | Villacorta, Mabini, Pangasinan | Rice, Corn, Mungbean Production & Trading, Goat and Poultry Trading |
| Malingas Multi-Purpose Cooperative | 244 Lasip, Calasiao, Pangasinan | Palay Production and Trading, Broiler Chicken Contract Growing |
| Alcala Onion, Rice and Corn Growers Multi-Purpose Cooperative | Alcala Agro-Industrial Complex, Bersamin, Alcala, Pangasinan | Yellow Grannex (Onion) Production, Consolidation, and Trading Enterprise, Trucking Rentals |

Annual Report

Province-led Agriculture & Fisheries Extension System (PAFES)

As support to the institutionalization of the Province-led Agriculture and Fisheries Extension System (PAFES), the DA RFO I, Agricultural Training Institute (ATI) and the Provincial Local Governments established cluster areas in the provinces. The Provinces of Ilocos Norte and Pangasinan were established as pilot PAFES in the country and in the region, respectively.

The PAFES is among the key strategies of DA which aimed to increase farmers' productivity and income. It serves as extension hub that synchronizes agricultural plans and programs as well as orchestrate the activities of the various stakeholders.

The Ilocos Norte Agriculture and Fisheries Extension System (INAFES), PAFES in Ilocos Norte, was established to strengthen the collaboration between the DA, the Local Government Units, the academe, and the private sector in bringing extension services to the grassroot. It will also help establish and enhance rural livelihoods in the province though the development, adaptation, sharing and utilization of science-based knowledge and innovations with farming and fishing, families, rural communities and agriculture enterprises.

DA Secretary William D. Dar and Ilocos Norte Governor Matthew Joseph Marcos Manotoc signed the Memorandum of Agreement on February 28, 2020 in Laoag City. The creation of the Provincial Agricultural and Fishery Extension Center (PAFEC) was completed in 2020. The establishment of PAFEC office was completed in August 2021.

NAFE

The INAFES conducted Community Organization Team Activation Training Workshop on October 2021 with group beneficiaries.

As part of the PAFEP activities, the province established onion, garlic and mango with calamansi integrated clustered faming. Target activities under Phase IV – Mapping out of CPAFEF for implementation in 2022 covering nine (9) commodities are as follows:



Meanwhile, the Province of Pangasinan facilitated the following activities:

- Phase I Preparatory activities: conduct of appraisal, submission of appraisal report (by the Pangasinan State University)
- Phase II Establishment of PAFES: Endorsement of the Sangguniang Panlalawigan and approval of the Governor, and MOA signing with stakeholder-partners.



Mobilization & Empowerment of Farmers

The DA RFO I continued to strengthen partnership and collaboration with the Local Government Units, Civil Society Organizations (CSOs) and other stakeholders in the planning, implementation, and monitoring and evaluation of programs, projects and activities.

As support to the LGU's endeavor on agri-fishery sector development, the DA provided incentive (monetary) allowance to Agricultural Extension Workers (AEWs) - the Provincial/City/Municipal Agriculturists and Veterinarians, Local Farmer Technicians (LFT), and the Agricultural and Fishery Council (AFC) members. For 2021, a total of Php60.6 Million was provided to 1,406 AEWs, LFTs and AFCs, broken down by program as follows:

| | | Incentive Allowance Recipients (No.) | | | | Amount of Incentive | Annual Amount of | |
|--|------|--------------------------------------|-----------|---------------|-----|------------------------|------------------------------|------------------------------|
| Personnel | Rice | Corn | HVC DP | Lives tock | OAP | Total | Allowance Per Month (Php) | Incentives Provided (Php) |
| No. of AEWs supported | 740 | 261 | 155 | 221 | 29 | 1,406 | | 60,600,000 |
| Provincial Agriculturist/Veterinarians | 4 | | | 4 | | 8 | 4,500 | 432,000 |
| Provincial Coordinators | 4 | 4 | | | | 8 | 4,000 | 384,000 |
| Municipal/City Agriculturists/Veterinarians | 125 | | | | | 125 | 4,000 | 6,000,000 |
| Agricultural Technicians/Agriculturial Technologists/PCC | 468 | 257 | 155 | 217 | 29 | 1,126 | 3,500 | 47,292,000 |
| LFTs | 124 | | | | | 124 | 4,000 | 5,952,000 |
| AFC Coordinators | 15 | | | | | 15 | 3,000 | 540,000 |

Table 15. Incentive Allowances provided to LGU-Agri extension workers, CY 2021.

Likewise, the region sustained close partnership with the Regional Agricultural and Fishery Council (RAFC) as the monitoring arm and policy recommending body of the DA Ilocos Region.

For 2021, the RAFC facilitated the following activities:

- a. Training and training-related events
- Conducted 17 consultations, orientation briefings, and trainings which include 3 executive committee meetings, 3 sectoral committee meetings, 3 operational meetings, 2 trainings and 6 relevant orientation briefings/dialogues to youths and other sectors.



- Supported 29 PAFC consultations resulting in the crafting of 13 policy resolutions
- Assisted 140 MAFC meetings ensuing in the consolidation of local issues and concerns resolve.

b. Monitoring of basic commodity prices and DA-funded projects

12 monitoring teams created to monitor and evaluate the 96 targeted projects implemented/awarded in 2018-2020 by the HVCDP and rice banner programs

117 units of farm machinery projects were monitored, namely: 54 units four-wheel drive tractor, 19 units combine harvester, 23 units hand tractor, 16 units knapsack sprayer, 3 units cultivator, and 2 units pump and engine sets

Findings of the Monitoring Teams were as follows:

- >116 out of 117 units of machineries/ equipment were operational and functional;
- > 1 unit of combine harvester was professed non-operational (awarded to Bonga Pump 1 IA, Inc., in Sarrat, Ilocos Norte, parts of the unit were not sturdy; and

> recommended the conduct of trainings on operation of equipment/machineries and record management to track the significant information on the operation of the machinery/equipment.

• Weekly monitoring of basic food commodities were conducted with the Agribusiness and Marketing Assistance Division (AMAD) of DA, Department of Trade and Industry (DTI), and Local Government Units (LGUs)

c. Monitoring of Agrikultura Kaagapay ng Bayang Pinoy Program (AKBay) implementation

- A total of PhP 3,186,050,000.00 was collected from the the Php4,400,000.00 worth of projects awarded to 440 recipients in nine (9) municipalities in La Union
- 145 additional farm household beneficiaries were benefited from the deposited Provincial AKBay roll-over account.

Diversification

Some of the rice and corn farmers in Ilocos Region endeavored production of high value crops such as mango, vegetables, bamboo, banana, onion and garlic, and other crops.

As part of the One DA Reform Agenda on Diversification Strategy and the Bayanihan to Recover as One Act (Bayanihan Act 2), development programs of the following commodities were funded and implemented in the region:

> a. Mango Industry Productivity Enhancement Project

The project generally aimed to enhance productivity of mango trees in pilot areas heavily affected by Cecid Fly. All the targeted interventions under the Production Support Services, Extension Support, Education and Training Services, and the Agricultural Machinery, Equipment and Facility were accomplished.

Specifically, it aimed to provide production support services for the increase of production and reduce losses due Cecid Fly infestation, conduct of training and training-related events to capacitate farmers the adoption of Good Agricultural practices (GAP) and insecticide resistance

a. Banana Industry Development Program

- b. Onion and Garlic Expansion Program
- c. Urban Agriculture Program

PRODUCTION SUPPORT SERVICES

Objective: Reduce losses due to Cecid Fly infestation

| Activity | Unit | Target | Accomp | % Accomp |
|---|----------|--------|--------|----------|
| Group beneficiaries | Number | 4 | 4 | 100 |
| a. Provision of production inputs | | | | |
| EMO (Bacillus Subtilis) | Number | 1,430 | 1,430 | 100 |
| Insecticide | Kilogram | 2,000 | 2,000 | 100 |
| Inorganic fertilizers | Kilogram | 4,000 | 4,000 | 100 |
| Organic acid | Liters | 4,000 | 4,000 | 100 |
| Natural plant food | Kilogram | 4,000 | 4,000 | 100 |
| b. Distribution of irrigation paraphernalia | | | | |
| Industrial drum | Pieces | 83 | 83 | 100 |

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EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

Objective: Capacitate farmers to adopt Good Agricultural Practices (GAP) and insecticide resistance management

| Activity | Unit | Target | Accomp | % Accomp | |
|--|--------------|--------|--------|----------|--|
| a. Conduct of Package of Tech | nology (POT) | | | | |
| Batches | Number | 4 | 4 | 100 | |
| Participants | Number | 140 | 140 | 100 | |
| b. Establishment of technology demonstration | | | | | |
| Sites | Number | 2 | 2 | 100 | |

AGRICULTURAL MACHINERY, EQUIPMENT AND FACILITY

Objective: Improve and modernize farm management and operation; Produce safe and quality fruits

| Activity | Unit | Target | Accomp | % Accomp |
|--|-----------------|--------|--------|----------|
| a. Distribution of farm equipme | ent/machineries | | | |
| Drone sprayer | Number | 1 | 1 | 100 |
| b. Distribution of farm production machineries | Number | 401 | 401 | 100 |
| c. Distribution of post harvest machineries | Number | 7 | 7 | 100 |

b. Bamboo Industry Development Program

The program aims to develop and demonstrate appropriate cultural management practices of bamboo that will produce a for sustainable supply of quality raw materials for food and industrial processing thru establishment of bamboo nurseries in strategic areas. Likewise, it aimed to create and implement appropriate production and harvesting management of bamboo thru establishment of bamboo plantations.



The program covered the following:

PRODUCTION SUPPORT SERVICES

| Activity | Unit | Target Accomp | | % Accomp |
|--------------------------------|---------|---------------|-------|----------|
| a. Distribution of bamboo plar | ntings | | | |
| Bamboo plantings | Number | 2,000 | 2,000 | 100 |
| Group beneficiaries | Number | 4 | 4 | 100 |
| Area planted | Hectare | 20 | 20 | 100 |

EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

| Activity | Unit | Target | Accomp | % Accomp | |
|--|--------|--------|--------|----------|--|
| a. Conduct of Package of Technology (POT) | | | | | |
| Batches | Number | 2 | 2 | 100 | |
| Participants | Number | 70 | 70 | 100 | |
| b. Establishment of technology demonstration | | | | | |
| Sites | Number | 2 | 2 | 100 | |

AGRICULTURAL MACHINERY, EQUIPMENT AND FACILITY

| Activity | Unit | Target | Accomp | % Accomp |
|---|--------|--------|--------|----------|
| a. Distribution of farm equipment/machineries | Number | 264 | 264 | 100 |
| Group beneficiaries | Number | 4 | 4 | 100 |
| b. Establishment of bamboo processing facility | Number | 1 | 1 | 100 |
| Group beneficiaries | Number | 1 | 1 | 100 |
| c. Distribution of irrigation equipment | Number | 12 | 12 | 100 |

c. Garlic Expansion Project

The project aims to increase production and sufficiency level of garlic through provision of inputs, conduct of trainings and provision of machineries and equipment.

Specific interventions provided are as follows:

PRODUCTION SUPPORT SERVICES

| Activity | Unit | Target | Accomp | % Accomp |
|--|----------|--------|--------|----------|
| a. Distribution of planting and inputs | | | | |
| Garlic planting materials | Kilogram | 40,800 | 40,800 | 100 |
| Group beneficiaries | Number | 5 | 5 | 100 |
| Area planted | Hectare | 102 | 102 | 100 |
| Fungicide | Kilogram | 300 | 300 | 100 |



AGRICULTURAL MACHINERY, EQUIPMENT AND FACILITY

| Activity | Unit | Target | Accomp | % Accomp |
|---|--------|--------|--------|----------|
| a. Distribution of farm equipment/machineries (multi- cultivator) | Number | 21 | 21 | 100 |
| Group beneficiaries | Number | 5 | 5 | 100 |
| b. Distribution of irrigation equipment | Number | 30 | 3 | 100 |
| Group beneficiaries | Number | 5 | 5 | 100 |

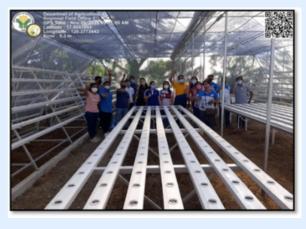
d. Urban Agriculture Program

The project promotes urban gardening and innovative agricultural practices to facilitate food availability and accessibility. Components of the project include the establishment of community gardens and modernized urban agriculture.

Specific interventions provided are as follows:

PRODUCTION SUPPORT SERVICES

| Activity | Unit | Target | Accomp | % Accomp |
|--|--------|--------|--------|----------|
| a. Establishment of production facilitie | es | | | |
| Community garden | Number | 40 | 40 | 100 |
| Group beneficiaries | Number | 4 | 4 | 100 |
| Modernized urban agriculture | Number | 40 | 40 | 100 |
| Group beneficiaries | Number | 4 | 4 | 100 |



Credit Support

The DA RFO I facilitated technical assistance to Small Farmers and Fisherfolk (SFF) and Micro and Small Enterprises (MSE) for availing agricultural credit/financial programs to the Agricultural Credit Policy Council (ACPC). The ACPC was created in 1986 by virtue of Executive Order 113 to assist the (DA) Department Agriculture of in synchronizing all credit policies and programs in support of the latter's priority programs.

In 2021, a total of PhP 653.70 Million was availed by 29,923 borrowers under the Survival and Recovery (SURE) Loan, SURE-Aid and Recovery Project (SURE COVID-19) and the Expanded SURECOVID-19, Kapital Access for Young Agripreneurs (KAYA), and the Agri-Negosyo (ANYO) Loan Programs as shown in Table 16.

The SURE COVID-19 provides working capital loans to agricultural/fishery/livestock MSEs, cooperatives, and associations to continue operations and ensure the availability of food supply amid the COVID-19 pandemic. Eligible enterprises may avail of zero-interest loans of up to Php 10 million, payable in five (5) years.

The KAYA Loan Program offers zero-interest loans of up to Php 500,000 (subject to approval of Provincial Lending Center (PLC) payable up to 5 years.

Borrowers must be 18 to 30 years old, and are graduates of either formal or non-formal schooling (including but not limited to graduates of agriculture and fishery related degrees from higher education institutions, DA and ATI-accredited programs, TESDA programs, farm schools, and secondary schools with agriculture and fishery-related courses).

On the other hand, the ANYO Loan Program offers zero interest loans for Small Farmers and Fishers (SFF) and registered Micro and Small agri-fishery Enterprises (MSEs) which may be sole proprietors, partnerships, corporations, associations and cooperatives. Eligible individual SFF borrowers may avail a maximum loanable amount of Php 300,000 while registered MSEs, depending on its size, may borrow a loan amount of up to Php 15 million (subject to approval of PLC). Loans are payable up to 5 years.

Lending conduits of the ANYO program include the Nueva Segovia Consortium of Cooperatives (NSCC), Ilocos Consolidated Cooperative Bank (ICCB) and the Sta. Cruz Savings and Development Cooperative (SACDECO).

Expanded Expanded SURE SURE COVID-**Particulars** SURE SURE Aid (LBP) AID (LBP) Corn **Rice Tariff** and Fisheries 19 Amount of Loan 70,000,000.00 114,095,000.00 209,145,000.00 62,500,000.00 Released (PhP) Ilocos Norte 21,885,000.00 13,845,000.00 12,475,000.00 Ilocos Sur 7,924,000.00 12,240,000.00 59,700,000.00 14,025,000.00 La Union 4,401,000.00 38,775,000.00 17,100,000.00 9,250,000.00 Pangasinan 15,790,000.00 63,080,000.00 118,500,000.00 26,750,000.00

Table 16. Loan released to beneficiaries.

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Below are the details of 2021 assisted credit/financial programs.

| Particulars | ANYO (Individual) | ANYO (MSE) | КАҮА | Total |
|----------------------------------|----------------------|---------------|---------------|----------------|
| Amount of Loan Released (PhP) | 133,937,320.00 | 53,600,000.00 | 10,419,500.00 | 653,696,820.00 |
| llocos Norte | 32,962,520.00 | 25,000,000.00 | 2,147,000.00 | 108,314,520.00 |
| llocos Sur | 26,804,800.00 | | 246,500.00 | 140,940,300.00 |
| La Union | 30,765,000.00 | 9,600,000.00 | 2,476,000.00 | 112,367,000.00 |
| Pangasinan | 41,045,000.00 | 18,000,000.00 | 5,550,000.00 | 288,715,000.00 |

| Particulars | SURE | SURE COVID-19 | Expanded SURE Aid (LBP) Rice Tariff | Expanded SURE AID (LBP) Corn and Fisheries |
|-----------------------------------|-------|------------------|---|--|
| Individual Borrowers (Numbers) | 7,587 | 4,504 | 13,943 | 2,500 |
| llocos Norte | 1,631 | - | 923 | 499 |
| llocos Sur | 2,309 | 704 | 3,980 | 561 |
| La Union | 489 | 1,055 | 1,140 | 370 |
| Pangasinan | 3,158 | 2,745 | 7,900 | 1,070 |

| Particulars | ANYO (Individual) | ANYO (MSE) | КАҮА | Total |
|----------------------------------|----------------------|------------|------|--------|
| Individual Borrower (Numbers) | s 1,349 | | 26 | 29,909 |
| Ilocos Nor | e 247 | | 5 | 3,305 |
| llocos Si | r 300 | | 1 | 7,855 |
| La Unic | n 361 | | 7 | 3,422 |
| Pangasina | n 417 | | 13 | 15,303 |

Annual Report

02 I MODERNIZATION

Technology & Innovation Including Digital Agriculture

Research for Development

Promotion of Quality Seeds of New Inbred Rice Varieties through Sustainable Seed Support System

A total of 7.0 has were planted of which 3 has. were devoted to inbred rice varieties during the dry season 2020 -2021 and 4.0 hectares during the wet season 2021. During the DS 2020, varieties planted were NSIC Rc222 (FS), NSIC Rc216 (FS), NSIC Rc160 (FS), and NSIC Rc222 (FS) with actual yield obtained of 2.44 t/ha, 5.01 t/ha, and 3.28t/ha, respectively. Low yield due to insufficient irrigation water at milking to maturity stage NSIC. However, Rc 160 still obtained the highest because the yield topography of the area is lower thus, more volume of water was deposited during release of irrigation water.

In WS 2021, the following varieties were planted: NSIC Rc216(FS), NSIC Rc160(FS), NSIC Rc480(FS) and NSIC Rc408(FS). Planting was delayed due to late arrival of seeds. As a result, no production obtained because rice crop suffered from drought from midtillering to maturity stage with coupled total infestation of stem borer and rice bugs.





Sustaining productivity and profitability of rice-rice-mungbean production system in irrigated areas in Dingras, Ilocos Norte

Three farmers' associations in Lanas and Barong, Dingras, Ilocos Norte successfully marketed their 61.0 tons of mungbean harvest to Nutridense Food Manufacturing Corporation through DA's market-matching activity at Php61.00/kg with gross income of P3.8M. Yield range obtained from mungbean production is from 700kg to 1,200 kg/ha with yield difference of 500kg. This implies that though mungbean is a drought resistant crop, when irrigated prior to flowering stage, yield is enhanced.

Effectiveness of Different Plant Growth Enhancers on Rice Production in Ilocos (INREC)



Based from the result on WS 2021. no significant differences were observed on the yield of rice applied with different growth enhancers. But numerically, rice crop applied with kwikgroe +SA, obtained the highest average yield of 4.19t/ha followed by SA alone, SANSKAR +SA. AMO+SA. Growmore+SA, Bioprime+SA, NEB88+SA, and the least is the rice with no fertilizer applied but made use of the indigenous fertility of the soil. This means that plant growth enhancers are added cost on rice production.

Innovative 6. Family Enterprise on Rice+ vegetables+free-range chicken farming system in Ilocos Region

The application of seaweed based plant growth enhancer along with the soil analysis rate significantly obtained the highest yield of pole sitao at 30.35 kg/21 m2 or 14.45 t/ha. This means that application of AMO enhanced the yield of pole sitao by 29% compared to farmers' practice under llocos Norte condition.

Under the IFED on free-range chicken, a total of 600 heads improved chicken were awarded to 30 recipients in 3 barangays or associations. To date, a total of 279 chicks and 4, 576 eggs have been produced in the IFED site.



Multi-Location Testing Of Hybrid Yellow Corn Under Pangasinan Condition

Pest Assessment

Results of the study showed that all varieties were found susceptible to Fall Armyworm (FAW) with significant differences at 1% level among treatments.

Results on incidence showed that V2 (NK6410) and V1 (NK6414) proportionally attained the highest incidence of 99.34% and 98.31%, respectively, which differed significantly compared to V7 (H102) and V4 (DK9919S) with proportionally lowest incidence of 41.99% and 36.15%, respectively.

Yield

In terms of grain yield per hectare, the result shows insignificant differences among all the varieties. But numerically, V4 (DK9919S) with 11.32 t/ha obtained the highest yield, followed by V6 (P3585YHR) with 10.92 t/ha, V5 P4097 YHR) with 10.71 t/ha, V3 (DK9118S) with 10.64 t/ha, V2 (NK6410) with 10.46 t/ha, V1 (NK6414) with 9.91 t/ha, V7 (H102) with 9.38 t/ha and V8 (J505) with 7.60 t/ha, respectively. Field Validation Of Growth Enhancer In Hybrid Corn Production in Pangasinan Condition



Pests Assessment

The highest population of insect pests was recorded in treatment 120-7-7 NPK/ha + PGE 5 with 4 numbers of insect pests, followed by treatments control 120-7-7 NPK/ha, 120-7-7 NPK/ha + PGE 3 and 120-7-7 NPK/ha + PGE 2 with 3 noted insect pests. Among the treatments, 120-7-7 NPK/ha + PGE 1 and 120-7-7 NPK/ha + PGE 4 obtained the lowest number of insect pests with 2 and 1 respectively. However, statistical analysis revealed that there is no significant difference among treatments.

Yield

Analysis of variance disclosed that there is no significant difference among treatment yields. However, according to numerical value, plants under treatment 120-7-7 NPK/ha + PGE 5 acquired the highest yield of 7.79 t/ha. Followed by the treatments 120-7-7 NPK/ha + PGE 4, 120-7-7 NPK/ha + PGE 2, 120-7-7 NPK/ha + PGE 3 and 120-7-7 NPK/ha + PGE 1 with 6.73 t/ha, 6.28 t/ha, 6.02 t/ha and 5.62 t/ha, respectively. Oppositely, lowest yield were recorded in controlled plants with 5.30 t/ha. This only implies that the high nutrient content of the treatment (Nitrogen - 16%, Phosphorus - 10% and Potassium -8%) promoted large and heavy corn ears which resulted to a higher yield compared to other treatments.

Management Of Fall Army Worm Using Commercial Biological Pesticides

Pests assessment

Insect pests observed during seedling were suspected army worms with a damage rating of 1 or window panes in leaves. After treatment application during seedling, suspected fall army worm were still observed in all treated corn plants except corn plants applied with synthetic pesticide (Lufenuron).

Innovative Family Enterprise Development In Green Corn Production

Pests Assessment

Insect pests observed were corn plant hoppers (Peregrinus maidis) and fall army worms (Spodoptera frugiperda). Small elongated lesions about 5-10mm in size on 1 to 3 leaves were observed in POT corn, while midsized lesions about 10 to 30 mm in size on 4 to 5 leaves were observed in POT + PGE corn.

Yield

Mean yield was higher in POT (10.25t.ha) treated corn than POT + PGE (10.11tha). However, analysis of variance disclosed no significant difference in both treatment.



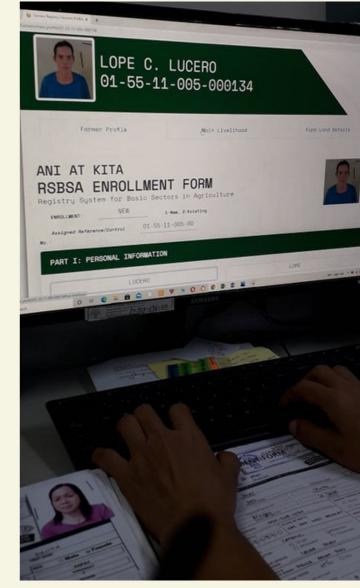


Registry System for Basic Sector in Agriculture

The DA RFO I, thorough the RSBSA-Regional Project Mananagement Office is continuously enrolling farmer profiles in the system. All farmers, farmworkers and fisherfolks, including the youth involved in farming were encouraged to enroll in the system through their respective city/municipal agriculture office. Enrolled farmers are being prioritized in availing of agriculture and fishery assistance in the form of cash or farm inputs.

The actual registration activity was conducted at the barangay level. Hired interviewers made house-to house visits and face-to-face interviews, with the barangay secretary as the focal person and immediate supervisor. The registration team at the municipality level was assigned the intermediate supervisor. The accomplished data collection forms were collated by the barangay secretary and submitted to the city/municipal planning and development coordinator.

The Project was effectively executed because of the joint effort, constant briefing and close coordination with the Agricultural Extension Workers (AEWs), Municipal/City Agriculturist, Barangay Officials and the Farmer Leaders of each municipality in the region. Along with the implementation of the project are the provision of ICT equipment, office supplies to fast-track the encoding and registration of farmers and their farm lot/s.



The RSBSA is being used by the DA-RFO I since 2021 as basis for identifying those in agricultural sectors that can avail P5,000 Rice Competitiveness Enhancement Fund-Rice Farmers Financial Assistance (RCEF-RFFA), Seed Subsidy, Cash and Food Subsidy for Marginal Farmers and Fisherfolks (CFSMFF0 and Fuel Discount Voucher.

In 2021, a total of 293,255 farmer profiles were already enrolled in the system. Out of 293,255 enrolled farmers in the FFRS, a total of 192,000 rice farmers had already received Php5,000.00 RCEF-RFFA and Intervention Monitoring Card (IMC). Moreover, 29, 399 farmers received Cash and Food Subsidy for Marginal Farmers and Fisherfolk (CFSMFF) and 12,422 farmers received Fuel Discount Voucher.

Farm Mechanization & Infrastructure Investments

In CY 2021, the DA RFO I distributed various farm production and postharvest machineries and equipment under the Banner Programs.



Table 16. Postharvest machineries and farm equipment distributed, CY 2021.

| | Units Distributed (No.) |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Machineries and Equipment | Rice | Corn | HVCDP | Organic | Total |
| Farm Production-Related Machinery and Equipment | | | | | |
| Four-Wheel Drive Tractor | 10 | 6 | | | 16 |
| Hand Tractor | 10 | | | | 10 |
| Tractor | | | 2 | | 2 |
| Multi-Cultivator | | | 60 | | 60 |
| Precision Seeder | 10 | | | | 10 |
| Hauling Truck | 4 | | | | 4 |
| Two-row Corn Planter | | 2 | | | 2 |
| Knapsack Sprayer | | | 720 | | 720 |
| Power Sprayer | | | | 15 | 15 |
| Forage Chopper | | | | 4 | 4 |
| Postharvest/processing equipment and machineries | | | | | |
| Combine Harvester | 8 | | | | 8 |
| Recirculating Dyer | 5 | | | | 5 |
| Hammer Mill | | 4 | | | 4 |
| Mechanical Corn Sheller | | 4 | | | 4 |
| Cassava Grater with Presser | | 5 | | | 5 |
| Cassava Pulverizer | | 5 | | | 5 |
| Plastic Crates | | | 5,614 | | 5,614 |
| Multi-commodity solar dryer | | | 6 | | 6 |
| Brown Rice Mill | | | | 4 | 4 |
| Multigrain Thresher | | | | 1 | 1 |
| PHilMech Soybean Cleaner/Sorter/Grader | | | | 1 | 1 |
| Soybean Grinder | | | | 1 | 1 |
| Soybean roasting machine | | | | 1 | 1 |
| Tofu Maker | | | | 1 | 1 |
| Chest Freezer | | | | 1 | 1 |
| Preparation table | | | | 1 | 1 |

Farm Mechanization & Infrastructure Investments

Under the Irrigation Networks Services, 12 Small Scale Irrigation Project (SSIPs) were constructed generating 282.4 hectares service area of 679 farmer-beneficiaries. The SSIP projects include the Small Water Impounding Projects (SWIP), Diversion Dam (DD), Solar-Powered Irrigation System (SPIS), and Solar-Powered Fertigation System (SPFS).



Climate Change Adaptation & Mitigation Measures

Disaster Risk Reduction & Management (DRRM)

The DA RFO I continuously strengthens the Regional and Provincial Disaster Risk Reduction and Management Operations Center (R/PDRRMOpCen) implemented continuing projects on Typhoon Ompong rehabilitation/enhancement of Small Scale Irrigation Projects (SSIPs) and infrastructure facilities in the region.

The Operations Center serves as coordinating hub in the institutionalization of appropriate mechanisms and structures for disaster prevention and mitigation, preparedness, response, and rehabilitation and recovery.

As part of strengthening the R/PDRRM OPCen, a training on damage assessment and reporting system was conducted though virtual platform. The training was participated by the counterpart Agricultural Extension Workers in the Provincial, City and Municipal LGUs.

Under the rehabilitation and recovery thematic area, the DA RFO I implemented continuing projects on Typhoon Ompong rehabilitation/ enhancement of Small Scale Irrigation Projects (SSIPs) and infrastructure facilities funded in 2020. Likewise, the region implements the rehabilitation and recovery projects on ASF, Typhoon Ulysses and Severe Tropical Storm Maring affected farmers, fisherfolk and infrastructures.

A total of PhP513.69 Million was allotted for the said rehabilitation and recovery interventions in 2020 and 2021.





Breakdown of the rehabilitation and recovery interventions in physical and financial are Shown in Table 17 and Table 18.

| Fund Source | Calamity | Rehabilitation and Recovery | Physical | al Physical Physical | | l Remarks | |
|-------------|-----------------------------------|---|-----------|----------------------|-----|--|--|
| | Calality | Interventions | Target | Accomp | % | Kennarks | |
| 2020 | | | | | | | |
| NDRRMF | TY Ompong | Rehabilitation of irrigation and infrastructure facilities | | | | | |
| NDRRMF | TY Ompong | Rehabilitation/Enhancement of DA offices and buildings (No.) | 8 | 3 | 38 | 3 units on-going, 1 unit terminated and 1 project cancelled | |
| NDRRMF | TY Ompong | Rehabilitation/Enhancement of Diversion Dam (No.) | 25 | 25 | 100 | | |
| NDRRMF | TY Ompong | Rehabilitation/Enhancement of SWIP (No.) | 13 | 12 | 92 | 1 unit on-going | |
| NDRRMF | TY Ompong | Rehabilitation of production and post harvest facilities (No.) | 20 | 9 | 45 | 8 units on-going, 1 unit suspended and 1 unit cancelled | |
| 2021 | | | | | | | |
| QRF | ASF Indemnification | Distribution of cash assistance | | | | | |
| QRF | ASF Indemnification | Animals Indemnified (No.) | 6,457 | 6,418 | 99 | | |
| QRF | ASF Indemnification | Beneficiaries (No.) | 1,147 | 1,129 | 98 | | |
| QRF | ASF Test Kits | Distribution of Convection Polymerase Chain Reaction (cPCR) (No.) | 150 | 150 | 100 | | |
| QRF | TY Ulysses | Production Support Services | | | | | |
| QRF | TY Ulysses | Provision of assorted vegetable seeds (Kg) | 1,000 | - | - | | |
| QRF | TY Ulysses | Provision of GM hybrid yellow corn (Bags) | 1,000 | - | - | | |
| QRF | TY Ulysses | Livelihood assistance programs (cattle, chicken, mallard duck) (Heads) | 5,230 | 5,230 | 100 | | |
| QRF | TY Ulysses | Provision of various veterinatry drugs (Doses) | 6,720 | 6,720 | 100 | | |
| QRF | ASF Sentenelling/ Repopulation | Production Support Services | | | | | |
| QRF | ASF Sentenelling/ Repopulation | Re-stocking of swine | | | | | |
| QRF | ASF Sentenelling/ Repopulation | Heads distributed (No.) | 3,600 | 585 | 16 | | |
| QRF | ASF Sentenelling/ Repopulation | Provision of feeds | | | | | |
| QRF | ASF Sentenelling/ Repopulation | Volume of feeds distributed (Bags) | 15,600 | 2,310 | 15 | | |
| QRF | ASF Sentenelling/ Repopulation | Provision of drugs and biologics | | | | | |
| QRF | ASF Sentenelling/ Repopulation | Doses provided (No.) | 85,040 | 85,040 | 100 | | |
| QRF | TY Maring 1st tranche | Production Support Services | | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of GM hybrid yellow corn (Bags) | 3,901 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of assorted vegetables (Kg) | 456 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of onion seeds (Kg) | 449 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of animals (Heads) | 12,010 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of various veterinary drugs (Doses) | 102,240 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of animal feeds (Bags) | 598 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring 1st tranche | Provision of fingerlings (Pieces) | 2,001,000 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Production Support Services | | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Provision of organic and bio-fertilizer (liters, bottles, packs, bags) | 158,013 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Provision of hybrid corn seeds | 2,000 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Provision of assorted vegetable seeds (Kg) | 1,000 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Provision of animals (Heads) | 405 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Provision of veterinary drugs | 744 | | | On-going procurement; for completion in 2022 | |
| QRF | TY Maring - 2nd tranche | Rehabilitation/Improvement of Small Scale Irrigation Projects (No.) | 18 | | | On-going procurement; for completion in 2022 | |

Table 17. Rehabilitation and recovery interventions, CY 2021.

| Fund Source | Calamity | Rehabilitation and Recovery Interventions | Allocation (PhP) | Obligation (PhP) | Oblig ation (PhP) % | Disbursement (PhP) | Disbur semen t (PhP) % |
|----------------|-----------------------------------|---|------------------|---------------------|------------------------------|-----------------------|---------------------------------|
| 2020 | | | 200,000,000. | 136,994,356 | 68.50 | 86,342,930. | 63.03 |
| NDRRMF | TY Ompong | Rehabilitation of irrigation and infrastructure facilities | 200,000,000 | 136,994,356 | 68.50 | 86,342,930 | 63.03 |
| 2021 | | | 313,685,490. | 310,456,707 | 592.26 | 91,525,536 | 29.48 |
| QRF | ASF Indemnification | Distribution of cash assistance | 41,735,000 | 41,735,000. | 100.00 | 41,445,750 | 99.31 |
| QRF | ASF Test Kits | Distribution of Convection Polymerase Chain Reaction (CPCR) | 9,450,000 | 9,450,000 | 100.00 | 9,355,750 | 99.00 |
| QRF | TY Ulysses | Production Support Services | 22,000,000 | 21,298,679 | 96.81 | 13,757,641 | 64.59 |
| QRF | ASF Sentenelling/ Repopulation | Production Support Services | 60,000,000 | 59,976,900. | 99.96 | 21,466,395 | 35.79 |
| TOTAL | TOTAL | | 513,685,490.00 | 447,451,063.00 | 87.11 | 177,868,466.00 | 39.75 |

Table 18. Rehabilitation and recovery interventions, CY 2021.

Adaptation & Mitigation Initiatives in Agriculture (AMIA)

In 2021, the AMIA Program continued the provision of production support services and conduct of trainings and training-related events such as entrepreneurial & value-adding trainings, meetings/dialogue with AMIA farmer-cooperators, and Focus Group Discussion (FGD) to the existing AMIA villages. Four (4) of the AMIA villages are the newly established sites in Binalonan, Pangasinan; City of San Fernando, La Union, Alilem, Ilocos Sur, and Marcos, Ilocos Norte. Interventions provided are shown in Table 19.

| Programs/Projects/Activities Distributed | Programs/Projects/Activities Distributed | | |
|--|---|--|--|
| Production Support Services | | | |
| Distribution of animals | 1,302 heads of free-range chicken | | |
| Production seeds and planting materials | 950 kg of soybeans 350 pcs rambutan 450 pcs mango | | |
| Distribution of other production inputs | 131 gallons of molasses225 packs of foliar fertilizer | | |
| Distribution of farm-production and processing equipment | • 3 sets of mushroom start-up kit (3 units of autoclave sterilizer, 3 units fabricated inoculation chamber, 18 bottles of mushroom spawn, 9 units manual mushroom bagger, 6 units steel drum, 6 bags cotton, 6 weighing scale, 300 pcs PP bags, 12 units gas lamp, 12 unit PVC pipe rings, 6 boxes rubber band, 6 stainless steel strainer, 6 big basin, 3 aluminum casserole and 3 stainless steel ladle.) | | |
| | 120 pcs of plastic drums 80 rolls of poly-net 100 pcs of plastic crates 48 units of knapsack sprayers | | |

Table 19. AMIA interventions, CY 2021.

Meanwhile, four (4) Climate-Resistant Agriculture (CRA) practices were introduced to the established villages such as crop-livestock integration, vermicomposting, soybean production (drought resistant crop) and mushroom production.

I. Mushroom Production

Oyster mushroom production is one of the adopted CRA practices by the AMIA Villages in Sibsibbu, San Emilio, Ilocos Sur, Madupayas, Badoc, Ilocos Norte & San Jose, Anda, Pangasinan. This livelihood and business enterprise serves as source of additional income for the members of the associations.

The farmer-cooperators of the said AMIA villages participated in training on oyster mushroom production and awarded them with a mushroom startup kit to kick off their production.

From August 4 to October 27, 2021, Sibsibbu Farmers Association harvested 13 kg mushroom from the 300 fruiting bags and generated an income of Php2,600.00.





3. Native Pig Production

During the outbreak of African Swine Fever (ASF) in 2021, the AMIA farmer-cooperators raised native pigs as the source of stock and meat for the locality. The AMIA villages that adopted the native pig production are located in Badoc, llocos Norte; Luna, La Union; & Sison, Pangasinan.

2. Free-range Chicken Production

The free-range chicken production, specifically a DeKalb brown chicken, is also adopted by the AMIA villagers in the region. The said layer-type chicken can produce more or less 300 pieces of eggs annually, generating an average net income of PhP 2,000 per month.



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4. Vermicomposting

The vermicomposting activity was introduced to AMIA villagers in Badoc, Ilocos Norte, San Emilio, Ilocos Sur, and Sison and Binalonan, Pangasinan. With the price hike of commercial fertilizer, the use of vermicast and vermicompost are recommended to minimize production cost while maintaining soil health.

According to Mr. George Oli, Vice President of the CaLia Gawis Farmers' Association Inc, the use of vermicast decreases their input cost by up to 25% on vegetable garden production of eggplant, sili and okra.





5. Value-adding/Product Development

The Lancuas AMIA Integrated Farmers Association Inc., initiated value adding activity on turmeric powder, salabat and chili powder from their raw products. With the help of the AMIA program, the developed products are now registered under the Department of Trade and Industry (DTI) and marketed regionwide.

The Anda Mushroom Growers and Farmers Association in Anda, Pangasinan was provided with different interventions by the AMIA Program and partner institutions (DOST and DTI) for mango vinegar production. An average of 24 bottles were sold per week generating an additional income of Php1,400 a month.

6. Planting of Drought-Tolerant Varieties

In collaboration with the Research Division, Ms. Melinda G. Calumpit, Project Leader of Soybean Production in the region, advocated the planting of soybean as a drought-tolerant crop to the AMIA villages. Seed materials were provided to AMIA farmer-cooperators and planted during the dry season.

Soybean requires a small amount of irrigation due to its ability to extend its root to engulf the groundwater in the soil. The crop has also the ability to produce Nitrogen with the use of Nitrogen-fixing bacteria residing in its roots.



Advocacy, Communication and Social Mobilization



The DA-RFO 1 AMIA Program's official social media account on Facebook is the AMIA Ilocos, which can be found at https://www.facebook.com/climatechange.da.ilocos. The FB page has 100 new likes or an increase of 13.8% from November 31 to December 31 of 2021. It has a total of 823 followers, with 72 contents posted as of December 31, 2021, from which 45 are original contents while 27 are reposted from different accounts.

In celebration of the Climate Change Consciousness (CCC) Week on November 22-26, 2021, the DA-RFO 1 AMIA team was hailed as the Grand Winner for participating in the TikTok contest entitled "Can you CRank the AMIA Challenge?". The competition aimed to popularize the climate-resilient agriculture practices the farmers utilize to combat the adverse effects of climate change in their area. Also, highlighted the impacts of climate change and how the CRA practices helped them fare with their farming operations. The TikTok entry was posted on the FB page of AMIA.

Climate Information Services (CIS)

To provide timely, relevant, and site-specific climate information, the climate-and weatherinformed farm and fishing advisory was published on the AMIA Ilocos Facebook page. The CIS is one of the support services of the Department of Agriculture to farmers' and fisherfolks in preparation and planning ahead of time for suited and resilient farm activities amidst the effects of changing climate and weather.

There are three (3) kinds of advisory released through CIS, namely:

- 1. Regional/Provincial Seasonal Climate Outlook and Advisory (R/PSCOA) These are either on a regional or provincial level that covers a 6 month period.
- 2. Farm Weather Outlook Advisory (FWOA) This advisory is on the municipal level that covers a 10-day weather forecast.
- 3. Special Weather Outlook and Advisory—Focuses on areas that are affected by typhoons.

From January 1 to December 31, 2022, there were eight (8) RSCOA, four (4) PSCOA, one (1) Special FWOA and one (1) ten-day FWOA were published on the AMIA llocos Fb page.

Food Safety & Regulations

Food Safety

In 2021, the DA RFO I implemented food safety interventions in the value chain system to provide safe and quality food for the consumers.

Assistance to Philippine Good Agricultural Practices (PhilGAP) Certification

At the farm level, the region assisted the farmer associations and cooperatives learning sites and **TESDA-accredited** agricultural farms for the application of PhilGAP Certification. Seven (7) PhilGAP Certified associations/ cooperatives in the provinces of Pangasinan and Ilocos Sur are suppliers of Jollibee Food Corporation (JFC).



Implementation of PhilTrace System in Region I

The Ilocos Region was one of the pilot areas in the implementation of Philippine Traceability (PhilTrace) System, a bar coding system initiated by the Bureau of Plant Inductry (BPI) for the PhilGAP certified farms and products.

Bar-coded stickers were approved and printed by the BPI for distribution to PhilGAP certified farm owners.

The system implementation in the region was successfully launched in the Province of Pangasinan on September 24, 2021 at Quintela's Farm (Papaya PhilGAP certified producers) in Brgy. Vacante, Alcala, Pangasinan and at Danzil's Farm (Eggplant PhilGAP certified producer) in Brgy. San Pedro Apartado, Alcala, Pangasinan. The PhilGAP Certified Papaya fruits were sold for PhP10.00/piece or up to 42-67% higher compared to the prevailing price in bagsakan market which is PhP6.00-PhP7.00. The said farms are associated with the Alcala Onion Growers Multi-Purpose Cooperative – one of the suppliers of the Jollibee Food Corporations.

Creation of the DA-RFO I - Regional Food Safety Unit (RFSU)

In response to the DA-Memorandum Order No. 11, Series of 2021, the DA RFO1 issued the Regional Special Order No. 030, Series of 2021 for the Creation of the Regional Food Safety Unit under the direct supervision of the Regional Executive Director through the Regional Technical Director for Research and Regulations.

Establishment of Pesticide Residue Testing Laboratory

The proposed project entitled "Establishment of Pesticide Residue Testing Laboratory" was approved by DA Secretary William D. Dar. The said project will be established near the trading post in the municipalities of Santa Catalina and Santa Maria, Ilocos Sur with an amount of 6.7 Million Pesos per site. All fruits and vegetables shall undergo testing using the Rapid Testing Kit of the National Crop Protection Center (NCPC). It is stated in the proposal that the products found negative to pesticide residue will be provided with stickers as identification. Vegetables found contaminated with pesticides will not be allowed to be sold in the market.



Speaking Engagements related to Food Safety

The staff of Food Safety Unit were invited as resource persons/learning service providers on several trainings. discussing food safety related topics such as GAP, HALAL, Food Processing, and Organic Farming conducted by the DA RFO1, ATI and LGUs in the region.

Regulations

Under Regulations, the Regulatory Division of DA RFO I implemented quality control and inspection of livestock and poultry feeds and feed establishments, and animal facilities.

The following were accomplished in 2021:

- Conducted monitoring and inspection of 918 feed establishments and 92 animal facilities
- Collected 2,778 feed samples from different feed establishments for laboratory analysis to test the quality assurance of feed and feed ingredients being sold in the market
- Collected 473 corn samples grits, cracked and whole and submitted for aflatoxin analysis.

Animal Disease Surveillance

• The Division implemented the Bantay African Swine Fever (ASF) sa Barangay Program activities:

Depopulation Activities

- The 1-7-10 protocol was undertaken to manage and control ASF from spreading in the affected municipalities in Ilocos Sur and Ilocos Norte. The 1-7-10 protocol means the LGU shall cull all pigs within one kilometer radius form the infected farm, while the movement of pork and pork products within the 7- . The Division also facilitated the kilometer radius be limited. The DA and LGU will work together to conduct surveillance and monitoring within the 10-kilometer radius of the ASF-affected areas.
- Distributed 150 Conventional Polymerase Chain Reaction (CPCR) ASF Detection Test Kits inclusive of • On the other hand, regular CPCR Reader/ analyzers to the affected areas.



Sentineling Program Activities

- Identified beneficiaries in the 51 ASF-affected municipalities received 3 weaners, 1 bag prestarter, 3 bags starter, 3 bags growers and 3 bags finisher each.
- conduct of the consultativemeetings such as Roll-Out on Swine Repopulation, Recovery and Rehabilitation Program with different sectors.
- monitoring of the incidences of plant pests in the region for early detection of pest and for the improvement of pest management.
- Early detection of pest and for the improvement of pest management.
- Trainings and related-training Conducted
- Conducted Consultative Meetings such as Roll Out on Swine Repopulation, Recovery and Rehabilitation Program with different sectors

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03 INDUSTRIALIZATION

Agri-Industrial Business Corridors (ABCs)

The project entitled "Strengthening the Agro-Industrial Incubation Platform in Region 1 through Crop-Livestock Diversification" funded under the Inclusive Agribusiness Program envisions the PREC-Sual, Pangasinan to be a leading Agribusiness Incubation Hub that drives agri-innovations and science-based technologies for economic growth, job generation and food security. It shall initiate sustainable innovations that will boost diverse agroindustries for economic growth and well-being of smallhold farmers in the agri-fishery sector. It has a total fund allocation of PhP 234,701,000 for the implementation of two (2) major project components - Establishment of Sustainable Agriculture & Fishery Enterprise (SAFE) Incubation Hub and Establishment of Bamboo Rural Enterprise Development (BREAD) Incubation Project.

This project aimed to establish an incubation hub to serve as knowledge and learning platform for agroindustries from production, processing and marketing, create new employment and income opportunities to smallhold farmers, showcase holistic bio-diversified farming system for food security and environmental protection with the participation of various stakeholders (out of school youth, students, agri-preneurs, teachers etc.), have an avenue that will facilitate transfer of relevant result of researches on crop-livestock diversification, product development, value adding and technology transfer and to showcase the station as state-of-the art livestock breeding center.

When fully established, the featured activities in the incubation hub shall include agribusiness activities such as livestock production, poultry production (both meat and egg type), high value commercial crops production, root crop production, coconut production, mushroom production, and tilapia/bangus production as well as agro-industrial activities such as crop and meat processing, feed processing, organic probiotic production for crops and livestock, salted egg processing and fish processing and value-adding.



Safe Incubation Hub

- Two (2) SAFE incubation hubs will be established in two sites one in PREC-Sual, Pangasinan and another in Ilocos Sur Polytechnic State College (ISPSC), Santa Maria, Ilocos Sur.
- The incubation hub in PREC-Sual, Pangasinan, covering an area of 149 hectares, shall serve as one-stop shop in providing shared facilities and technical services for our stakeholders in the agri-fishery sector.
- Buildings, other structures, and water supply systems are to be constructed in the various zones of the incubation hub such as multi-purpose facility, knowledge center with dormitory, guest and staff houses, incubatees' office and dorms, information center and product display area, semen processing center, open techno-demo facility, tissue culture laboratory, greenhouses with hydroponics and nursery, livestock and poultry housing, feed mill facility, perimeter fence small water impounding projects, small farm reservoir, and spring development project.
- In ISPSC, an Agri-Incubation and Food Hub shall be established to provide technical services to agri-entrepreneurs venturing on poultry, swine and vegetable production and food processors of bagnet, cane vinegar, and other products from sugar cane in the municipality of Santa Maria and neighboring towns.



Initial Accomplishment

Construction of some of the facilities of incubation hub in PREC, Sual, Pangasinan is on-going:

- The Kaigorotan iti Pangasinan (KAIPA) with 141 members was assisted in its member's application to the RSBSA and for their registration to the Securities and Exchange Commission (SEC). Seeds and seedling trays were provided to 35 KAIPA members, 22 males and 13 females, to support their agribusiness involving vegetable production.
- Procurement and/or bidding activities for these projects were done and the structures are to be completed in 2022.

Bamboo Rural Enterprise Development

• Bamboo nurseries and a bamboo processing center shall be established in PREC-Sual, Pangasinan. This will cater the need of interested bamboo entrepreneurs for bamboo propagules and capacity-building on bamboo processing and/or woodcrafting.



Initial Accomplishment

- Procurement and/or bidding activities for these projects are done and the structures are to be completed in 2022.
- A total of 50 individuals, 27 males and 23 females, were assisted thru training seminars and provision of bamboo planting materials. The Baito IP's Farmers' Association Inc. and Mabilay Danum Farmers' Irrigators Association signified their interest to engage in bamboo agribusiness. They were linked to the Hundred Island E-Bamboo Factory (HIEF) for technical assistance on improved production practices and established partnership on the production and sale of raw materials, particularly bamboo slats, to be bought by HIEF management for their engineered bamboo crafts.
- An orientation-briefing of DA-RFO 1 personnel on Agribusiness Incubation and benchmarking at DMMMSU-Technology Business Incubation Center was conducted in Rosario and Sto. Tomas, La Union.
- Hauling trucks were procured to provide support to agri-entrepreneurs in hauling their produce to the market.

Global Trade Export Development & Promotion

Conduct of Trade Fair

The DA RFO I, through the Agribusiness and Marketing Assistance Division (AMAD), in coordination with the DTI, DOST, Provincial LGU of Pangasinan, and the Municipal LGU Calasiao, conducted the Agribusiness Support for Promotion and Investment in Regional Exposition (ASPIRE) program on November 18-20, 2021 at the Robinsons Place, Calasiao, Pangasinan.

The ASPIRE program specifically aims to promote regional priority commodities, and agrifishery based products to showcase strong backward linkages with the farmers and fisherfolk; equip/capacitate men and women farmers/fisherfolks and MSMEs to optimize market opportunities; promote and advocate investment opportunities to encourage agribusiness investments; and build strong partnerships and convergence with other government and private sector industry groups.



Kadiwa ni Ani at Kita

The DA RFO I strengthened the operations of KADIWA ni Ani at Kita Projects in Ilocos Region to facilitate mobilization the fast of food commodities in the region as well as in the NCR through the different market modalities. In partnership with the LGUs, gasoline companies and other institutional partners, various KADIWA modalities were operated to ensure the availability of fresh, safe and affordable agri-fishery products for consumers during the time of pandemic. Through this project, farmers /fisherfolkproducers were linked with various institutional buyers.

The KADIWA ni Ani at Kita is a market system which aims to make accessible and available quality products at affordable prices to the consumers. This system ensures sustainable additional market for small farmer's and fisherfolks produce/catch to increase increase household income.



a. Kadiwa Agri-Kart

The DA RFO I supported two (2) Kadiwa Agri-Kart beneficiaries in La Union and Pangasinan.

The Province of La Union Vegetable Growers Association Inc., project operator of the KADIWA Agri-kart at CSI City Mall, Biday, City of San Fernando, La Union, generated total sales of Php. 1,146,733.00 from January to December 2021 with total volume sold of 7,566.84 kgs of rice, assorted vegetables and fruits benefiting over 8,126 households in the province.

On the other hand, the Samahang Itinataguyod ang Kaunlaran ng Agri-Turismo sa Rehiyon Uno (I-SIKAT) operated the Kadiwa Agri-Kart in CSI Lucao, Dagfupan City, Pangasinan generating a total sales of Php963,340.00 from June to December 2021. A total volume 4,084.56kgs of rice, fish, meat and assorted vegetables and fruits was sold serving 4,021 households in the province.

b. Kadiwa Express

The DA RFO I facilitated the transport of vegetable products of the Alcala Livestock and Cassava Growers Association Inc. of Alcala, Pangasinan to Taguig City, Manila through its Kadiwa Express Program wherein over 6,844.17 kgs of assorted vegetables products were sold generating a total sales of Php366,676.85 with 15 institutional buyers catered.



c. Kadiwa Retail Selling



Postharvest, Processing, Logistics and Marketing Support



The DA RFO I provided marketing support to Farmers and Fisherfolk Cooperatives and Association (FCA) and Community-based Organizations (CBOs) through the DA-Enhanced KADIWA Financial Grant Assistance Program. This program aims to enhance the capacities of FCAs and CBOs to become reliable food commodity suppliers and sustainably operate the Kadiwa Retail Selling stores.

Packages of financial grants is as follows:

| GRANT TYPE | PURPOSE OF GRANT |
|---|--|
| Type A: Grant for FCA Assemblers | To finance value adding activities as assemblers of farmers' produce such as procurement of produce, aggregation and pre-processing (cleaning, sorting, packing and drying). The grant can be used for any of the following: a) seed fund for procuring farmers/fishers' produce, b) cost of packing facility, machinery or equipment needed e.g. storing shed, delivery vehicle. |
| Type B: Grant for FCA Consolidators | To finance value adding activities as consolidators and distributors of farmers/fishers' produce to consumer markets such as assembly, storage, transport, delivery of produce/products to distribution centers of buyers. The grant can be sued for a) purchase of delivery vehicle, machinery or equipment, orb) construction or rehabilitation of storage facilities. |
| Type C: Grant for KADIWA CBO retailers | To finance the start-up cost requirements of CBOs in operating and maintaining Kadiwa retails markets (palengke) or retail stores. The grant can be used for a) procurement of store facility/equipment such as stalls, weighing scales, chiller, crates, shelves, etc., b) construction of retail store structure/storage room, etc. |

Market-Related Information Activities



- Establishment of the Farmers and Fisherfolk Enterprise Development Information System (FFEDIS). The FFEDIS is a web-based information system designed to assist the government in formulating plans and programs on enterprise development, and to enable the producers groups, the private sector, and the LGUs and potential donors to respond to the needs of the local and world markets and in generating.
- Conduct of weekly monitoring & blasting of prices (farmgate, wholesale and retail) of basic agri-commodities in selected major markets in the region, as follows: Pangasinan-29 municipalities; La Union-16 municipalities, Ilocos Sur-18 municipalities; and Ilocos Norte-15 municipalities and and 1 trading center (PATC) in the region.

04 I PROFESSIONALIZATION

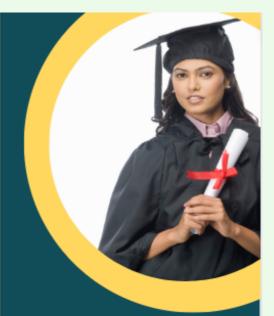
Agriculture Career System

The DA RFO I continued to support the implementation of Agricultural Competitiveness Enhancement Fund – Grant-in-Aid in Higher Education Program (ACEF-GIAHEP) Scholarship Program.

The ACEF-GIAHEP aims to contribute to the development of agriculture and fisheries by increasing the number of graduates in higher education who are trained in the scientific habit of thought, entrepreneurial skills and technical competencies in the areas of agriculture, forestry, fisheries, veterinary medicine education and related agricultural education programs.

From 2016 to 2021, 885 studentscholars were assisted in their higher education program from the various State Colleges and Universities in Region I.

Below is the disaggregation of assisted scholars by batch and by SUC.



ENHANCED IMPLEMENTING GUIDELINES OF ACEF-GACEF-GIAHEP AS PER CHED-DA FMC NO. 2017-7



Education & Training, Agribusiness Management

The DA RFO I conducted various trainings and training-related events with focus on helping farmers learn and improve their knowledge and skills in entrepreneurship and farm business management.

The AMAD conducted four (4) batches of Business Plan Preparation and Business Management Training. This activity was conducted to train and equip farmers' associations and cooperatives in the preparation of business plan and capacitate them in the management of their enterprises as to organization, financial, operation, marketing and sustainability aspects.

Under the Corn Banner Program, the following trainings were conducted:

- 4 batches of entrepreneurial training with a total of 130 participants
- 4 batches of Cassava Livelihood Training with a total of 139 participants
- 10 batches of Farmer Field School on Corn Production with a total of 282 participants
- 2 batches of Good Agricultural Practices (GAP) Training for Corn with a total of 79 participants

- 1 batch of Good Agricultural Practices (GAP) Training for Cassava with 30 participants
- 2 batches of corn Cluster Development Training with 84 participants
- 2 batches of Sorghum Production Training with 88 participants

The Program also conducted education/extension-related events such as:

- Establishment of technology demonstrations on

- 12 sites for corn techno-demo
 - sites for sorghum techno-demo
 - 2 sites for corn model farm
 - 1 cassava model farm in Pangasinan with a total area of 20 hectares

Moreover, the HVCDP conducted 22 Package of Technology Trainings (POT) for Garlic, Onion, Coffee, Cacao, mango, Vegetable, Calamansi IPM cum GAP. Rehabilitation of old and unproductive mango trees were also funded and implemented by the Program.



Youth Engagement

Kapital Access for Young Agripreneurs (KAYA) Loan Program

The DA RFO I assisted twenty (20) youth-awardees in the virtual briefing on KAYA Loan Program guidelines with the ACPC. The program seeks to entice and empower the youth to venture into agriculture as startup business owners, the Program offers loan window for young people at 0% interest payable in 5 years.



1st Regional Youth Summit

The region conducted the 1st Regional Youth Summit on December 28, 2021 which was attended by 72 youth farmer-awardees of KAYA from Pangasinan, La Union, llocos Sur, and llocos Norte. All the awardees presented the status of their enterprises and challenges encountered during the implementation of their awards.



Young Farmers Challenge Fund: Kabataang Agribiz Competitive Grant Assistance Program (YFCF:KACGAP)

A one-day Chickahan was conducted with the Young Farmers Challenge Fund: Kabataang Agribiz Competitive Grant Assistance Program (YFCF:KACGAP) awardees" with 20 awardee-participants. The ATI discussed the process and procedure on the application of the Learning Site for Agriculture. The youth were encourage to apply as recipient of the Learning Site for Agriculture.



Investment and Credit Forum, and Capacity Building Activities

Twenty (20) youths participated in the Agri-Investment Opportunities and Credit Window Forum conducted by the DA RFO I.

- Capacity buildings conducted were:
 - Business Plan Preparation and Business Management
 - Product Packaging and Labelling
 - Entrepreneurial training

Women Engagement - Gender & Development (GAD)



Client-focused activities

• Conducted livelihood trainings on vegetable, mushroom, free-range chicken an rabbit meat production benefitting 14 women/farmers' associations with 294 female and 53 male beneficiaries

Capability-building activities

- Conducted the Kadiwa ni Ani at Kita Trade Fair during the National Women's Month Celebration participated by DA Employees and 19 exhibitors from La Union and Pangasinan
- Spearheaded the conduct of CY 2021 Search for Outstanding Rural Women

Organization-focused activities

- Celebrated 2021 national Women's Month
- Conducted a virtual seminar on the Impact of Campaign to End Violence Against Women cum Awareness on Data Privacy Rights I support to Violence Against Women Campaign (VAWC)

Ease of Doing Business & Transparent Procurement

Registration & Licensing

The Regulatory Division evaluated, inspected and endorsed 1,127 applications on the accreditation and registration of poultry and livestock carriers, feed establishments, livestock, poultry and by-products handlers, animal welfare facilities, show veterinarians/organizers and GAP farms in the region.

Table 20. Registration and licensing evaluated, inspected and endorsed, Regulatory Division.

| Activity | Application | No. of applicants | | | Approving |
|--|--------------------------------------|-------------------|-------|-------|--|
| | | New | Renew | Total | Entity |
| Poultry and Livestock Transport Carrier | Accreditation | 121 | 126 | 247 | Bureau of Animal Industry (BAI) |
| Feed Establishments | Registration | 36 | 385 | 421 | BAI Central Office |
| Livestock, Poultry and By-Products Handler's | Registration Certificate | 182 | 114 | 296 | BAI |
| Animal Welfare Facilities | Registration and Accreditation | 42 | 32 | 74 | BAI |
| Show Veterinarians/ Show Organizer | Accreditation | 5 | | 5 | BAI |
| GAP Farms | Certification | 83 | | 83 | GAP Certification Committee |
| TOTAL | | 121 | | 1,126 | |

ISO Standards

The DA RFO-I facilitated continuous implementation, maintenance and continual improvement of ISO 9001:2015 ISO 9001:2015 or Quality Management System (QMS) and ISO 14001:2015 or Integrated Management System (IMS).

This is a proof that the agency meets the requirements for a quality management system in demonstrating the ability to consistently provide products and services that meet customer and applicants' statutory and regulatory requirement conforming with the international standards.

The DA RFO I maintained the ISO 9001:2015 Certification while the Regional Feed Chemical Analysis Laboratory of the Integrated Laboratories Division of DA RFO-I sustained its two ISO Certificates—the ISO 9001:2015 and to ISO 14001:2015.

| | CERTIFICATIO |
|---|---|
| Certificate of Registration | Appendix to Certificate |
| This is to certify that | Department of Agriculture – Regional Field Office I |
| Department of Agriculture – Regional Field Office I | Certificate No : CIP/5359/22/11/1069 |
| Aguila Road, Barangay Sevilla, City of San Fernando, La Union, 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 agricultural policies, and programs related to technical, regulatory and support services on rice, corn, high-value crops, livestock and organic agriculture programs. | Pangasinan Research and Experiment Center (PREC) Barangay Tebag East, Sta. Barbara, Pangasinan, Philippines Ilocos Norte Research and Experiment Center (INREC) MMSU Compound, Barangay Tabug, Batac City, Ilocos Norte Ilocos Integrated Agricultural Research Center (ILIARC) DMMMSU Compound, Barangay Sapilang, Bacnotan, La Union, Philippine |
| Certificate No: CIP/5359/22/11/1069 Joselito C. Soler Issue Date: 17 February 2023 President & Managing Director Valid Unit: 16 February 2023 | |
| | Javefile C. Safer Freideni & Managing Director |
| Centration Hemational Hispanes (Inc.) P Your Cama Emilia Mulaga as Mague Avanue, Ongos Center Pasa Dry, Meha Manka, Hispanes (Inc), Angola Sana and A Manara Mathanana ana ana angola Avanue, Ongos Center Pasa Dry, Meha Manka, Hispanes (Inc), Angola Avana, Angola | Centration interviewold hispanes w. en roux come Chais Sunge San Majue Avenue. Orgas Center Rosg Chy, Metro Manka Philippines (a0) www.centration/contentrations.pr Page 2 of |

Strategic Communications

At the height of the pandemic, the Regional Agriculture and Fisheries Information Section (RAFIS) never cease to do its duties and responsibilities if only to disseminate agriculture and fisheries information and developmental programs and projects.

BROADCAST

The DA-RAFIS was able to conduct radio programs in five leading commercial radio stations in the region efficiently managed by the 2 Farmcasters Provincial and 1 Regional Farmcaster. These radio stations are: DZEA in Laoag City, DWRS in Vigan City, DZNL in San Fernando City, La Union and DZWM in Alaminos City and Aksyon Radyo in Dagupan City in Pangasinan, respectively. Conducted three times a week, 30 minutes per day, and dubbed as the "Oras ti Mannalon" radio program, it then served as the mouthpiece of DA in reaching the farmers, fishers, ruralfolks and other agricultural stakeholders on agriupdates and technologies on the four major banner programs. Topics such as but not limited to technology production on rice, corn, value commercial crops. high livestock as well as organic agriculture were discussed in the program giving up-to-date agricultural information and development.

Maximizing the use of social media as a vital tool to disseminate agridevelopment programs and RAFIS likewise projects, has conducted the Agri-Damdamag llocos livestreaming once a month. Anchored by Ms. Roley Ann Pagal and Ms. Pearl Lovedyne Dacuag, the news program provides an up-todate information to the viewers using the RAFIS FB page and account.



PRINT

To address the needs of agri-stakeholders on updated agricultural information, IEC reading materials produced by RAFIS are distributed among the Local Government Units, farmers and other stakeholders.

Examples of these are techno-guides on rice and corn production as well as high value crops production in different dialects (English, Tagalog and Ilokano) were re-produced to update farmers with the recent technologies/breakthroughs in these commodities. Likewise, production guide for native pig, poultry (chicken and ducks) and rabies were also produced and distributed in the region through the Provincial and Municipal Agricultures Office (MAOs) and to walk-in clients.

Strategic Communications

Further, regular press and photo releases were prepared and published at the RAFIS FB page and account. A total of 124 press, photo releases and infographic materials were published that provides an updates on the programs/projects/activities as well as success stories of the farmer and fisherfolk beneficiaries in the region.

Likewise, the 21st volume of the Damag-Agri, the official newsletter of DA-RFO I published every quarter with 4 issues respectively were prepared featuring the documentation of DA's activities, success stories of farmers and different stakeholders as well as other-agri-related news and information.

As part of the celebration of November as Rice Awareness Month, several promotion strategies and campaign materials were produced such as tarpaulins, flyers, and t-shirts.

Relative to the celebration, RAFIS also launched the Pinaka-RICE FB Challenge that aims to promote the consumption of rice and making the general public become more responsible in eating healthy and nutritious food.

The Challenge featured the unique and nutritional rice dish as challengers are required to cook and take pictures of the dish and then eventually posted the same to their FB accounts which drove interests to among the challengers. There were a total of 17 challengers who have joined the said contest.

To strengthen the communication activities in among the DA-RFO I employees, RAFIS has also conducted a 4-day training on effective written communication participated in by around 34 employees of the DA in Ilocos.

RAFIS also play a vital role in special events such as Secretary's visit and other VIP visit in the region, in project launching, field days, seminars/workshops, etc. and one of which is the National Organic Agriculture Congress in Laoag City, Ilocos Norte. The RAFIS usually handles Committee on program and invitation, promotion and advertisement and documentation in these activities.

Speeches were also prepared as required for the top management's speaking engagements during agri-events in the region.



2021highlights PHILIPPINE RURAL DEVELOPMENT PROJECT



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Farmer Groups max transport facilities amid pandemic

The unprecedented happening of the Corona Virus Disease 2019 (COVID-19) pandemic, more than ever, highlighted the importance of owning transport facilities for farmer organizations. Enterprises funded by the PRDP and provided with transport facilities continued operations. Transport facilities became a crucial instrument for PRDP-funded enterprises to get through the pandemic.

The Hundred Islands Farmpreneurs Cooperative in Alaminos City, Pangasinan; BOMADUS MPC in Labrador, Pangasinan; Alcala Onion Growers in Alcala, Pangasinan; San Fermin ARB Multipurpose Cooperative in Caba, La Union, and the Pasuquin Farmers Onion-Garlic Growers Association in Pasuquin, Ilocos Norte through their



Irrigation rehab inspires farmers in Paoay, llocos Norte

The Paoay Irrigation System has been in existence since the 1950s. However, siltation and improper maintenance of its canals have hampered and limited the service of the Paoay Irrigation System.

As a result, farmers during the dry season cannot plant rice and other high value commodities. Although farmers utilize shallow tube wells from nearby creeks, it is not enough to sustain the crops.

With the completion of the Paoay Communal Irrigation on December 13, 2021, the Paoayeños have renewed hopes as they anticipate the sufficient flow of water through the canals and carried through to the fields promising a bounty harvest.#



Emerging impacts of onion enterprise in Alcala, Pangasinan



The Alcala Onion Growers Multi-Purpose Cooperative (AOGMPC) offered a higher farmgate price of Php24 per kilogram compared to the price offer of traders marked at Php12-Php15 per kilogram putting 60% premium on the market price of onion in its CY 2021 cropping season. The price offer of the Cooperative even comes with free hauling and post-harvest services.

Also, the Cooperative employed more than the target eight (8) personnel per season, despite the effects of the pandemic and the army worm infestation. It employed a total of 17 personnel per season for the sorting of onions and for the hauling and operation of the delivery truck.

BACABRA FARMERS revitalize llocos Carlie Industry thru PRDP Carlie Interprise

The BacarraZanjera Irrigators Multi-Purpose Cooperative (BZIMPC) in Bacarra, Ilocos Norte was selected as the qualified proponent of the garlic enterprise. Amounting to more than Php23 million pesos, Bacarra's garlic enterprise is the biggest in Ilocos Region under the Philippine Rural Development Project (PRDP).

The good performance of the garlic enterprise of the BZIMPC with the assistance of the PRDP is encouraging more and more farmers to get back to planting garlic. The immediate impact of the garlic enterprise is scheduled to be gauged by the Project through a Rapid Appraisal of Emerging Benefits (RAEB) within the next months.



llocos Norte completes <mark>longest FMR</mark> in llocos Region under PRDP



The Billoca-San Juan Farm to Market Road and Eight (8) Bridges is the longest and the largest completed infrastructure subproject, in terms of length and cost, in Ilocos Region under the Philippine Rural Development Project (PRDP). The FMR measures 12 kilometers while the eight (8) bridges have a total length of 79 linear meters. The FMR-bridge's total project cost is Php188,370,942.48 and is benefitting more than 6,000 residents and farmers.

The completed FMR-bridge traverses the Municipality of Sarrat and Batac City and is the entry and exit point of commuters from interior barangays. It is the preferred route for traders and farmers in transporting their agricultural produce to the market.

The inauguration of the bridge was led by Batac City Mayor Albert Chua, Provincial Agriculturist Norma Lagmay, Governor Matthew Manotoc's Chief of Staff Atty. Pancho Jose, and PRDP RPCO 1 Deputy Project Director Jovita Datuin.



llocos I-PLAN-GGU launch GeoSMART App

The Investment in AFMP Planning at the Local and National Levels (IPLAN) Component and the Geomapping and Governance Unit of the Ilocos Region launched the GeoSmart Application during the Training on Climate Risk Vulnerability Assessment (CRVA) for PPMIUs cum Production of CRV Maps of PRDP Champion Commodities with Provinces of Pangasinan and Ilocos Norte at The Monarch Hotel, Calasiao, Pangasinan on May 20-21, 2021.

The GeoSmart App is developed by the GGU of the Philippine Rural Development Project (PRDP) in partnership with the I-PLAN Component to aid the planning of government interventions through a self-help application which factors in the socioeconomic and climate risk vulnerability, and suitability of the project site.

Peanut enterprise levels up with new facility

The Conconig East Farmers Multi-Purpose Cooperative achieved another milestone with the establishment of its very own three-storey building from the profits of the Integrated Quality Peanut Seed Production and Farm Service Enterprise awarded by the Philippine Rural Development Project (PRDP).

With the peanut enterprise, the Cooperative was able to secure a contract with the Municipality of Santa Lucia, Ilocos Sur to supply the peanut seed requirements for farmers. The Municipality of Santa Lucia, Ilocos Sur is the top peanut producing municipality in Ilocos Region and its local government is exerting effort to subsidize the input requirements of farmers. In order to fulfill its obligations with the LGU, the Cooperative established the Php3.5-million building to store its peanut produce.

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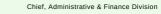
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