2023

ANNUAL REPORT

DEPARTMENT OF AGRICULTURE
REGIONAL FIELD OFFICE 1



2023
ANNUAL REPORT
DEPARTMENT OF AGRICULTURE
REGIONAL FIELD OFFICE 1



Department of Agriculture Regional Field Office 1
2023 Annual Report
Copyright © 2024



Table of Contents

FOREWORD vii

EXECUTIVE SUMMARY 2

PART I. AGRICULTURE SECTOR OUTPUTS AND OUTCOMES

Gross Regional Domestic Product (GRDP) 5

Food Sufficiency Level 8

Agricultural Commodity Performance 9

PART II. INPUTS – PROGRAMS/PROJECTS/ACTIVITIES

Banner Programs 20

- Rice 21
- Corn 29
- High Value Crops Development 33
- National Urban and Peri-Urban Agriculture Program 34
- Livestock 34
- Organic Agriculture Program 36
- HALAL Program 38

Locally-funded projects 40

- Special Area for Agricultural Development Program Phase 2 41
- Registry System for Basic Sectors in Agriculture 42
- Kabuhayan at Kaunlaran ng Kababayang Katutubo 43
- Adaptation and Mitigation Initiative in Agriculture Program 44
- Farm and Fisheries Clustering and Consolidation Program 47

Regular, other and special programs/projects 50

- Other PSS 51
- Market Development Services 55
- Other ESETS 57
- Gender and Development 58
- Research 59
- Other Research for Development 60
- Agriculture and Fishery Regulatory support 63
- Farm-to-Market road 65
- Integrated Laboratories Division 67
- Philippine Rural Development Project 71


DEPARTMENT OF AGRICULTURE
1898

Foreword

There is so much to be thankful for in CY 2023 for the Department of Agriculture - Ilocos Region. Steadfast in our commitment to better serve our agri-stakeholders in the region, especially our farmers and fisherfolk, we remain undaunted by the various challenges the year has brought us.

Determined to consistently raise the standards of our service to the agriculture sector, in 2023 the DA-RFO I have successfully passed the ISO 9001:2015 or Quality Management System (QMS) Re-Certification, its 2nd 3-Year cycle certification and the 1st Surveillance Audit for a consistent compliance to the requirements of the ISO standards.

As a result of our collective efforts in ensuring the quality and efficient implementation of our Programs, Projects, and Activities in the Department, we achieved an Outstanding performance rating in the CY 2023 Year-end Performance Assessment of DA RFO attaining an over-all performance rating of 90.22% translating to an Excellent Program Management.

Carrying on our enhanced performance in the region, we also attained the same Outstanding performance rating in the National, thus, receiving recognition as 3rd Place among Regional Field Offices as Most Improved Region in 2023.

Our DA workforce are determined to stride forward and continue to maintain our comparative advantage as one of the top producing regions in the country in the production of our major commodities where we remain 4th in rank in the production of Rice; 5th in Corn; 3rd in Onion and Goat production; and ranked 1st in the production of garlic, tomato, peanut, mungbean, and eggplant.

Reflective of a holistic agricultural development, we have continuously distributed various interventions in agriculture for our agri-fishery sector beneficiaries in the region in the form of production inputs like seeds, fuel subsidy, Fertilizer Discount Voucher (FDV), cash assistance through the Rice Farmers Financial Assistance (RFFA) Program, distribution of agri-machinery and equipment and other farm implements in our pursuit to modernize agriculture and improve the productivity of our farmers. Along with these interventions, DA-RFOI through our Banner programs under Rice, Corn, High Value Crops Development Program (HVCDP), NUPAP, Livestock, Organic Agriculture, and the DA special projects under SAAD, F2C2, 4K, Young Farmers Challenge, GAD, AMIA, and PRDP, among others, various livelihood programs/projects, technical assistance and marketing assistance were also successfully carried out.

Certainly, CY 2023 has been a very fruitful year despite the threat of El Niño, animal disease, pests and climate change challenges. We definitely are not resting on our laurels. The DA-RFO I, with the support from our partners in agricultural development, guided by our unified goal towards Masaganang Agrikultura, Maunlad na Ekonomiya, we intend to do better and to achieve more!

With this testament of our CY 2023 accomplishments, may our good God be Glorified!

ANNIE Q. BARES, DVM
Regional Executive Director





Executive Summary

This year, the Ilocos Region's agri-fishery sector continued to soar exuding its core values of Dedication, Resiliency, Integrity, Vigilance and Excellence (DRIVE) in attaining food security and increased farm productivity and income.

The Gross Regional Domestic Product (GRDP) of the Agriculture, Forestry and Fishing (AFF) sector, at constant 2018 prices, posted positive growth of 3.3% from PhP109.16 Billion in 2022 to PhP112.79 Billion in 2023. The sector's output contributed 16 percent to the the regional output at PhP701.47 Billion.

The region consistently exhibited strong comparative advantage in production as it sustained to be the top producer of mango, garlic, tomato, eggplant, mungbean and peanut. The region also maintained its rank as the 2nd in onion and goat, 3rd in cattle, 4th in rice and 5th in corn.

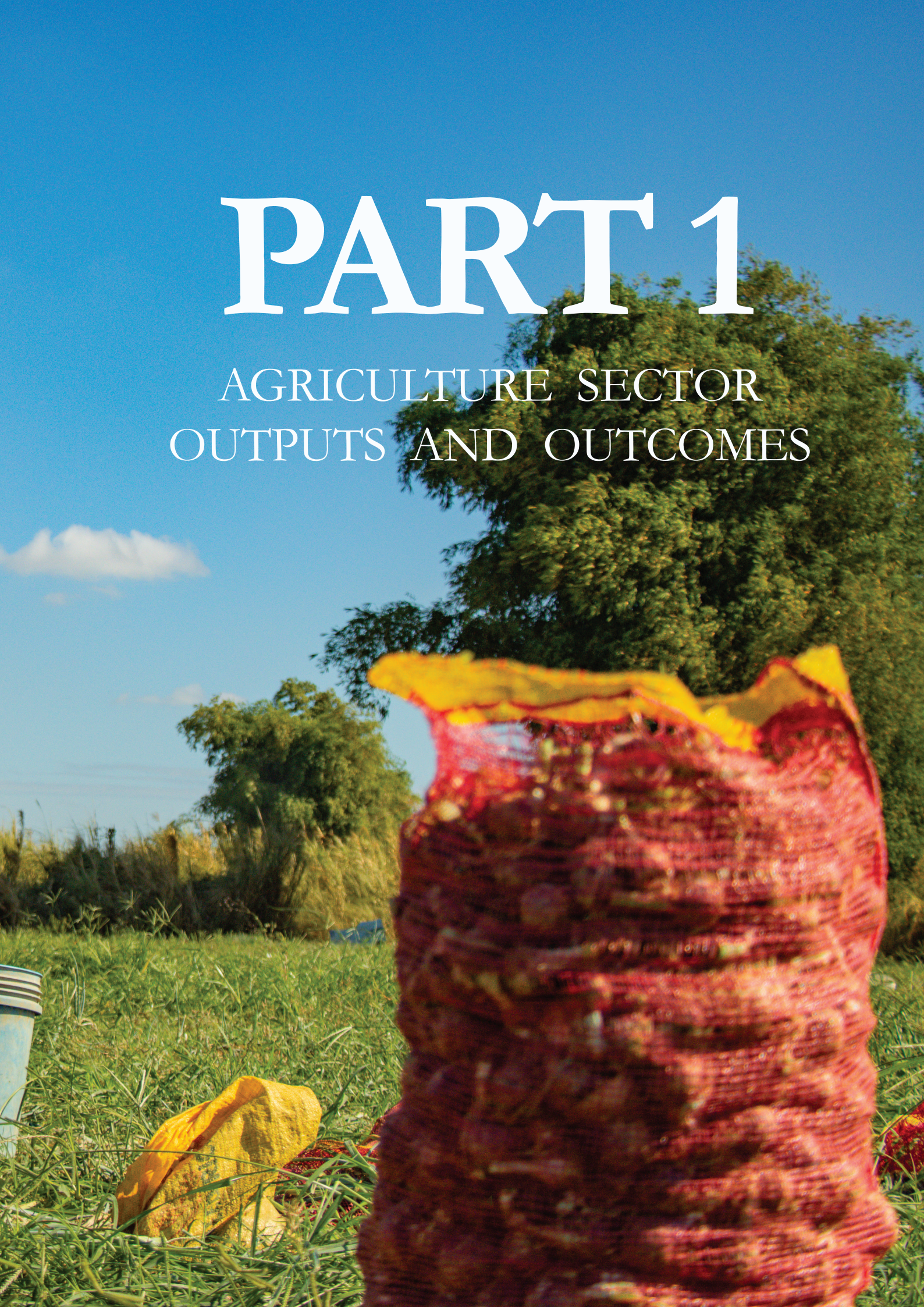
In terms of food sufficiency level in the region, Region 1 is still more than sufficient in almost basic commodities. Also, the production output of priority crop and livestock commodities in the region continuously increased from the previous year's level.

A total of 604,754 individuals and 1,398 groups were benefited from the various interventions of the DA RFO I.

These outcomes and outputs were the results of efficient and effective implementation of the various programs, projects and activities funded under the Banner Programs, Locally-funded Projects (LFPs) and Regular/Various Activities. In addition, the Philippine Rural Development Project (PRDP) Additional Financing 2 and Quick Response Fund (QRF) of the DA were also efficiently implemented benefiting farmers and fisherfolk in the region.

The region continuously facilitated the implementation, maintenance and continual improvement of its Quality Management System (QMS)/ISO 9001:2015 and the Integrated Management System (IMS)/ISO 14001:2015 for the Regional Chemical Feed Laboratory of the Integrated Laboratories Division.





PART 1

AGRICULTURE SECTOR OUTPUTS AND OUTCOMES



Gross Regional Domestic Product (GRDP)

In 2023, Ilocos Region's Agriculture, Forestry and Fishing (AFF) sector output, at constant 2018 prices, was valued at PhP 112.79 Billion as shown in Figure 1. This value, contributing the 16 percent to the regional output at PhP701.47 Billion, is higher by 3.3 percent than the 2022 output of PhP109.16 Billion.

The growth in the AFF was attributed to the increase in production and productivity of major commodities such as rice, corn, mango, peanut, mungbean, high and chicken. The sector is gradually

Figure 1. Gross Regional Domestic Product (GRDP) by Industry, Ilocos Region, 2023

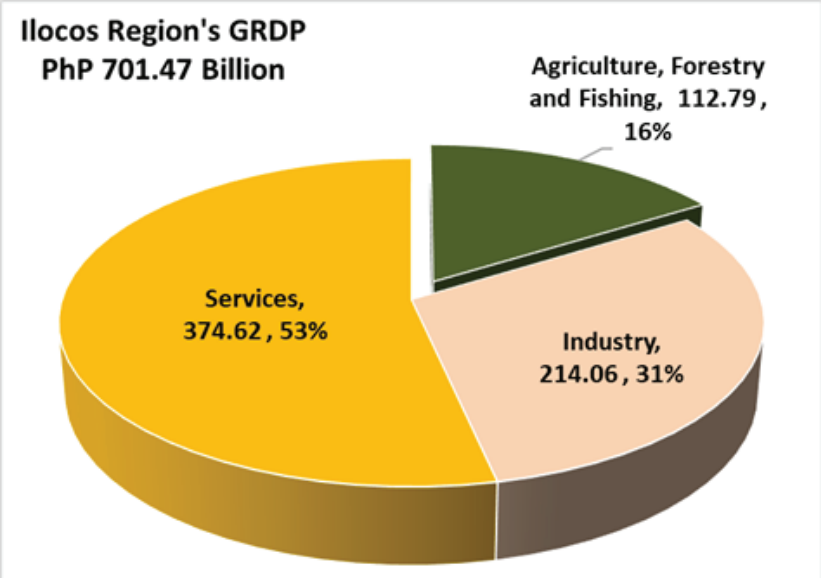
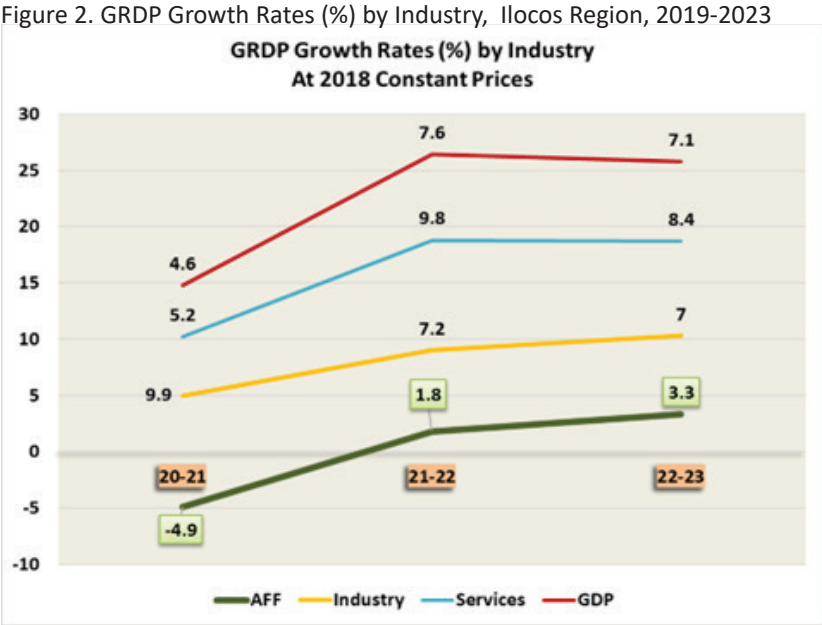


Figure 2. GRDP Growth Rates (%) by Industry, Ilocos Region, 2019-2023



recovering since the downfall economy in 2021 due to the devastating impacts of African Swine Fever (ASF), COVID 19 pandemic, and disastrous typhoons. The DA continuously implementing various programs, projects and activities to increase farm productivity and income, and modernize the agri-fishery sector towards food security and resiliency.

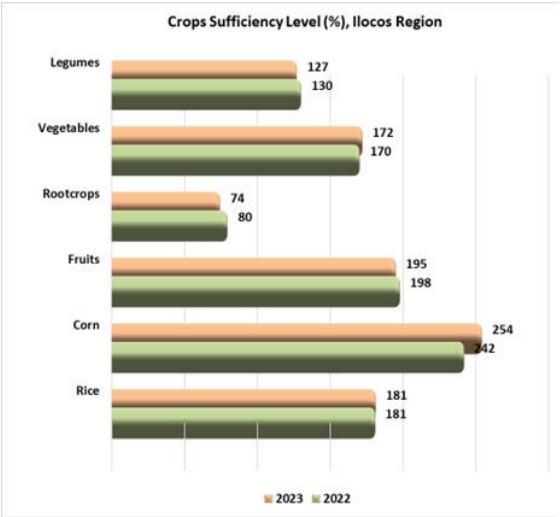
The Service sector contributed the largest share in the region's output at 53 percent valued at PhP374.62 Billion. The Industry sector's output worth PhP214.06 Billion shared 31% to the regional aggregates in 2023.

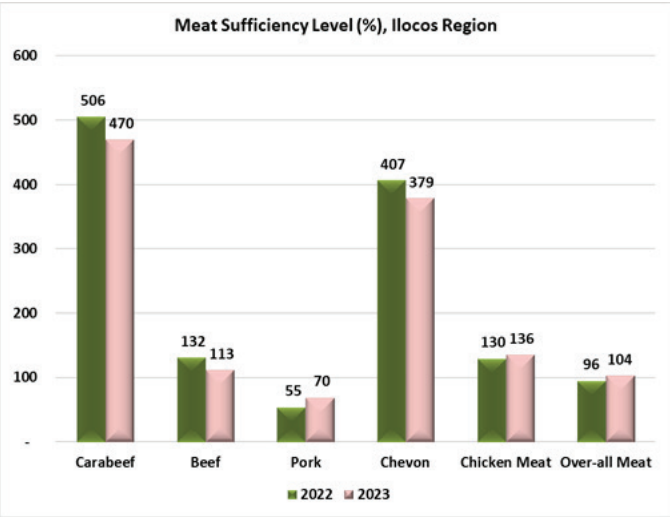
According to the National Economic Development Authority (NEDA), the region's economy posted robust growth as it facilitated various economic activities hence providing more employment activity and production of more goods.



Food Sufficiency Level

Figure 3. Food Sufficiency Level (%) of Priority Food Commodities, Ilocos Region 2022 vs 2023





The Ilocos Region is still sufficient in almost food commodities in 2023.

Rice registered 181% sufficienct level in 2023, same level in 2022. Its supply in 2023 at 1.19 million metric tons is more than sufficient to cater the requirement of about 5.5 million population in the region. Likewise, corn production is more than enough to cater the requirement of human and livestock consumption. Sufficiency level in corn attained 254%, higher by 5.04 points than the 2022 level of 242%.

The region's high value crops, except rootcrops, remained to be more than sufficient. S

Supply of fruits has surplus, however, its sufficiency level declined slightly by negative 1.5 points from 198% in 2022 to 195% in 2023. The region is still the top producer of mango in the country.

Vegetable production in the region is also more than sufficient registering 172% sufficiency level in 2023, an increase of 1.1% points from 2022 level.

Production of legumes, specifically peanut and mungbean, has also surplus with sufficiency level of 127%. The rootcrops, which is still deficit in production, recorded 74% sufficiency level this year.

For meat, the region registered an over-all sufficieny level of 104%. Among the livestock commodities, only swine has deficit in supply due to African Swine Fever (ASF) infestation, however, its sufficient level increased by 27.6 points from 55% in 2022 to 70% in 2023. The increased in supply is an indication that the region is recovering as a result of the DA initiatives on hog repopulation program and strict monitoring, control and surveillance protocols.

Agricultural Commodity Performance
A. Rice

This year, Ilocos Region sustained its rank as the 4th top rice producing region in the country contributing 10% to the national production of 20.06 Million metric tons of palay as shown in Figure 3.

Table 1 shows that the rice production in the region posted an increase of 1.3 percent from 1,965,372 metric tons in 2022 to 1,990,287 metric tons in 2023. All provinces in the region posted positive growth with recorded highest increase of 2.4% by the province of Ilocos Norte, followed by La Union at 1.5 percent, Pangasinan at 1.0 percent and Ilocos Sur at 0.7 percent.

Table 1. Rice production, area harvested and yield in Ilocos Region, by Province, 2022-2023

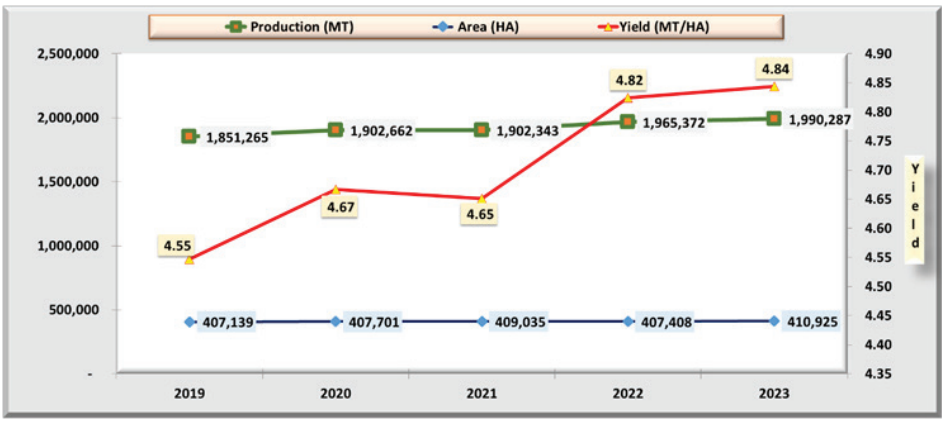
Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2022	2023	% GR	2022	2023	% GR	2022	2023	% GR
Ilocos Norte	330,749	338,681	2.4	63,909	65,069	1.8	5.18	5.20	0.6
Ilocos Sur	244,414	246,076	0.7	49,668	49,322	(0.7)	4.92	4.99	1.4
La Union	171,277	173,892	1.5	38,424	38,434	0.0	4.46	4.52	1.5
Pangasinan	1,218,933	1,231,638	1.0	255,407	258,100	1.1	4.77	4.77	(0.0)
Region	**1,965,372**	**1,990,287**	**1.3**	**407,408**	**410,925**	**0.9**	**4.82**	**4.84**	**0.4**

The increase in production was attributed to the 0.4% increase in yield per hectare from 4.82 metric tons in 2022 to 4.84 metric tons in 2023. Yield in in rice of all provinces, except Pangasinan, posted positive growth registering Ilocos Sur as the highest increase at 1.4 percent. Among the provinces, Ilocos Norte registered the highest yield per hectare at 5.20 metric tons. In terms of Ilocos Region's comparative advantage in yield among regions, the region remains to be the 2nd highest yielder surpassing the national average of 4.17 metric tons per hectare.

As shown in Figure 4, this year's outputs on production, area harvested and yield are the highest levels ever recorded in the region with significant increase from 2019 level.

The growth in rice outputs was attributed to the implemented various programs, projects and activities interventions that boost farm production and productivity coupled with favorable weather condition, such as provision of production support services, conduct of extension support education and training services, distribution of production, postharvest and irrigation machineries and equipment, construction/rehabilitation of Small-Scale Irrigation Projects (SSIP) such as Small Water Impounding Projects (SWIP), Diversion Dams (DD), Small Farm Reservoir (SFR), Solar-Powered Irrigation Projects (SPIS) including distribution pump and engine sets.

Figure 4. Trend in rice production, area harvested and yield in Ilocos Region, by Province, 2022-2023



Agricultural Commodity Performance
B. Corn

The region also sustained its rank as the 5th top corn producing region in the country with a production share of 7% or 594,407 metric tons to the country's aggregate of 8,405,004 metric tons as shown in Figure 5. The other top producing regions with their corresponding share are as follows: Cagayan Valley – 23%, Northern Mindanao – 18%, BARMM – 15% and SOCCSARGEN – 13%.

The production level in 2023 is higher by 1.45 percent or additional 8,651 metric tons from 585,756 metric tons in 2022 as shown in Table 2. All province's output grew this year with a recorded highest increase of 3.2 percent by Ilocos Sur at 3.02 percent.

Table 2. Corn production, area harvested and yield in Ilocos Region, 2021-2022

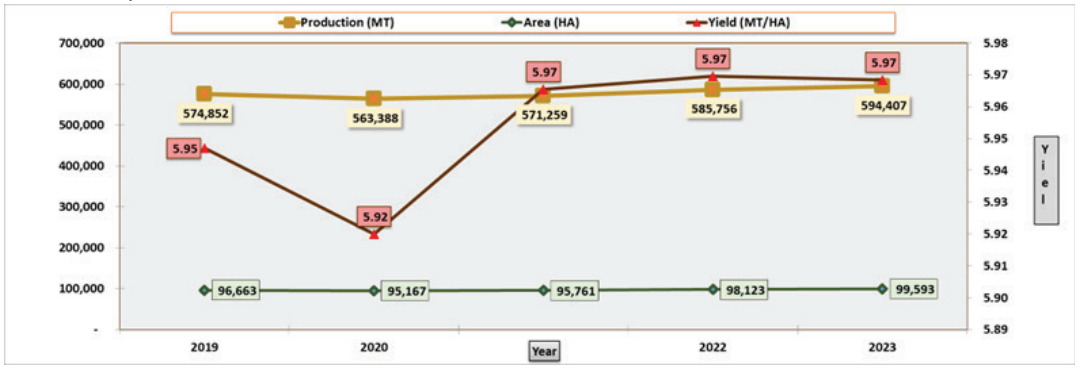
Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2022	2023	% GR	2022	2023	% GR	2022	2023	% GR
Ilocos Norte	66,284	68,425	3.2	11,718	12,237	4.4	5.66	5.59	(1.1)
Ilocos Sur	114,406	117,857	3.0	19,926	20,215	1.5	5.74	5.83	1.5
La Union	38,623	39,007	1.0	7,101	7,092	(0.1)	5.44	5.50	1.1
Pangasinan	366,443	369,118	0.7	59,378	60,049	1.1	6.17	6.15	(0.4)
Region	**585,756**	**594,407**	**1.5**	**98,123**	**99,593**	**1.5**	**5.97**	**5.97**	**(0.0)**

In terms of area, the region recorded an additional of 1.5 percent or 1,470 hectares from 98, 123 hectares in 2022 to 99,593 hectares in 2023. All provinces posted increase in area except La Union. Ilocos Norte recorded the highest increase in area at 4.4 percent.

For yield, the region sustained its level at 5.97 metric tons per hectare, same with the level in 2021 and still the highest yield recorded in the region. The region's yield level is the second highest yield in the country, next to Central Luzon at 6.31 metric tons per hectare. Also, this is higher by 2.66 metric tons that the 3.31 average yield in the country.

As shown in Figure 6, 2023's production and area harvested are the highest level recorded in the region.

Figure 6. Trend in corn production, area harvested and yield in Ilocos Region, by Province, 2022-2023



Agricultural Commodity Performance
C. Mango

The Ilocos Region's output in mango at 167,080 metric tons is still highest production level among the regions in the country as swhon in Figure 7. It contributed 21% to the national production of 786,044 metric tons with the following other top production regions: (2nd) Central Visayas producing 112,672 metric tons or 14%, (3rd) Zamboanga Peninsula at 68,117 metric tons, (4th) SOCCSKSARGEN at 63,982 metric tons, and (5th) Western Visayas at 63,697 metric tons.

Table 3 shows that the this year's production in mango grew by 0.62 percent from 2021 level of 166,032 metric tons. Production in all provinces went up except for La Union which registered a decrease of 9.58 percent from last year's output.

In terms of area harvested, it increased by 2.70 percent or additional 604 hectares from 22,406 hectares in 2022 to 23,010 hectares in 2023. More trees, especially the century trees, volunteered in flowering this year.

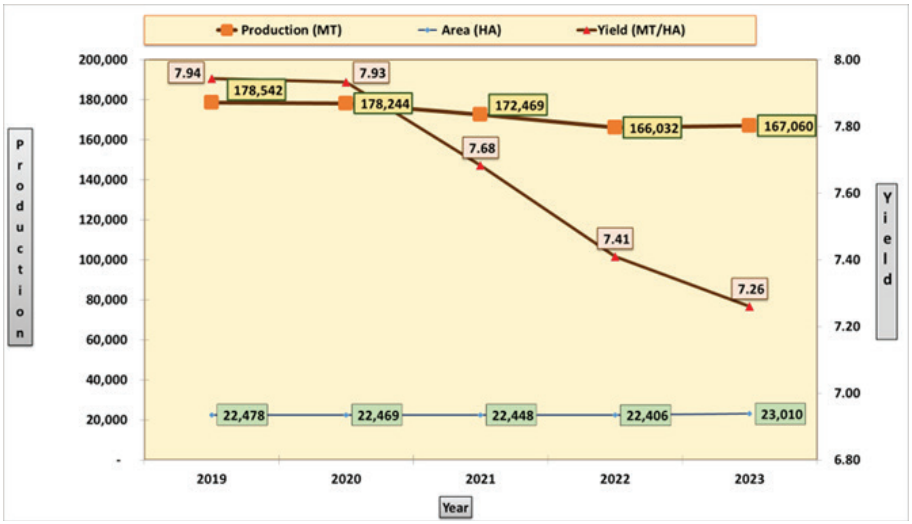
For yield per hectare, the region declined by 2.02 percent from 7.26 metric tons in previous year to 7.41 metric tons this year. Nevertheless, the region is 2nd highest yielder among the mango producing regions and higher than the national yield level of 4.10 metric tons per hectare.

Table 3. Mango production, area harvested and yield in Ilocos Region, 2022-2023

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2022	2023	% GR	2022	2023	% GR	2022	2023	% GR
Ilocos Norte	22,888	22,944	0.24	4,753	4,753	-	4.82	4.83	0.24
Ilocos Sur	11,979	12,760	6.52	1,304	1,308	0.28	9.19	9.76	6.22
La Union	13,670	12,361	(9.58)	2,476	2,476	0.01	5.52	4.99	(9.59)
Pangasinan	117,494	118,994	1.28	13,873	14,473	4.32	8.47	8.22	(2.92)
Region	**166,032**	**167,060**	**0.62**	**22,406**	**23,010**	**2.70**	**7.41**	**7.26**	**(2.02)**

Based on historical data on mango, its outcomes on production and yield recovered from 2022 level despite of the continuous decline in yield from the past five years as shown in Figure 8.

Figure 8. Trend in mango production, area harvested and yield in Ilocos Region, by Province, 2019-2023



Agricultural Commodity Performance
D. Garlic and Onion

As shown in Figure 8, Region 1 s still the top garlic producing region in the country contributing 74 percent or 4,292 metric tons to the country's production of 7,765 metric tons. The region also remains to be the 2nd top producing region in onion with a share of 21% or 52,682 metric tons to the national aggregates of 252,487 metric tons.

Other top producing regions in garlic include Cagayan Valley and Central Luzon contributing 11 percent and 7 percent, respectively. On the other hand, onion production was recorded in Central Luzon at 55 percent share and MIMAROPA Region at 20 percent.

Table 8 shows that onion production increased by 31.06 percent form 40,198 metric tons in 2022 to 52,682 metric tons in 2023. All provinces, except Ilocos Norte, posted growth in production. Pangasinan registered the highest increase in output at 218.82 percent or additional 8,358 metric tons from 2022 level.

The increase in onion production this year was attributed to the recorded growth in area harvested and yield per productivity level. The area harvested grew by 21.94 percent from 4,559 hectares in 2022 to 5,559 hectares in 2023. Likewise, the regional average yield per hectare grew by 7.48 percent or additional 0.66 metric tons from 2022's level of 8.82 metric tons.

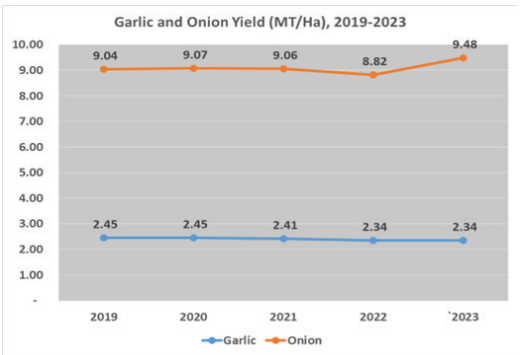
On the other hand, garlic outputs in production, area harvested and yield per hectare declined this year. This was attributed to the pest infestation and unfavorable weather condition in the Province of Ilocos Norte.

Table 4. Garlic and Onion production, area harvested and yield in Ilocos Region, 2022-2023

Commodity/	Production (MT)			Area (Ha)			Yield (MT/Ha)		
Province	2022	2023	% GR	2022	2023	% GR	2022	2023	% GR
Garlic	**4,503**	**4,292**	**(4.67)**	**1,865**	**1,831**	**(1.83)**	**2.41**	**2.34**	**(2.89)**
Ilocos Norte	4,376	4,139	(5.43)	1,801	1,766	(1.95)	2.43	2.34	(3.55)
Ilocos Sur	126	154	21.84	64	65	1.56	1.97	2.37	19.97
La Union	-	-	-	-	-	-	-	-	-
Pangasinan	-	-	-	-	-	-	-	-	-
Onion	**40,198**	**52,682**	**31.06**	**4,559**	**5,559**	**21.94**	**8.82**	**9.48**	**7.48**
Ilocos Norte	18,389	18,181	(1.13)	2,113	2,078	(1.67)	8.70	8.75	0.55
Ilocos Sur	17,609	21,427	21.68	1,690	1,571	(7.02)	10.42	13.64	30.86
La Union	380	897	135.87	33	67	101.44	11.44	13.39	17.09
Pangasinan	3,820	12,177	218.82	722	1,843	155.13	5.29	6.61	24.96

For the past five years, yield level per hectare of onion posted growth at 4.9 percent from 9.04 metric tons in 2019 to 9.48 metric tons this year, the highest recorded so far in Ilocos Region. However, garlic's yield level per hectare in the region recorded slight decrease of 4.6 percent from 2.45 metric tons in 2019 t0 2.34 metric tons in 2023. Highest garlic yield recorded so far was in 2097 at 2.45 metric tons per hectare.

Figure 10. Trend in garlic and onion yield per hectare, Ilocos Region, 2019-2023



Agricultural Commodity Performance
E. Legumes (Peanut & Mungbean)

The region remains to be the highest contributor of mungbean and peanut supply in the country at 35 percent and 39 percent, respectively as shown in Figure 11. Other top legume producing regions are Central Luzon and Cagayan Valley for both mungbean and peanut, and Northern Mindanao for peanut.

As shown in Table 5, mungbean production exhibited positive growth at 1.38% from 12.356 metric tons in 2022 to 12,527 metric tons in 2022. All provinces posted growth in production, except Ilocos Norte, with a recorded highest increase of 4.85% from the Province of Ilocos Sur.

The growth in production was attributed to the increase in yield per hectare at 2.44% or additional 300 kg from 1.30 metric tons in 2022 to 1.33 metric tons in 2023. All provinces exhibited growth in yield level with Ilocos Sur as the highest yielder among the provinces at 1.56 metric tons per hectare.

In terms of area harvested, the region showed slight decline at 1.04 percent or a reduction of 99 hectares from 2022 level of 9,527 hectares. Among the provinces, La Union and Pangasinan registered increase in area harvested.

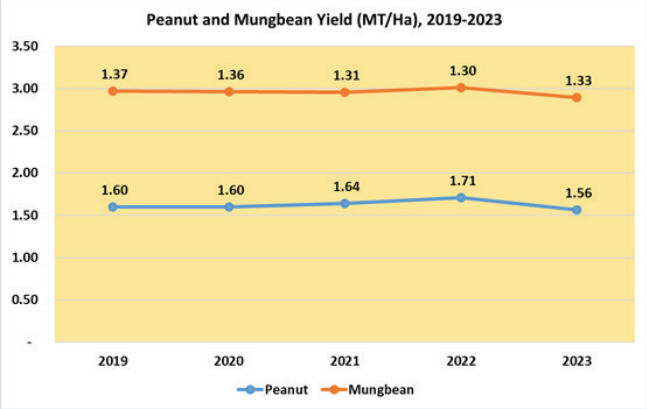
Table 5. Peanut and Mungbean production, area harvested and yield in Ilocos Region, 2022-2023

Commodity/ Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2022	2023	% GR	2022	2023	% GR	2022	2023	% GR
Mungbean	**12,356**	**12,527**	**1.38**	**9,527**	**9,429**	**(1.04)**	**1.30**	**1.33**	**2.44**
Ilocos Norte	5,402	5,344	(1.08)	4,495	4,426	(1.56)	1.20	1.21	0.49
Ilocos Sur	1,032	1,082	4.85	725	691	(4.67)	1.42	1.56	9.98
La Union	275	285	3.72	241	243	0.77	1.14	1.17	2.93
Pangasinan	5,648	5,816	2.98	4,066	4,069	0.08	1.39	1.43	2.90
Peanut	**12,802**	**12,335**	**(3.64)**	**7,476**	**7,882**	**5.43**	**1.71**	**1.56**	**(8.61)**
Ilocos Norte	1,617	1,658	2.54	1,150	1,157	0.61	1.41	1.43	1.92
Ilocos Sur	2,228	2,133	(4.27)	1,339	1,350	0.86	1.66	1.58	(5.09)
La Union	3,134	2,876	(8.21)	2,011	1,995	(0.79)	1.56	1.44	(7.48)
Pangasinan	5,823	5,668	(2.66)	2,976	3,380	13.56	1.96	1.68	(14.29)

On the other hand, peanut production dropped by 3.64 percent or a reduction of 466 metric tons from 12,802 metric tons in 2022. The negative growth in production was due to the declined yield at 8.61 percent from 1.71 metric tons in the previous year to 1.56 metric tons this year.

From 2019-2023, yield mungbean showed almost steady trend ranging 1.30 metric tons to 1.37 metric tons per hectare. There was a slight decrease in yield trend of peanut from 1.60 metric tons in 2019 to 1.56 metric tons in 2023.

Figure 10. Trend in peanut and mungbean yield per hectare, Ilcoos Region, 2019-2023



Agricultural Commodity Performance
F. Pinakbet Vegetables
(Tomato, Eggplant & Ampalaya)

Ilocos Region remains to be one of the country's major producer of pinakbet vegetables, namely: tomato, eggplant and ampalaya. Tomato and eggplant production in the region recorded the highest level among the regions in the country contributing 29% and 40%, respectively, to the national production. Other top producing regions include the Central Luzon and CALABARZON and Cagayan Valley.

On the other hand, ampalaya production in Regiom I sustained its rank as the 4th production region contributing 11% to the national aggregates.

Among the pinakbet vegetables, tomato and ampalaya outputs posted positive growth this year from 2022 data as shown in Table 6. Tomato production registered 1.19 percent from 62,806 metric tons in 2022 to 63,554 metric tons in 2023. Its yield grew by 3.81 percent or additional 760 kg per hectare.

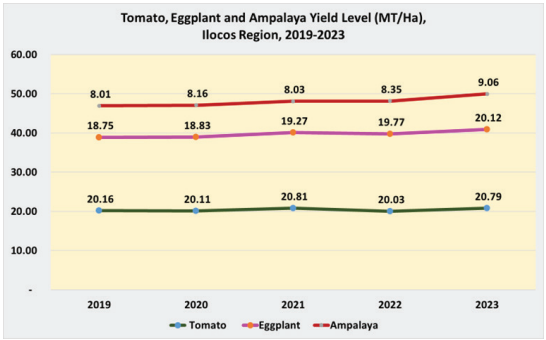
Table 6. Tomato, Eggplant and Ampalaya production, area harvested and yield in Ilocos Region, 2022-2023

Commodity/ Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2022	2023	% GR	2022	2,023	% GR	2022	2023	% GR
Tomato	**62,806**	**63,554**	**1.19**	**3,136**	**3,057**	**(2.53)**	**20.03**	**20.79**	**3.81**
Ilocos Norte	24,008	23,430	(2.41)	1,160	1,156	(0.34)	20.70	20.27	(2.07)
Ilocos Sur	17,041	19,052	11.80	655	680	3.70	26.00	28.03	7.81
La Union	2,315	2,380	2.78	171	172	0.79	13.56	13.82	1.97
Pangasinan	19,442	18,693	(3.85)	1,150	1,050	(8.77)	16.90	17.81	5.39
Eggplant	**100,383**	**95,281**	**(5.08)**	**5,079**	**4,736**	**(6.74)**	**19.77**	**20.12**	**1.78**
Ilocos Norte	8,519	8,338	(2.12)	673	663	(1.57)	12.66	12.59	(0.56)
Ilocos Sur	7,986	8,373	4.85	401	405	0.89	19.90	20.68	3.93
La Union	2,435	2,360	(3.08)	224	222	(1.03)	10.87	10.64	(2.07)
Pangasinan	81,443	76,210	(6.43)	3,780	3,447	(8.81)	21.55	22.11	2.61
Ampalaya	**10,831**	**10,927**	**0.88**	**1,297**	**1,206**	**(7.01)**	**8.35**	**9.06**	**8.50**
Ilocos Norte	3,470	3,626	4.47	401	392	(2.40)	8.65	9.26	7.04
Ilocos Sur	2,605	2,625	0.77	166	174	4.76	15.69	15.09	(3.81)
La Union	2,159	2,181	1.01	323	282	(12.46)	6.69	7.72	15.39
Pangasinan	2,598	2,496	(3.89)	407	358	(12.05)	6.39	6.98	9.27

Likewise, production and yield of ampalaya fruit posted growth by 0.88 percent and 8.50 percent, respectively. However, egpplant production this year declined by 5.08 percent as compared to the previous year's outpur. The reduction in output was due to the decrease in area harvested by 6.74 percent where all provinces, except Ilocos Sur, registered negative growth rates. Some of the farmers shifted to other crops such as corn and other high value crops.

Yield trend of the pinakbet vegetables from 2019 to 2023 is shown in Figure 12. All the commodities showed slight increasing trend from 2019 levels. This year's yields in tomato, eggplant and ampalaya were the highest ever recorded level in the region.

Figure 12. Trend in tomato, eggplant and amapalay yield per hectare, Ilcoos Region, 2019-2023

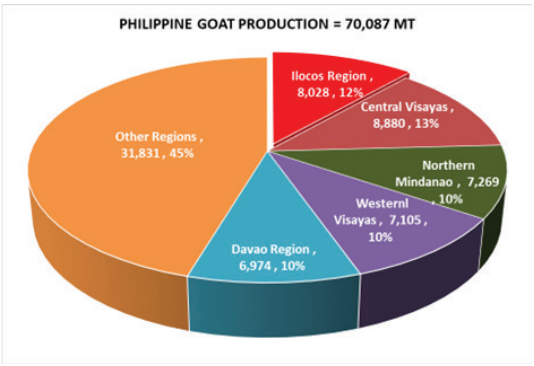


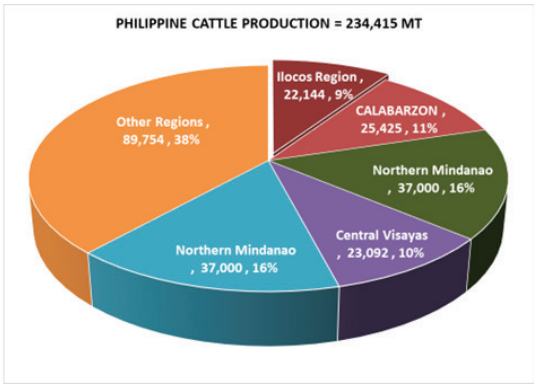
Agricultural Commodity Performance
G. Livestock

Ilocos Region is also among the top producer of livestock specifically the goat cattle. In terms of production, the region ranked 2nd in goat and 4th in cattle contributing 11% and 9%, respectively, to the national outputs as shown in Figure 13. Among the top producing regions of the goat and cattle include Central Visayas, Northern Mindano, Western Visayas, Davao Region and CALABARZON.

For the over-al production of livestock, which include cattle, carabao, swine and goat, the region posted an increase of 13.97 percent from 83, 688 metric tons in 2022 to 106,779 metric tons in 2023 as shown in Table 7. The increase was attributed to the increase of swine supply which exhibited growth by 29.06 percent from 53,062 metric tons in the previous year as compared to 68,484 metric tons this year. This is an indication that the region is gradually recovering from the African Swine Fever (ASF) infestation since 2021.

Figure 13. Ilocos Region's Goat and Cattle Production Share, 2023













The poultry, covering chicken, duck and eggs, also grew by 2.70% from 2022 level of production. The growth is due to the increase supply in chicken which registered an increase of 5.52 percent or additional of 4,779 metric tons from 2022 level of 86,652 metric tons.

Table 6. Tomato, Eggplant and Ampalaya production, area harvested and yield in Ilocos Region, 2022-2023

Commodity/ Province	Production (MT) 2022	2023	% GR
Livestock	**93,688**	**106,779**	**13.97**
Carabao	8,740	8,122	(7.07)
Cattle	23,367	22,144	(5.24)
Swine	53,062	68,484	29.06
Goat	8,519	8,028	(5.76)
Poultry	**109,614**	**112,568**	**2.70**
Chicken	86,652	91,431	5.52
Duck	1,015	900	(11.31)
Chicken Egg	21,103	19,513	(7.53)
Duck Egg	844	724	(14.21)





PART 2

INPUTS-PROGRAMS/ PROJECTS/ACTIVITIES


Maïse
i-Roundup



Banner programs

Rice Banner Program

A. Production Support Services

a. Procurement and distribution of high-quality seeds
• Procured and distributed 4,399,290 kgs of hybrid rice
• Distributed a total of 4,861,175 kgs of hybrid seeds and certified seeds as early recovery interventions for farmers affected by calamities

b. Distribution of Fertilizer Discount Voucher
• Benefited 266,125 rice farmers covering 221,849 hectares for the wet cropping season





The use of fertilizer vouchers offers an alternative to farmers with lowered purchasing power to buy a sufficient volume of fertilizer recommended for their rice area.

B. Extension Support Services, Education and Training Services (ESETS)

a. Establishment of demonstration farm sites
Established twenty (20) demonstration sites of Community Hybrid Rice Cluster Technology Demonstration Farms region-wide for dry season 2022-2023 and wet season 2023, wherein each site was composed of more or less 100 hectares of contiguous irrigated area which aims to showcase the relative yield advantage of using hybrid rice seeds as compared to certified inbred, good seeds and farmer's home saved seeds; to showcase the technology of producing 8 metric tons for wet season and 10 metric tons for dry season using hybrid varieties; and to enhance knowledge and skills of farmers through actual hands-on on hybrid rice technology.



C. Agricultural Machinery, Equipment, Facility Support Services (AMEFSS)

• Distributed a total of 159 units of various agricultural machinery and equipment amounting to Php70,884,311.19, under the 2023 regular target to farmer-associations and cooperatives



D. Irrigation Network Services (INS)

• Nine (9) units and 5,806 linear meters of completed projects were turned over to 17 FCAs with a generated and restored service area of 634 hectares (ha) and 421 jobs generated:

Name of Project/Location	Cost	Service Area (ha)	Beneficiaries (no.)
Construction of Calayab Canal in Brgy. Calayab, Laoag City, Ilocos Norte	400,000	400,000	400,000
Construction of Mandaloque Canal in Brgy. Mandaloque, Dingras, Ilocos Norte	1,873,669.98	134	86
Construction of Batuka Irrigation Canal in Brgy. Poblacion Sur, Lidlidda, Ilocos Sur	2,633,614.49	55	60

continued on Page 22...

..continuation from 21

Name of Project/Location	Cost	Service Area (ha)	Beneficiaries (no.)
Construction of Tiagan Irrigation Canal in Brgy. Tiagan, San Emilio, Ilocos Sur	2,333,834.75	16	40
Construction of San Aurelio SWIP 1st Canal Lining in Brgy. San Aurelio, Balungao, Pangasinan	6,925,729.89	134	86
Construction of Manana Diversion Dam Canal Lining in Bergy. Laguit-Padilla, Bugallon, Pangasinan	2,776,818.59	27	428
Construction of Tamurong Small Farm Reservoir in Brgy. Tamurong, San Nicolas, Ilocos Norte	1,188,121.09	100	18
Construction of Magsiping Small Farm Reservoir in Brgy. Magsiping, Luna, La Union	2,666,872.95	30	50
Construction of Sta. Catalina Diversion Dam in Brgy. Sta. Catalina, Pasuquin, Ilocos Norte	7,424,175.52	40	56



Construction of Calayab Canal in Brgy. Calayab, Laoag City, Ilocos Norte



Construction of Mandaloque Canal in Brgy. Mandaloque, Dingras, Ilocos Norte



Construction of Batuka Irrigation Canal in Brgy. Poblacion Sur, Lidlidda, Ilocos Sur



Construction of Tiagan Irrigation Canal in Brgy. Tiagan, San Emilio, Ilocos Sur



Construction of San Aurelio SWIP 1st Canal Lining in Brgy. San Aurelio, Balungao, Pangasinan



Construction of Manana Diversion Dam Canal Lining in Bergy. Laguit-Padilla, Bugallon, Pangasinan



Construction of Tamurong Small Farm Reservoir in Brgy. Tamurong, San Nicolas, Ilocos Norte



Construction of Magsiping Small Farm Reservoir in Brgy. Magsiping, Luna, La Union



Construction of Sta. Catalina Diversion Dam in Brgy. Sta. Catalina, Pasuquin, Ilocos Norte



Rehabilitation of Patar Small Water Impounding Project in Brgy. Patar, Mabini, Pangasinan



Rehabilitation of Nagbeddengan Diversion Dam in Brgy. Bessang, Burgos, Ilocos Sur



Rehabilitation of Salipawak Diversion Dam in Brgy. Silag, Sta. Maria, Ilocos Sur



Rehabilitation of Saldivar Diversion Dam in Brgy. Amagbagan, Pozzorubio, Pangasinan

Research and Development Activities	Highlights/Results
Production-related Collaborative R4D with other Institutions (Ilocos R4D Initiatives and support Enhancement for Rice (I RISE for RICE)	• This program is a Research for Development (R4D) model for community transformation that is holistic in nature. This model uses a participatory approach in technology development to promotion, and market-driven to improve competitiveness of rice-based cluster areas. This model eludes fragmented R4DE projects in the region and will enhance rice R4DE collaboration. • It aims to inclusively develop rice cluster areas in the Ilocos Region. Specifically, it aims to: 1) enhance agricultural productivity by 10% in irrigated rice cluster areas annually; 2) increase rice cluster area income by 20% through integration of different marketing strategies after 3 years; and 3) institutionalize at least 1 policy on rice research into production and marketing strategies after 3 years. **Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur** Sub-project 2. Scaling of Smarter Rice Production Technologies in Cluster Areas • Aims to enhance agricultural productivity by 10% from benchmark in irrigated cluster areas per cropping season.

continued on Page 24...

...from Page 23

Research and Development Activities	Highlights/Results
Production-related Collaborative R4D with other Institutions (Ilocos R4D Initiatives and support Enhancement for Rice (I RISE for RICE)	• Conducted various activities to capacitate the farmers in rice farming during the wet season 2023, major activities include Participatory Rural Appraisal (PRA), training on mushroom production and capability building for scaling of SMARTER rice production through the help of the collaborating agencies such as Agricultural Training Institute-Regional Training Center I (ATI-RTC I), Philippine Rice Research Institute (PhilRice)-Batac Station, Ilocos Sur Polytechnic State College (ISPSC)-Sta Maria, Office of the Provincial Agriculturist of Ilocos Sur, and Municipal Agriculture Office of Bantay. • The mean average yield of crop components of the pilot farms compared to the benchmark and comparative farms was shown in Table 2. Farmer-cooperators from pilot farm obtained an average yield of 5.96t/ha during first cropping while the benchmark data only attained 4.80 t/ha. However, the targeted increase in yield for 1st cropping was only 5.28 t/ha. Moreover, cost in return analysis of benchmark, pilot farms and comparative farms was also shown in Table 3.

Table 2: Mean average yield of crop components of the pilot farms, benchmark, and comparative farms in I RISE for Rise project in Ilocos Sur WS 2023

Crop component	Bench Mark t/ha	Target t/ha	Pilot Farms t/ha	Comparative Farms t/h	Difference pilot farms bench mark t/ha	Difference pilot farms comparative farms t/ha
1st Crop (Rice)	4.8	5.28	5.96	5.20	1.16	.76

Table 3. Cost of return analysis of Benchmark, Pilot Farms and Comparative Farms

Particulars	Benchmark	Pilot farms	Comparative farms
Production Cost	Php 56,223.29	Php 54,418.50	Php 58,138.86
Gross Income	Php 83,941.00	Php 114,454.30	Php 101,928.36
Net Farm Income	Php 27,717.71	Php 60,035.80	Php 43,789.50

Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur

Component 1. Promotion of Quality Seeds of New Inbred Rice Varieties through Sustainable Seed Support System

• As shown in Table 4, a total of 2.0 hectares were planted in the station for wet season 2023. Varieties used were NSIC Rc160 (0.5 ha), NSIC Rc 480 (1.0 ha) and NSIC Rc 402 (0.5 ha). Freshly harvested grains were dried to <14% MC. The produce was stored in the rice bodega.

Table 4. Variety planted, area planted, date planted, date harvested, no. and seed class of produce of inbred rice

Variety Planted	Area Planted (ha)	Seed Class Sown	Date Transplanted	Date harvested	No. of bags @20kg/bag	Seed Class passed
1. NSIC Rc160	0.50	Foundation Seed	Aug. 23, 2023	Nov. 21, 2023	40	Certified Seed
2. NSIC Rc480	1.00	Foundation Seed	Aug. 4, 2023	Nov. 3, 2023	96	Registered Seed
3. NSIC Rc216	0.50	Foundation Seed	Aug. 9, 2023	Nov. 21, 2023	66	Registered Seed

continued on Page 25...

...from Page 24

Research and Development Activities	Highlights/Results
Production-related Collaborative R4D with other Institutions (Ilocos R4D Initiatives and support Enhancement for Rice (I RISE for RICE)	**Ilocos Norte Research and Experiment Center (INREC) Dingras, Ilocos Norte site** Sub-project 1. Production and Promotion of Quality Seeds of New Inbred Rice Varieties and Special Purpose Rice Through a Sustainable Seed System Component 1. On-station Seed Production of Inbred Rice • During the wet season, five (5) varieties of foundation rice seeds were planted, namely NSIC Rc534, NSIC Rc480, NSIC Rc510, NSIC Rc216, NSIC Rc222, NSIC Rc160, and special-purpose rice (good seeds). • As a standard for seed production, produced seeds were subjected to seed analysis and seed certification, wherein the results were passed as registered seed classes except for NSIC Rc510, which is still ongoing for seed retesting (Table). For the dry season 2023-2024, four (4) varieties were planted, namely NSIC Rc160, NSIC Rc216, NSIC Rc222, and NSIC Rc216. All varieties were at the active tillering stage.

Table 5. Inbred rice varieties and area planted during the WS 2023, INREC Dingras Station.

Name of Varieties	Area (ha)	Date harvested	Production (20kg/bag)	Seed Class
NSIC Rc534	0.40	Oct. 11, 2023	78	Registered
NSIC Rc480	1.00	Oct. 19, 2023	180	Registered
NSIC Rc510	0.42	Oct. 19, 2023	60	On-going re-testing
NSIC Rc216	0.57	Oct. 28, 2023	48	Registered
NSIC Rc222	0.31	Oct. 28, 2023	45	Registered
NSIC Rc160	1.00	Oct. 27, 2023	129	Registered
Special Purpose Rice	0.30	Oct. 30, 2023	30	Good seed
TOTAL	**4.0**		**570**	

Sub-project 2. Scaling of Smarter Rice Production Technologies in Cluster Areas

Component 1. Promotion of Balance Fertilizer Use Strategies in Rice Cluster Areas
Component 2. Promotion of Balance Pest Management Strategies in Rice Cluster Areas

• The model farm was established at Brgy. Tabucbuc,Marcos, Ilocos Norte with a total area covered of 25.0 hectares and 37 farmer-partners showcased the improved production technology for rice.
• Along with the establishment of model farm, table 3 shows the various project activities undertaken in the site such as the conduct of Participatory Rural Appraisal (PRA), to identify farming limitations and the solution to address such limitations.
• Conducted project launching with all the project stakeholders to officially commence the project. Likewise, capability building on smarter technologies on rice and mushroom production participated by farmer partners and other walk-in farmers.

continued on Page 26...

...from Page 25

<table>
<tr><th>Research and Development Activities</th><th>Highlights/Results</th></tr>
<tr><td>Production-related Collaborative R4D with other Institutions (Ilocos R4D Initiatives and support Enhancement for Rice (I RISE for RICE)</td><td>
• Table 6 shows the comparison between the benchmark, target, and average actual yield of rice planted in the project site. An increase of 0.27 t/ha, or 4.97%, from the target to the average actual yield which means the use of improved production technologies was attributed to the increase in yield. Meanwhile, the results of the dry season 2023–2024 or the second crop have not yet been reported since most of the model farm is in the reproductive phase.
• The activities undertaken were Participatory Rural Appraisal (PRA), inception meeting, project launching, capability building for scaling of smarter rice production technologies and training on mushroom production with 158 total participants.

Table 6. Benchmark, target and actual yield of rice in the IRISE for Rice project in Brgy. Tabucbuc, Marcos, Ilocos Norte CY 20232020-2021.
<table>
<tr><th>Crop Components</th><th colspan="3">Yield</th></tr>
<tr><td></td><td>Benchmark</td><td>Target</td><td>Average Actual Yield (t/ha)</td></tr>
<tr><td>1st crop rice</td><td>4.94</td><td>5.43</td><td>5.70</td></tr>
<tr><td>2nd crop rice</td><td colspan="3">Crops at reproductive phase</td></tr>
</table>

Sub-Project 3. Development of Agro-enterprises in Rice Cluster Areas

Component 1. Promotion and Utilization of Waste Product and By-Product of Rice in Rice Cluster Areas

• Produced a total of 320 mother cultures of white oyster mushrooms which produces 6,350 mushroom spawns for use in the production of fruiting bags. Some of the spawns were distributed to the training participants to serve as their initial stock to utilize in their own fruiting bag production. Furthermore, other mushroom spawns produced were also distributed to 50 individual growers from Ilocos Norte (Dingras, Adams, Bangui, Burgos, Marcos, Batac, Paoay, Ilocos Norte) and Bantay, Ilocos Sur.
• Produced a total of 6,700 fruiting bags of which were distributed to participants during the conduct of eight (8) trainings. Harvested a total of 625 kg mushroom fruits from mushroom techno demo in the station and were used in the training demonstration and used for processing. The community-based mushroom technology demonstration in Brgy. Tabucbuc, Marcos, Ilocos Norte, will be established in February 2024.
• Conducted seven (7) training sessions which was participated by 187 active participants
• Developed two (2) novel products, the mushroom binagoongan and mushroom balls. Likewise, showcased different mushroom products (1,650 grams dried mushroom, 3,050 grams mushroom powder, and 10,500 grams mushroom kropek) during the 36th National Agriculture and Fisheries Technology Exhibition (DA-BAR Anniversary) held at Central Luzon State University Science City of Munoz, Nueva Ecija, where 466 students of the said school participated in the taste testing of mushroom kropek.
</td></tr>
</table>

continued on Page 27...

...from Page 26

Research and Development Activities	Highlights/Results
Production-related Collaborative R4D with other Institutions (Ilocos R4D Initiatives and support Enhancement for Rice (I RISE for RICE)	**Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union** • The site validation in Barangay Rissing, Bangar, La Union was carried out in close coordination with the Local Government Unit. The objective was to assess a total area of 25 ha, to date, 23.45 ha have been successfully validated as pilot areas and were given support services such as training, fertilizers, and other inputs. • A significant number of the selected farmer-cooperators were members of the RISINTAL Irrigators Association. To date, a total of 51 farmer-cooperators have been participating in the project. As a result of the training, the extent of knowledge has expanded by 31.93%, and a notable count of 51 farmers have graduated. **Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site** Component 1: Promotion and Utilization of Waste Products and By-Products of Rice in Rice Cluster Areas) • Produced a total of 50 bottles of tissue culture and 201 bags of grain spawn that will be used in the community mushroom production • Conducted capability building on oyster mushroom production benefiting 44 farmer cooperators wherein 100 fruiting bags were distributed to all participants for them to observe and monitor • Conducted farmers meeting last November, 2023; during the discussion, only Purok 3 in Brgy. Alitaya, Mangaldan, Pangasinan, agreed and were willing to venture into mushroom farming. A site visit and validation were conducted to assess the area where they will put up their growing house for mushroom production. Their production is scheduled to begin in the first quarter of 2024. **Pangasinan Research and Experiment Center (PREC) Sual, Pangasinan site** • Established pilot farms based on the existing cropping pattern of the cluster area with a total of 25-hectare cluster fields consisting of 44 farmer-cooperators from the Magayaga Alitaya Farmers Irrigator Association (MAFIA) showcasing the improved production technologies. Technologies were evaluated in the farmer's field through Participatory Adaptive Research (PAR) method. • Conducted an inception meeting last June 14, 2023 with all of the stakeholders prior to the establishment of the project for fine-tune the workplan of activities, discussed project budget, objectives, roles and responsibilities of stakeholders, benefits and support services. • Conducted a 3-day PRA on July 11-13, 2023 at Mangaldan which was facilitated by the project implementers in Pangasinan. • Conducted nine (9) week session of capability building under smarter rice production technologies • Based on the crop cut data gathered, group 1 (SL-8 variety) attains the highest yield with the average of 5.4 t/ha. The group 2 (Longpin) had the 2nd highest yield with the record of 4.3 t/ha followed by group 5 with the yield of 3.6 t/ha. Group 3 (SL-20) got 3.2 t/ha and the group 4 (TH-82) had the lowest among the 5 groups with 2.8 t/ha. • Established a 25-hectare field trial of IRISE4RICE for dry season 2023-2024. Prior to the establishment, LGU-Agriculture Mangaldan distributed rice seeds to farmer cooperators.

continued on Page 28...

...from Page 27

Research and Development Activities	Highlights/Results
Production Collaborative R&D with other institutions (Yield and Economic Potential of Enhanced Rice Crop Manager (RCM) Recommendation for Diverse Rice Growing Ecosystem	**Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur** •Conducted a field trial at Sto. Domingo, Ilocos Sur following a rice-corn cropping pattern to validate the effectiveness of the enhanced site-specific nutrient management component of Rice Crop Manager (RCM) across the diverse rice-growing ecosystems in Ilocos Sur. • Nutrient Omission Plot Technique (NOPT) was also implemented super-imposed to farmer's field with a minimum of three sites within the municipality. • The crop was managed employing the recommended cultural practices for rice. Complete crop protection was done, except for the fertilizer application which was based on RCM tool • Prior to the establishment, a one-on-one interview was done with the farmer to gather information with his existing practices being employed in his farm. During the interview, it was found out that the farmers only fertilize their crop twice but with greater amount of fertilizer. • During crop cut activity, all the data were collected per site and were used as the main basis of the analysis for WS 2023. Based on analysis, the use of RCM recommendation enhanced/improved the growth and yield performance of the rice crop with an average yield of 4.7 t/ha under rainfed condition. **Ilocos Norte Research and Experiment Center (INREC) Batac, Ilocos Norte site** • Table 7 shows the information of the three sites identified in Batac City, Ilocos Norte. Data consolidation and finalization is still on going to properly identify and compare the effect of farmers practice versus RCM 1 (old version of RCM) and RCM 2 (adjusted/new version of RCM). *Table 7. Farmer's information* **Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union** • This project was established at Brgy. Ballay, Bauang, La Union. Based from the initial yield result through crop cuts, RCM treatments had the highest production over the farmer's practice. It has been observed that during the last interview, farmers had only used single element fertilizer (Use of N fertilizer) which is urea (46-0-0) and/or Ammonium Sulphate (21-0-0) only and beng applied either once or twice based on the color of the leaves with no specific time of application. • Collected information supports that farmers had limited technical knowhow on nutrient management which leads to lower yield and not efficient used of fertilizer. • Seedlings were transplanted at more than a month old which leads to poor quality and low production of tillers which is another factor resulting to lower production. • As observed, water was a major problem which affects the seedling age at transplanting and the nutrient management. **Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site** • Conducted two studies to evaluate the yield and economic potential of rice using the enhanced Rice Crop Manager (RCM) recommendation system for diverse rice ecosystems. Study 1 focused on the zinc area, while study 2 examined the rice-based area. • The findings from both studies demonstrate the effectiveness of the Enhanced Rice Crop Manager (RCM) recommendation system in optimizing rice cultivation practices and improving yields in diverse rice ecosystems. The RCM system consistently outperformed conventional farmer practices in terms of yield.

Name	Address	Area (sqm)		
		RCM 1	RCM 2	Farmer's Practice
Fernando Opelac	Brgy. San Mateo, Batac City	614	576	2189
Nathaniel Jamito	Brgy. Naguirangan, Batac City	683	797	1418
James Mercado	Brgy. Naguirangan, Batac City	614	576	891

Corn Banner Program

A. Production Support Services

a. Procurement and distribution of high-quality seeds
• Distributed a total of 232 bags of registered OPV glutinous white corn seeds at 20 kg/bag for 232 hectares, 265,032 kilograms GM yellow corn seeds and 1,472,400 kilograms' inorganic fertilizer-urea, serving and area of 14,724 hectares
• Distributed a total of 2 bags yellow corn seeds at 9 kg/bag and 2 bags urea fertilizer at 50kg/bag to qualified corn farmer registered in the RSBSA
• Distributed a total of 3,000 bags at 50 kg/bag to corn farmer in Pangasinan, Ilocos Sur and Ilocos Norte from the inorganic fertilizer-urea donation of the People's Republic of China
• Distributed a total of 109,570 pieces' cassava cuttings region-wide for the support to cassava production

b. Procurement and distribution of various seeds as buffer stock
• Procured and distributed a total of 10,800 kilograms OPV white corn seeds and 13,788 kilograms GM Yellow Corn Seeds under the seed reserve, covering a total area of 600 hectares for the OPV white corn and 766 hectares for the GM yellow corn
• Procured and distributed various pesticides such as insecticides, rodenticides and pheromone lure for fall army worn under chemical reserve

B. Extension support, Education and Training Services (ESETS)

a. Conduct of trainings and training-related events
• Conducted four (4) batches of entrepreneurial training region-wide benefiting 158 farmers where each group was awarded with one (1) unit hammer mill as grant for them to process their produce into grits or cracked corn to be used as feed ingredient, thereby adding value to the corn grains to increase their income

b. Establishment of technology demonstrations and model farms
• Established four (4) sites of cassava techno-demos in Aguilar, Pangasinan, Bauang, La Union, Sto. Domingo, Ilocos Sur and Laoag City, Ilocos Norte where each site covers one ha showcasing the Site Specific Nutrient Management (SSNM) fertilizer rate
• Established four (4) model farms in Tayug, Pangasinan, Bangar, La Union, Sto. Domingo, Ilocos Sur and Solsona, Ilocos Norte where each site covers 50 ha showcasing the use of SSNM Software to generate site specific fertilizer recommendation and farm mechanization such as the use of tractor with planter and fertilizer application and the likes.

C. Irrigation Network Services

• Distributed a total of 202 units pump and engine set for shallow tube wells benefiting 69 farmer groups or associations region wide with a total service are of 606 hectares



Distribution of hybrid yellow corn seeds under the Yellow Corn Production Enhancement Program.



Distribution of urea fertilizer under the Yellow Corn Production Enhancement Program.



Distribution of urea fertilizer under the Yellow Corn Production Enhancement Program.



Field lay-outing and planting on the 50ha. hybrid yellow corn model farm at Brgy. Paras Sto. Domingo, Ilocos Sur.



Distribution of pump and engine sets.

D. Agriculture and Fishery Machinery, Equipment and Facilities Support Services (AFMEFSS)

• Distributed six (6) units four-wheel drive farm tractor and two (2) units corn combine harvester under the production-related machineries and equipment and four (4) units hammer mill, one (1) unit mobile dryer, two (2) units hauling truck and two (2) units cassava chipper under the post-harvest related machineries and equipment benefiting a total of 18 FCAs in the region



Awarding and distribution of farm machineries to FCA's.

Research and Development Activities	Highlights/Results
Out scaling of production of hybrid yellow corn using ne-based fertilizer recommendation	**Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur** • Conducted crop cutting activity for the out- scaling of yellow corn in Ilocos Sur in collaboration with the Provincial Government of Ilocos Sur, local government unit of San Juan, Sinait and Candon. • Composed of two treatments each site which - the Farmers Practice (FP) and Site Specific Nutrient Management (SSNM) were harvested based on the methodology of the project. • Employed three sampling areas for each treatment measuring 8.40sqm per crop cut Data gathered were number of plants, number of ears, fresh weight of 10 representative ears, fresh weight of grain from 10 representative ears, grain yield and cost and return analysis. This is to determine the crop performance of the corn plants based on the two different practices. • Table shows that in terms of crop yield, gross income, production cost, net income, and benefit cost ratio per hectare, SSNM site for the city of Candon, Ilocos Sur and the municipality of San Juan, Ilocos Sur obtained the higher value compared to farmers practice. On the other hand, higher value of farmers practice was noticeable vs SSNM in the municipality of Sinait, Ilocos Sur.

Table 8. Yield performance of yellow corn for SSNM vs Farmers Practice, DS 2022-2023

Municipality	Treatment	Yield (Tons/ Ha)	Gross Income (Php/Ha)	Production Cost (Php/ Ha)	Net Income (Php/Ha)	Benefit Cost Ratio (Bcr)
Candon	SSNM	8.18	171,780.00	65,472.00	106,308.00	1.62
	Farmer's Practice	7.84	164,640.00	66,269.50	98,370.50	1.48
San Juan	SSNM	9.80	171,780.00	65,472.00	106,308.00	1.62
	Farmer's Practice	9.68	164,640.00	66,269.50	98,370.50	1.48
SINAIT	SSNM	8.18	171780	65472	106,308	1.62
	Farmer's Practice	7.84	164640	66269.5	98,370.5	1.48

Ilocos Norte Research and Experiment Center (INREC) Batac, Ilocos Norte site

• This project was conducted to evaluate and disseminate Nutrient Expert for Maize Philippines (NEMPH) under Ilocos condition and assess the economic benefits using this software fertilizer recommendation to the current practice of farmers.
• Prior to the establishment of the project, a coordination with the local government unit thru Municipal Agricultural Office (MAO) was conducted to identify the site and cooperator of the project in which the set of qualifications and criteria for selection was presented. Technical briefing to the beneficiaries was done on 15 September 2023 wherein the project protocol and package of technologies were presented and discussed to ensure the smooth and accurate implementation of the project.

Research and Development Activities	Highlights/Results
Out scaling of production of hybrid yellow corn using ne-based fertilizer recommendation	• This project was established at Brgy. Mariquet, Solsona, Ilocos Norte in three (3) farmer-cooperators on 10 November 2023, devoting 200 sq. m. which was divided into two areas managed with farmers' fertilizer rate and practice (FFP) and SSNM recommendation based on based on NE software that served as treatment of the study. Weekly monitoring were performed to assess the pest occurrence and incidence in the research area and status of the crop. **Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union** • An on-farm participatory evaluation of Nutrient Expert-based Site-specific Nutrient Management (NE-SSNM) was conducted in 12 different sites in Region 1. This study aimed to compare the yield results of Hybrid yellow corn and validate and fine-tune Nutrient Expert software-based recommendations with farmers. • The gathered data were computed, tabulated, and analyzed using the T-test (paired sample) for significance. Analyzed using the Statistical Tool for Agricultural Research (STAR). • Results of the study showed a significant result on the average grain yield of Hybrid Yellow corn using the NE-based fertilizer recommendation of 7.65 tha-1 compared to CNMP for farmers with an average grain yield of 6.08 tha-1 with a yield difference of 1.32 (25.82%). Furthermore, NE-based treatment revealed a higher average net income of PhP 78,507.49 per ha compared to the farmers practice of PhP 48,774.57 per ha, which indicates that NE-based Treatment was cheaper to produce at PhP 9.69 per kg compared to PhP 14.19 per kg. • NE based Nutrient recommendation was able to decrease the fertilizer Nitrogen (N) kg per ha by 18kg per ha and improved fertilizer Phosphorus (P) and Potassium (K) by 8 kg per ha and 25 kg per ha respectively. Validation of protocol recommendations generated by the Nutrient Expert for Maize-Philippines (NEM-PH) revealed that the targeted yields were achieved in all sites. The average attained yield of 7.65 tha-1 from the NEM-PH rate has surpassed the target yield of 6.05 tha-1.
Optimizing Yield and Income on White Corn Production through Integrated Crop Management	**Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union** • An initial consultation with the Provincial Agriculture office of possible site and project cooperators who needs intervention and possible solutions to problems present thru phone call. Based on consultations, problems on seed sources and decreasing number of white corn growers in the area of Tubao, La Union due to FAW infestation was one of the concerns. • Conducted Participatory Rural Appraisal (PRA), this followed activities designed to describe and evaluate the biophysical, socio-economic characteristics and crop-animal production practices of the area, identify problems, opportunities, and constraints in the farming system of the area, identify research and development interventions in the community and formulate a preliminary participatory plan in the community. • Conducted community action planning wherein the results of analysis, interventions/technology plans, detailed plans and activities as well as the project design and possible technology options to help solve the identified problems in the PRA site was presented. • Farmers were also trained wherein all necessary training and activities that will enhance the technical knowledge as well as values formation and entrepreneurial and leadership skills of the participants was offered. This will play a vital role in the success of technology transfer, adoption and utilization. The following trainings were provided for the farmer-partners through lectures: >Improved White Corn Production Guide >SSNM Principles and Nutrient Expert Software Technology >Pest Management for White Corn >Financial Literacy and Basic Farm Recordkeeping

<table>
<tr><th>Research and Development Activities</th><th>Highlights/Results</th></tr>
<tr><td>Optimizing Yield and Income on White Corn Production through Integrated Crop Management</td><td>• Established demonstration farm to showcase improved white corn production technologies in the selected areas during the 2023-2024 cropping season. Three sites for the varietal trial and three set up for the BCA trial was established with three farmer cooperators. The existing farmers practice was compared with the package of technology which includes practices on varietal selection, land preparation, planting distance, fertilization and pest management. These sites were monitored and gathered with data on pest incidence and damage severity. Harvesting and crop cutting activity was conducted on December 2023 and on-going finalization of paper.

Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site

• One key farmer in respective districts of Pangasinan served as cooperators of the project located in District 1 Brgy. Dacap Norte in the municipality of Bani, in District 2 Brgy. Bayaoas in the municipality of Urbiztondo, in District 3 Brgy. Alacan in the municipality of Malasiqui, in District 4 Brgy. Guesang in the municipality of Mangaldan, in District 5 Brgy. Gualsic in municipality of Alcala, in District 6 Brgy. San Miguel in the municipality of Natividad.
• SSNM obtained 8.75 tons/ha, higher than Farmers fertilizer practice of 8.23 tons/ha with 520-kilogram yield difference. With regards to cost and return, SSNM had production cost of Php80,050.00, gross income of Php144,375.00, net income of Php64,225.00, cost per kilogram of Php9.70 and BCR of 0.80 while FFP had Php79,810.00 production cost, gross income of Php135,795.00, net income of Php55,985.00, cost per kilogram of Php9.60 and BCR of 0.70. SSNM had higher net income than FFP with a difference of Php8,240.00.</td></tr>
<tr><td>On-farm Participatory Evaluation and Field Validation of Nutrient Expert for Cassava – a Tool for Sustainable Cassava Yield Intensification in Ilocos Region</td><td>Ilocos Norte Research and Experiment Center (INREC) Dingras, Ilocos Norte site

• This trial was established in 1.0 ha rainfed area at Brgy. Talingaan, Laoag City, and Ilocos Norte during DS 2022-2023 with 2 treatments; 1) farmer's fertilizer practice and, 2) nutrient-expert (NE)-based recommendations using the NE software for cassava. Cropcutting is on-going. The initial result was gathered in 8 farmer-cooperators or 61% of the total co-operators (table 9). No conclusion yet until the farms of 13 cooperators were gathered with yield.

Table 9. Initial yield of cassava using NE for cassava versus farmers' practice, planted at Laoag City, CY 2023.
<table><tr><th rowspan="2">Variety Planted</th><th colspan="2">Average yield (tons/ha)</th></tr><tr><th>Nutrient Expert</th><th>Farmer's Practice</th></tr><tr><td>Golden yellow</td><td>8.6</td><td>8.8</td></tr></table>
Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union

• Establishment was conducted during DS 2022 on November 16, 2022 at Brgy. Inabaan Norte, Rosario, La Union in a 1 ha area. This includes treatments such as the farmer's fertilizer practice and nutrient-expert (NE) based recommendation using the NE-software for cassava. Fertilizer was applied right after planting of cassava while sidedress application of fertilizer was applied at 3 MAP for the SSNM plot. The crop was already harvested and paper is for finalization.

Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site

• Conducted pre-implementation activities: trial sites were made in close coordination with the Municipal LGU of Pozzorubio through the office of the Municipal Agriculturist, Brgy. Buneg as one major cassava producing barangay were selected and five active co-operators were chosen for the project.
• Initial result of SSNM fertilizer recommendation obtained an average yield of 45.03 tons per hectare which is higher than of farmers' fertilizer practice with an average yield of 26.63 tons per hectare. Significant yield increase of 59% was noted with the use of nutrient expert SSNM fertilizer recommendation compared to Farmers fertilizer practice.</td></tr>
</table>

High Value Crops Development Program

A. Production Support Services

a. Distributed assorted vegetable seeds and farm supplies as follows:

Interventions	Distributed	No. of Beneficiaries (Groups)
Garlic (kg)	24,000	2
Shallot (kg)	40,000	2
Red Onion (kg)	400	6
Lowland Vegetables (kg)	1,012	26
Flower Inducer (kg)	48,000	8
Inorganic Fertilizer (kg)	18,000	12
Liquid Fertilizer (lit)	1,400	35
Bagging Materials (pcs)	480,000	5
Plastic Mulch (no.)	120	12





b. Supported Gulayan projects as follows:

- Established 73 schools and 8 Gulayan sa Barangay benefiting 81 group-beneficiaries
- Conducted a regional search for the FY 2023 Best Gulayan sa Barangay Implementer with a total of thirty (30) barangay-participants



B. Extension Support, Education and Training Services Sub-Program

- Established techno demos for the rehabilitation of old and unproductive trees of coffee, cacao and mango:

Interventions	Unit of Measure	Accomplishment
Coffee (no. of trees fertilized)	number of trees fertilized	11,000
Cacao (no. of trees fertilized)	number of trees fertilized	8,500
Mango (no. of trees fertilized)	number of trees fertilized	34,000



C. Agricultural Machinery, Equipment and Facilities Support Services Sub-Program

- Provided 393 units of farm production-related machinery and equipment as follows:

Interventions	Distributed	No. of Beneficiaries (Groups)
4-Wheel tractor (no.)	2	2
Vegetable seeder (no.)	56	28
Multi-Cultivator (no.)	23	23
Power Sprayer (no.)	34	17
Knapsack Sprayer (no.)	268	34
Shredder (no.)	10	10





D. Irrigation Network Services

- Distributed 63 units of pump and engine set benefiting 114 group-beneficiaries

National Urban and Peri-Urban Agriculture Program

A. Production Support Services

a. Distributed seed and other farm supplies as follows:

Interventions	Distributed	No. of Beneficiaries (Groups)
Vegetable Seeds (kg)	100	12
Garden Tools (no.)	120	12
Plastic Drum (no.)	350	12
Goat (no.)	20	20



B. Agricultural Machinery, Equipment and Facilities Support Services Sub-Program

a. Provided farm production-related machinery and equipment as follows:

Interventions	Distributed	No. of Beneficiaries (Groups)
Multi-Cultivator (no.)	12	12
Shredder (no.)	12	12



Livestock Banner Program

A. Production Support Services

a. National Animal Genetic Resources Improvement Program

• Distributed a total of 8,673 pieces of semen straws, 10,300 animals inseminated and 3,162 heads of calf-drop under the Unified National Artificial Insemination Program (UNAIP)



Calf drop produced of Mr. of Artificial Insemination under UNAIP

• Maintained two (2) techno-demos in Don Mariano Marcos Memorial State University (DMMMSU) in Bacnotan, La Union and in Sta. Barbara Breeding Center in Pangasinan under the Philippine Native Animal Development (PNAD). The stocks shall serve as breeder stocks for production of the Ilocos Breed Native Pig where offsprings produced will be distributed to raisers who are interested to venture in native pig production



Artificial Insemination activity

• Maintained, upgraded and rehabilitated five (5) government stock farms that were strategically located in the four (4) provinces of Ilocos Region to provide local source of quality breeders to be distributed to interested individuals and FCAs, as well as a source of replacement animals for the affected raisers caused by typhoon/ calamities

• Distributed 6 heifers and 27 breeder goats benefitting 29 farmer individuals in Ilocos Norte



Distribution of breeder goats produced from Production Station in ILIARC Station, Bacnotan, La Union

• A collaborative activity with PVO, LGU and ASF affected farmers in the implementation of 40-day quarantine period through the provision of technical assistance, distribution of sentinel package

and monitoring of identified areas under the Calibrated Repopulation Thru the Implementation of Sentinel Protocol (INSPIRE Program)

• Distributed 1,530 weaners benefiting 510 beneficiaries and 33 barangays released from quarantine, a total of 25.6 million interventions





Awarding of LEED Cattle Package to the 30 members of Bagnos Multipurpose Cooperative in Banna, Ilocos Norte

B. Extension Support, Education and Training Services (ESETS)

• Provide incentives to 201 AEWs and 55 Meat Inspectors

C. Agricultural Machinery, Equipment, and Facilities Support Services (AMEFSS)

a. Established Production facilities
• Livestock Economic Enterprise Development Project (LEED) with the following recipients:

Project	Cost	Beneficiaries
Cattle Multiplier Farm	1,500,000.00	• Bagnos Multipurpose Cooperative, Banna, Ilocos Norte • Arangkada Sto. Domingo Federated Farmers Association, Sto. Domingo, Ilocos Sur
Duck Multiplier Farm	1,875,000.00	• Alcala Tobacco Rice Corn Agriculture Cooperative, Alcala, Pangasinan
Goat Multiplier Farm	2,500,000.00	• Dupitac ARBs Multipurpose Cooperative, Piddig, Ilocos Norte •Abante Domaralos Agriculture Cooperative, Malasiqui, Pangasinan
Chicken Multiplier Farm	2,000,000.00	• Rosario Dairy Farmers Cooperative, Rosario, La Union
Rabbit Multiplier Farm	1,000,000.00	• Bayambang Rabbit Meat Producers and Breeders Association Inc., Bayambang, Pangasinan

• Implemented Community-Based Swine Production through Clustering and Consolidation Project (INSPIRE Program) worth P180 million benefiting 18 qualified FCAs/LGUs where P10million was awarded each of the following FCAs/LGUs:

1. LGU Bayambang, Pangasinan;
2. Binarmappa Multipurpose Cooperative;
3. Conconig East Farmers Multipurpose Cooperative, Sta. Lucia, Ilocos Sur;
4. Catuday Agrarian Reform Cooperative, Catuday, Bolinao, Pangasinan;
5. Aramal Tocok FFF Multipurpose Cooperative, San Fabian, Pangasinan;
6. TRC Farmers Association, Inc., San Fabian, Pangasinan;
7. LGU Santol, La Union;
8. LGU Alcala, Pangasinan/Alcala Blessed Agri Network Agriculture;

9. LGU Caoayan, Ilocos Sur;
10. Baggak Multipurpose Cooperative;
11. San Juan Icas Maumel Farmers Association, Inc.;
12. Kagra Agriculture Cooperative;
13. Pangasinan Farmers Agriculture Cooperative;
14. LGU Banayoyo/Binnuyog Banayoyo Farmers Agriculture Cooperative;
15. LGU San Fabian;
16. Baro A Namnama Multipurpose Cooperative;
17. LGU Dingras; and
18. Old Central Multipurpose Cooperative.



Awarding of Community-based Swine Production through Consolidation and Clustering Project amounting to 10Million to LGU Dingras

Organic Agriculture Program

A. Production Support Services Sub-Program

• Distributed 390 bags of pigmented rice seeds, 22,625 kilograms of molasses, 800 pieces of plastic drums, 260 rolls of plastic fine-meshed net, and 1,800 pieces of plastic crates to 149 farmer group beneficiaries' region-wide

• Provided seeds (black and red, mungbean, OPV white corn, cowpea), vermicompost, vermicast, vermiworms, animals (upgraded goat, native chicken, Muscovy duck) and herbs and spices to the DA-RFO 1 stations for the production of farm inputs and animals

B. Extension Support, Education, and Training Services (ESETS) Sub-Program

• Conducted two (2) batches of business planning on organic agriculture hub, two (2) batches of training on livelihood proposal, four (4) consultative meetings to the farmers toward PGS certification



Awarding/distribution of inputs and farm supplies to the farmer-group beneficiaries' region wide

• Conducted five (5) batches of Information Caravan attended by the local chief executives and staff from the Provincial and Municipal Agriculture Office

• Conducted two (2) PGS inspections were also conducted for the group of La Union and Pangasinan leading to the organic agriculture accreditation

• Conducted the 5th Regional Organic Agriculture Congress (ROAC) with the theme, "Kabuhayang OA, Kinabukasang OK," was conducted at Centennial Arena, Laoag City, Ilocos Norte on August 31, 2023 with 200 stakeholders, including organic agriculture practitioners in the region, organic farming advocates, staff from Local Government Units, Provincial Organic Agriculture Focal Persons, and the academe, as well as the National Organic Agriculture Board (NOAB)

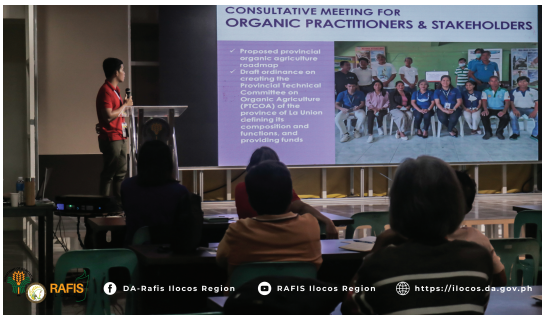
• Conducted the regional launching of the 9th Organic Agriculture Month was conducted on November 13, 2023, at Agricultural Training Institute Tebag East, Sta. Barbara Pangasinan, highlighting the economic benefits of organic farming in partnership with the Agricultural Training Institute – Regional Training Center I (ATI-RTC I)

C. Agricultural Machinery, Equipment, And Facilities Support Services Sub- Program (AMEFSS)

• Distributed four (4) units of floating tillers, 1 unit of forage chopper, 2 units of mini rice thresher, and 2 units of feed mixer to the 13 farmer's associations/cooperatives region-wide

D. Irrigation Network Services (INS) Sub-Program

• Distributed and procured 48 units of pump and engine sets
• Constructed and awarded a total of 10 solar- powered irrigation systems to 17 and 10 farmers associations/cooperatives region-wide, respectively



Organic agriculture information caravan held at the DA-RFO1 conference room.



The 5th Regional Organic Agriculture Congress held on August 31, 2023 in Laoag City, Ilocos Norte.



Launching of the 9th Organic Agriculture Month in Sta. Barbara, Pangasinan



Awarding and distribution pump and engine set SPIS to the qualified FCAs in the region

Halal Food Industry Development Program

• Conducted a one-day seminar on Halal-compliant Goat Multiplier Farm on April 26, 2023 at DA-RFO1 Pangasinan Research Experiment Center (PREC) Sual, Pangasinan;

• Conducted a one-day seminar on Halal-compliant raising of Cattle on April 28, 2023 at Laoag City, Ilocos Norte with the support and technical assistance of the Provincial Veterinary Office headed by Dr. Loida Valenzuela;

• Conducted training on Halal-compliant broiler production on May 25, 2023 at the Municipal Farmers Hall, Bauang, La Union with Dr. Jovita Datuin as the learning service provider benefiting sixty (60) individuals;

• Conducted training on Halal-compliant feeds formulation on May 30, 2023 at DA-RFO1, PREC station, Sual, Pangasinan;

• Conducted training on Halal-compliant cacao and coffee production on May 31, 2023 at 5th floor Conference Room, Department of Agriculture, Regional Office 1, City of San Fernando, La Union benefiting sixty (60) individuals;

• Conducted training cum production on DA assisted Halal products to SMEs, processors and food producers on August 22, 2023 at 5th floor Conference Room, Department of Agriculture, Regional Office 1, City of San Fernando, La Union in collaboration with the DOST Regional Office 1;

• Conducted a one-day seminar on animal slaughtering following the Islamic way on August 25, 2023 at PESO Office Conference Hall, Lingayen, Pangasinan; and

• Accompanied staff from Central Office, headed by Mr. Patrick Raymund A. Lesaca. for the conduct of validation of beneficiaries of various Halal trainings for CY 2023 from Ilocos Norte.



Conduct of training on Halal-compliant multiplier farm



Conduct of training on Halal-compliant cattle fattening



Conduct of training on Halal-compliant feeds formulation



Conduct of training cum production on DA Assisted Halal Products





Locally-funded projects

Special Area for Agricultural Development Program Phase 2

I. Social Preparation Component

• Conducted orientation, consultation, beneficiary needs assessment, and capability enhancement/building activities to capture the necessary data related to the beneficiaries' socio-economic profile, needs or gaps vis-à-vis their current and desired situation and to develop their values formation, leadership, and organizational management

II.Food Production and Livelihood Interventions Component

• Conducted technical trainings (package of technology trainings and market-related trainings and provided livestock animals, seeds, planting materials, farm machineries and equipment

• Selected the four pilot municipalities with the highest poverty incidence from the 5th Class Municipalities per province and provided with livelihood packages, to wit:



Orientation and beneficiary needs assessment activities

Province/Municipality	Name of Beneficiary	Livelihood Enterprise
Sto. Tomas, Pangasinan	United Barangay San Antonio Sto. Tomas Farmers Association, Inc.	Enhanced Cattle Production with White Corn Production
Bagulin, La Union	Sinabugan Farmers Association	Enhanced Cattle Production with Vegetable Production
Sugpon, Ilocos Sur	Pangotan Farmers Development Association Inc.	Enhanced Goat Production with Ube Production
Dumalneg, Ilocos Norte	Riverside Greeners Association - RISGA Inc.	Enhanced Cattle Production with Ginger Production



Conduct of capability building training on leadership, organizational management and values orientation



Distribution activities

Updating Registry System for Basic Sectors in Agriculture

The two components of the Registry System for Basic Sectors in Agriculture—Profiling of Farmer and georeferencing of parcel—this program is still in place and continues to provide services to our respective clientele with effective, timely, and easily accessible data.



Profiling of farmers

Profiling of Farmer

• Enrolled/Registered 12,371 farmers in the Farmers and Fisherfolk Registry System (FFRS) for the Ilocos Region and 9,780 for the 2nd Semester; and

• Conducted a reconciliation of detected probable duplicate records encoded in the Farmers and Fisherfolks Registration System (FFRS) to ensure that the generated list in the RSBSA is reliable since records contained in the RSBSA are essential to the ongoing planning and implementation of various DA interventions, including the fertilizer distribution voucher (FDV), seed distribution, and RCEF-Rice Farmers Financial Assistance (RCEF-RFFA). As a result, 283 were already rectified through desk validation and in collaboration with the concerned local government units.

Georeferencing of Parcel

• Monitored farm production areas to make government interventions more appropriate for increasing farmers' productivity and incomes while also enhancing the resilience and sustainability of their farms; and

• Verified an area of 15,833.9 hectares, while the second's semester's estimated verified area is 22,478.72 hectares. The estimated result may be greater before 31 January 2024 because the uploading of GPX files for the second semester accomplishment is still ongoing. The source of this data is the RSBSA-Georeferencing Platform.

The updated RSBSA list of rice farmers could be attributed to the successful and efficient distribution of assistance through the Rice Competitiveness Enhancement Fund-Rice Farmers Financial Assistance (RCEF-RFFA), wherein unconditional cash assistance of P5,000 was loaded into the accounts of 285,087 rice farmer-beneficiaries who are tilling an area of two hectares or less.







Geotagging activities

Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) Program

Social Preparation Component

• Executed six (6) training aligning with the predetermined targets. Additionally, a total of twelve (12) IPOs successfully underwent training.

• Equipped three (3) IPOs underwent Community Organizing, eight (8) IPOs received training on Integrated Crop Management, and twelve (12) IPOs with skills in Mushroom Spawn Production training.

Production and Livelihood Component

• Provided five (5) sub-projects to twelve (12) AD, benefiting a total of eighteen (18) IPO recipients.

Marketing Assistance and Enterprise Development

• Organized two (2) informative and engaging trainings on tomato and banana product development.

• Four (4) IPOs had the opportunity to participate in these training sessions, gaining valuable insights and knowledge that will help them grow their businesses in the future



Community Organizing activity of the Malico Indigenous People Development Organization with the DOLE, CDA, and DA Staff in Malico, San Nicolas, Pangasinan.



Community Organizing activity of the Kabayabasan Tribal Council Association with the DOLE, CDA, and DA Staff in San Felipe East, Kabayabasan, San Nicolas, Pangasinan.



Distribution of nursery materials to Libbo Farmers Association and Alibangsay Farmers Association in Bagulin, La Union



Banana by-product development training attended by I-owak Tribe Earth Savers Association Inc. of Brgy. Fianza, San Nicolas, Pangasinan



Distribution of Lanzones and Rambutan Seedlings to RIC Danac and Caoayan in Sugpon, Ilocos Sur.

Adaptation and Mitigation Initiative in Agriculture Program

• The year 2023 marks the 7th year of the out scaling and sustaining Climate Risk Agriculture (CRA) and the 4th year of Adaptation and Mitigation Initiative in Agriculture Program-Climate Resilient Agri-Fishery Technology Based Enterprises (AMIA-CREATE) in Ilocos Region with existing 13 AMIA villages region-wide [three (3) AMIA Villages each for the province of Ilocos Norte, Ilocos Sur, and La Union and four (4) from Pangasinan] wherein AMIA Development Pathway (ADP) was developed to guide the implementation, monitoring and assessment of climate resilient villages.

• Procured and distributed tailor-fitted production supports in support of the crop-livestock integration to help the farmers elevate their farming production and likewise for the diversification and livelihood development of AMIA sites. These include the 35 heads of cattle for fattening with briefing, various drugs and biologics, 68 bags of drought resistant rice seeds (NSIC RC 480), 157 cans of watermelon seeds, 2 units floating tiller, 1 unit of multi-purpose cultivator, 100 rolls of plastic mulch, agricultural supplies and 93 pieces of plastic drum.

• Conducted training on financial management and bookkeeping, entrepreneurial and value-adding to capacitate and upskill the beneficiaries in formulating strategies for their sustainable enterprise development projects.

• Awarded processing equipment and machinery such as pulverizer, fruit juicer, chiller and fruit chipper in support to the establishment of CRA technology-based enterprises of the AMIA communities.

• Initiated workshops with Local Government Units of Ilocos Sur, La Union and Ilocos Norte for the updating of Climate Risk Vulnerability Assessment (CRVA) Maps in Ilocos Region in collaboration with the Geographic Innovations for Development Solutions, Incorporated. The training primarily aims to evaluate the climate risk vulnerability status within a geospatial landscape at the provincial level by integrating field data and secondary data.

• Assessed three (3) sites from the existing 13 AMIA Village Sites region-wide under Phase 3 [Establishment of Climate Resilient Agri-fishery Technology-based Enterprises]:

1. Brgy. Sibsibbu, Lancuas and Kalumsing, San Emilio, Ilocos Sur

- The barangays of Sibsibbu, Lancuas, and Kalumsing in San Emilio are home to three of the AMIA program's pioneering locations since its founding in the Ilocos Region in 2016.

- Through Community-Based Participatory Action Research (CPAR), a variety of Climate Resilient Agriculture (CRA) practiceas were introduced. Following years of use, some of these technologies and methods have proven ineffective, while others have produced notable results in terms of their adaptability and suitability for the farming environment and farmers' lifestyle.





Distribution of tailor fitted production supports to the AMIA Villages

- The established enterprises of the AMIA sites are powdered turmeric, salabat, ube, chili in Lancuas; turmeric, ginger, malunggay, ube, squash chips in Sibsibbu; and crop-livestock production in barangay Kalumsing.

2. Brgy. Madupayas, Badoc

- The program introduced eight Climate Resilient Agriculture (CRA) practices, including vermicomposting, soya bean production, crop-livestock integration including native pig and free-range chicken production, organic vegetable production, diversified vegetable farming, and mushroom production. Despite the challenges posed by the Covid-19 pandemic, the farmer-cooperators have successfully maintained the continuity of their association and its livelihood activities.

- Through the efforts of the DA-RFO 1 AMAD-Agribusiness Promotion Section, association members participated in the capability development training on poultry and livestock production, business registration, and taxation held at INREC-Dingras, Ilocos Norte on September 21-22, 2023. The association has established enterprises in native pig production, turmeric powder, and mushroom production.

3. Brgy. San Jose, Anda, Pangasinan

- The Anda Mushroom Growers and Organic Farmers Association Inc. (AMGOFA) is one of the AMIA Villages in the Ilocos Region, located in Brgy. San Jose, Anda, Pangasinan.

- It was organized and introduced Community-Based Resilience and Adaptation (CRA) practices that have significantly impacted income and sustainability. These practices include mushroom production, crop and livestock integration, and value-adding, all of which have been adopted as income-generating livelihoods for the association. Ms. Marilou Celi, the president of AMGOFA was included among the semifinalists for the Philippine Resilience Award for Women 2023 conducted by the National Resilience Council.

- The established enterprises of the association are the dried fish, oyster mushroom and vegetable production. Further, Ms. Celi is teaching her members how to make mango vinegar and fruit wine for the additional income of the association.



Conduct of the Financial Management and Bookkeeping Training to the AMIA villagers of the Brgy. Madupayas, Badoc, Ilocos Norte



Constructed Processing Facility at Brgy. Lancuas



Conduct of the Entrepreneurial and Value-adding at Brgy. Calunetan, Sison, Pangasinan





The female members of the association have started making embutido and skinless longganisa as a means of livelihood

Results of the conducted CRVA in Region 1

• Summary of Accomplished CRVA mapping projects for Region 1

Province	AMIA Phase	CRVA Map Completion (%)	Year Completed	Partner Institution	Project Cost
Ilocos Sur	AMIA 2	100	2016	Mariano Marcos State University, Batac, Ilocos Norte	Php 1M
Ilocos Norte	AMIA 2++	100	2019	Geographic Innovations for Development Solutions, Inc., Los Baños, Laguna	Php 1.4M
La Union	AMIA 2++	100	2019		
Pangasinan	AMIA 2++	100	2019		

• Vulnerability Profile of the AMIA Villages in Region 1

AMIA VILLAGE	YEAR ESTABLISHED	OVER-ALL VULNERABILITY CLASS*	CLIMATE-RELATED RISKS*
ILOCOS SUR			
1. Brgy. Kalumsing, Lancuas & Sibsibbu, San Emilio	2016	Moderate	Drought, soil erosion, landslide and typhoon
2. Brgy, San Vicente, Lidlidda	2020	High	Drought, soil erosion, landslide and typhoon
3. Brgy. Polacion, Alilem	2021	High	Drought, soil erosion, landslide and typhoon
ILOCOS NORTE			
1. Solsona	2018	Very High	Soil erosion
2. Brgy. Madupayas. Badoc	2019	Very High	Landslide, Erosion, Typhoon, Flood, Storm Surge
3. Brgy. Cacafean, Marcos	2021	High	Flood, Typhoon, Drought, Landslide, Erosion
LA UNION			
1. Brgy. Nalvo Sur, Luna	2019	High	Sea level rise, Flood, Storm surge, Typhoon
2. San Gabriel (Brgys. Lipay Proper, Polipol)	2020	High	Landslide, Drought, Soil Erosion, Typhoon
3. San Fernando City (Brgys. Bato, Santiago Sur & Abut)	2021	Very Low	Drought, Landslide, Erosion, Flood, Storm Surge, SLR, Typhoon
PANGASINAN			
1. Brgy. Calunetan, Sison	2019	High	Landslide, Soil Erosion, Typhoon, Drought, Flood
2. Brgy. San Jose, Anda	2020	High	Typhoon, Storm Surge, Drought, Sea level rise, Soil erosion
3. Brgy. Sta. Maria Norte, Binalonan	2021	Moderate	Typhoon, Flood, Landslide, Drought, Erosion
4. Brgy. San Pedro, Mabini	2021	Very High	Typhoon, Drought, Landslide, erosion

**Based on the CRVA Maps at the municipal level produced by MMSU (2016) and GRIDS (2019)*
Weighted Overall Vulnerability is at 15% (Crop Sensitivity) + 15% (Hazard) + 70% (Adaptive Capacity)

Climate Information Services

• Status Update on the Preparation and Dissemination of Climate-and Weather-Informed Farming and Fishing Advisory

Climate Information Service	Total number of released	Mode of Dissemination
Regional Seasonal Climate Outlook & Advisory	1	Facebook posting and messenger group chats
Special Farm Weather Outlook & Advisory	6	
10-Day Farm Weather Outlook & Advisory	25	

Farm and Fisheries Clustering and Consolidation (F2C2) Program

I. Number of Clusters Validated

• Validated 67 clusters out of the 82 overall total of catch-up and 2023 target F2C2 Clusters of Region

1. With the validated 67 clusters, the area coverage spans to 37, 994. 59 with 23, 912 farmer and fisher members of the region. There are also 47 developed cluster development plans out of the validated clusters.

II. Agro-Enterprise Clustering Approach (AECA) Activities Conducted

• Conducted a briefing on Agro-Enterprise Clustering Approach for F2C2 clusters of La Union on December 5, 2023 which includes 8 Cluster participants. This was also the first re-echo of one F2C2 staff (Ms. Remalyn Graycochea, Enterprise Development and Marketing Officer) who graduated the introductory course on Agro-enterprise Clustering Approach by the Jollibee Group Foundation on November 2023.

• AECA is being presently mainstreamed in every part of the agricultural development as rural-based strategy and approach improving the parts of every level of the value chain especially the processing and marketing part, this is as well one of the key strategies in the enterprise development of the F2C2 Program.

• The participating F2C2 clusters also had a MOA signing for garlic-onion growers of Ilocos Norte with the Jollibee Group Foundation on December 19, 2023. There were F2C2 Clusters and staff who attended the JGF coaching for the new onion growers as JFG suppliers.

III. Capacity Building Activities

• Conducted simultaneous catch-up profiling, briefing, and orientation for the catch up F2C2 Clusters on the first semester of 2023.

• As the catch-up clusters were also being re-introduced, their old cluster development plans were also being updated and re-assessed based on its present situation and needs. The 2023 target





Simultaneous catch-up profiling and validation of F2C2 clusters



BData Gathering and Enterprise Assessment of Baguionas Coffee Growers Association of Bagulin, La Union





Data Gathering and Enterprise Assessment of Santiago Island Hog Raiser and Agricultural Cooperative, Bolinao, Pangasinan

F2C2 Clusters were profiled, briefed, and oriented on the second semester of the year with the simultaneous crafting of their drafted cluster development plans.

• In every quarter, the F2C2 team has been regularly presenting and consulting the drafted cluster development plans with the F2C2 Regional Technical Working Group. This is a need for re-enhancement, levelling-off of different divisions, and agencies involved, for the clusters of the F2C2.

• Through the result of these activities, part of the social preparation of each organization was to determine the key affecting factor per community involvement (by Municipal/City Level, by Province Level) on their transitioning strategy in adapting the clustering approach and this pushes the clusters to determine the important main actors for the growth and development of their clusters.

• The team also conducted other activities such as briefing on the registration and renewal of certificate of good standing with participating agencies such as SEC, DOLE, CDA, BIR, and other DA related certification bodies. The F2C2 Team also conducted the 1st F2C2 Cluster Summit on October 18-20, 2023 to strengthen and widen their market opportunities to the demand sectors of government agencies and private sectors.

IV. Market Related Activities

• F2C2 cluster and staff joined the online orientation/market linkage for shallot onion to supply Monde Nissin Corp.

• Six (6) F2C2 clusters joined the DSWD-EPAHP Skills Enhancement Training for potential supplier under EPAHP Program.

V. Other Key Accomplishment

• F2C2 staffs serves as Resource Person to discussed F2C2 program, project and activities to different agencies (LEMMCAP National Convention, ATI-RTC1, Regional Agriculture and Fisheries Council, DSWP-Enhanced Partnership Against Hunger and Poverty)

• Publication of audio-visual presentation of San Fermin ARB Multi-Purpose Cooperative.

• Information dissemination on various F2C2 activities through social media posting.





Workshop on Crafting Cluster Development Plan



Workshop on Enterprise Assessment Tool and Conduct of Profiling for F2C2 2023 Cluster



F2C2 REGIONAL SUMMIT (B2B)



Jollibee Group Foundation(JGF) Validation for Onion Growers of Pasuquin





Regular, other and special programs/ projects

Other Production Support Services



Monolithic Dome facility has been constructed to serve as a research and development center for crop storage techniques, seed storage, and agricultural innovation.

Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur

- Produced 355 OPV seedlings such as cowpea, mungbean, okra, squash, winged bean and eggplant and tomato and distributed 195 kgs of OPV seeds

- Maintained and took care five (5) Anglo-Nubian-Caprine

- Four female breeder stocks produced four male offspring this year

- Established and maintained an approximately 500 sqm forage area

- Distributed 2,050 pieces propagated trichanthera seedling benefiting twenty-one (21) livestock growers in Ilocos Sur

- Produced a total of 1,050 kg vermicast, 1,300 kg vermicompost, and 8.3 kg vermi worms and were distributed to various backyard gardeners/clientele from different municipalities of Ilocos Sur

- Produced 2,350 fruit tree seedlings such as tamarind, mango, jackfruit, santol, pomelo, anonas, atis, duhat, avocado, kaimito, lemon, calamansi, pomelo, guava, rambutan, chesa, mulberry, breadnut, caimito, and betel nut

- Distributed planting materials to walk-in clients from the 1st and 2nd district of Ilocos Sur and some from La Union and Ilocos Norte benefiting 134 individuals and eleven (11) group-beneficiaries

- Constructed monolithic dome facility to serve as a research and development center for crop storage techniques, seed storage, and agricultural innovation however, the storage facility is still not fully operational. The facility is expected to be fully operationalized on CY 2024



Ilocos Norte Research and Experiment Center (INREC) Batac, Ilocos Norte site

• Produced 501.47 kgs vegetable seeds such as eggplant, tomato, okra, parda, lima bean, winged bean and mungbean planted in a 2.0 hectare area during Dry Season 2023-2024

• Distributed 232.875 kgs to different beneficiaries composed of 35 individuals that majority were farmers and 5 groups of farmers' cooperative and associations from the province of Ilocos Norte

• Produced a total of 125 kgs of assorted vegetables (legumes-123kg and solanaceous-2.3kg) and distributed 144.75 kilos seeds during serbisyo fair program, info caravan and LAB for All program in Ilocos Norte for the OPV lowland seed buffer production

• Maintained one fruit tree nursery which is used for propagation with a total produced of 1,550 grafted mango seedlings for the asexual propagation of mango wherein 667 seedlings were distributed to walk in client and during the conduct of serbisyo fair, info caravan and LAB for all project

• Produced a total of 2,500 assorted fruit tree seedlings like mango, guyabano, atis, pomelo, calamansi, chico, rambutan, avocado and cashew wherein 3,290 pieces were distributed to the different farmer beneficiaries and walk-in clients of the station

• Maintained one-unit greenhouse for the vegetable fruit production of the station and established techno demo for the production of tomato, green garlic and pechay wherein a total of 75 kilograms of vegetable was produced and sold to consumers around the station

• Produced and distributed 219 trays of vegetable seedlings like pepper, tomato and eggplant to the walk-in clients from Batac, Banna and Nueva Era and during the conduct of training under ESET program

• Maintained one scion grove with 60 certified lamao and guimaras varieties, twenty (20) certified trees as sources of scion for asexual propagation and forty (40) remaining trees were used in fruit production as source of seeds for sexual propagation

• Maintained one HVC and corn cold storage bodega which serve as storage of OPV vegetable that are produced of the station, hybrid vegetable seeds and OPV corn seeds delivered from banner program to be distributed in Ilocos Norte

• Produced 760 kgs of pigmented rice seed during the wet season and distributed 600kgs from WS 2022 production to different groups of organic farms from Ilocos Norte, Ilocos Sur, and La Union

• Established 0.5 ha variety of indian black eye with a total produced of 122 kgs wherein 100 kgs was distributed to different recipients from Ilocos Norte, Ilocos Sur, La Union and Pangasinan.

• Produced 14,600 kg of vermicompost, 2,100 kg of vermicast and 120 kg vermi worms and were applied in various production area of vegetables and R&D projects in the station and some were distributed to interested farmers / organic farming in Ilocos Norte

Ilocos Norte Research and Experiment Center (INREC) Dingras, Ilocos Norte site

• Produced a total of 520 kilos of mungbean and peanut seeds wherein 269 kilograms were distributed to 28 individual-beneficiaries composed of seed growers and farmers and 5 groups composed of SUC's and other institutions

• Produced a total of 1,420 cuttings of napier and trichanthera seedlings wherein 1,310 pieces were distributed to 56 individual-beneficiaries, 5 group

beneficiaries and to walk-in clients

• Maintained breeders of cattle, goat, and sheep and chicken, of 22, 35, 35 and 31 heads, respectively

• Produced a total of 60,100 cuttings of napier and trichanthera seedlings under NLP of which 19,150 were distributed to 95 individual beneficiaries and some are walk-in clients

• Maintained 53 head breeder does and two (2) breeder bucks, wherein 33 breeder does and two bucks were just delivered as additional stocks last June 21, 2023 with a total produced of 19 heads of offspring for the year 2023 and majority of the produced were dominated by males

•Maintained one (1) facility for the farm waste utilization thru vermicomposting with four (4) vermi beds and one (1) pre-decomposting bin with a total produced of 90.5 kg vermi worms, 15,160 kg vermicompost and 2,560kgs vermicast and distributed 15 kg of vermi worms

• Produced a total of 133.50 kgs of various lowland vegetable seeds of which 185.15 kg and 15.50 kg seeds of legumes and cucurbits, respectively benefiting a total of 123 beneficiaries from the quality seeds and distributed a total of 101.15 kg of seeds

• Produced a total of 160 trays of vegetable seedlings such as tomato, pepper, eggplant, bottle gourd, and squash, and distributed 87 trays to 43 walk-in farmers and two (2) groups

• Produced a total of 2,500 grafted mango seedlings of which 1,350 seedlings were distributed to 125 walk-in clients composed of 68 males, 57 females, and 2 groups in Ilocos Norte

• Maintained one (1) fruit tree nursery which is used in the propagation and maintenance of assorted fruit tree seedlings wherein 19 species of fruit trees were produced such as achuete, betel nut, coffee, pomelo, tamarind, atis, calamansi, jackfruit, cashew, rambutan, guyabano, and guapple

• Distributed a total of 13,485 seedlings of assorted trees like, guyabano, atis, pomelo, calamansi, chico, rambutan,cashew, anonang, and avocado benefiting 256 individual clients

• Maintained one (1) cold storage which is used to store OPV lowland vegetable seeds

• Maintained 84 mango trees in the scion grove of which 71 trees are lamao while 13 trees are GES

• Maintained one (1) clonal garden with 32 coffee trees maintained. Harvested a total of 230 kilograms coffee fruits in ten (10) bearing trees

Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union



• Distributed a total pf 142.97 kgs OPV seeds to 41 beneficiaries and produced a total of 378.26 kgs of seeds

•Distributed a total of 1,233 pieces of trichanthera cuttings benefiting 22 individuals and one group such as farmers, students and employees from the 1,210 pieces total produced

• Maintained one (1) production facility of fruit tree seedlings wherein a total of 2,317 pieces of various fruit trees were distributed to farmers, employees, business owner, LGU and other agencies with 26 individuals and 4 groups from the 5,768 pieces total produced

• Produced a total of 2,750 pieces of mango seedlings wherein the activities conducted include pruning of mango trees, collection and cleaning of mango seeds for planting, preparation of substrate, potting of soil media, seed sowing and even collection of seedlings grown around the station for transplanting to polyethylene pots

• Conducted maintenance of multiplier farm such as cleaning, minor repair and disinfection

• Maintained 10 breeders composed of two (2) male and eight (8) female breeders

• Produced 3.2 kgs forage seeds, 4,007 seedlings and 3,115 cuttings

Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site

• Produced a total of 350 kg of assorted OPV vegetable seeds wherein 197 kg of OPV seeds were distributed to three (3) groups and 34 individual beneficiaries

• Propagated 1,750 pieces of trichanthera gigantea seedlings wherein 1,395 seedlings were distributed to 48 individuals and 3 group beneficiaries

• Produced a total of 125.5 kg of different OPV vegetable seeds as part of the HVCDP Program on seed bufferstocking

• Maintained four production facilities: a foundation scion grove, a greenhouse, a nursery, and a seed bodega

• Produced 9,000 assorted vegetable seedlings and propagated 5,077 assorted fruit tree seedlings

• Maintained foundation scion grove of different registered varieties of mango as source of scion for the on-station production of grafted seedlings

• Produced 181 kilograms of vermi worms, 15,380 kgs of vermicompost and 2,003 kgs of vermicast from the 6 beds as production area maintained

• Produced 10,090 pcs of various fruit tree seedlings like tamarind, avocado, calamansi, guyabano, santol, atis, mabolo and guava and produced a total of 1,000 pcs Trichanthera sp. / Madre de Agua as forage planting material

• Maintained two large white boars for quality semen collection wherein the semen collected were processed and stored by the laboratory technician for distribution to intended clienteles

• Maintained 0.5-hectare area for the production of cuttings and rootstocks like setaria grass and napier grass (Pakchong var.) and forage nursery for the production of forage seedlings, namely rensonii, indigofera desmanthus, flemengia, sesbania, and trichanthera, as a source of planting materials for farmers and raisers to increase feed production for their animals

• Produced a total of 16,123 pieces of cuttings, rootstocks, and seedling wherein 14,018 pieces were distributed to beneficiaries

• Distributed 11.9 kg forage seeds from the 10.15 kg produced of flemengia and sesbania seeds

• Maintained one (1) head of large white swine, 5 heads of native swine, and one (1) head of native boar wherein the offspring produced by the said sow were large white heads of nine white piglets, five male and four female. However, the boar used in swine artificial insemination and the sow used in the swine production project were incidentally diagnosed positive for the African Swine Fever (ASF) virus on October 24, 2023, the animals were immediately culled through depopulation

Pangasinan Research and Experiment Center (PREC) Sual, Pangasinan site

• Produced a total of 2,440 pcs forages cutting which was distributed to 88 individuals and 11 different groups coming from the different cities and municipalities in Pangasinan

• Produced a total of 114 kg of different OPV vegetable seeds (cowpea, mungbean, pole sitao, squash, and bottle gourd)

• Maintained 4-units of greenhouse for the establishment of tomato, japanese cucumber, and lettuce and 2 nurseries, 50 mango scion grove, 50 cacao for budwood garden and 1 unit of seed storage facility

• Maintained a total of 19 heads of Boer goats, 115 flock population of breeder ducks and produced a total of 1,049 ducklings and a total of 15,309 forage cuttings under the National Livestock Program

• Produced a total of 1,893 offspring in terms of maintaining the production of poultry, 4,593 seedlings of herbs/spices/ornamental plants and 3,778 kg of vermicast, 15,003 kg vermicompost and 316 kg vermi worm under the Organic Agriculture Program

Market Development Services



Market Development Section

I. Market Matching/Linkage of Agricultural Commodities

• Assisted two (2) associations that were partnered for the production of mungbean, namely: (1) CSDCS Farmers Association Incorporated at Barangay Barong, Dingras, Ilocos Norte; and (2) Lanas Timpoyog Farmers Association Incorporated at Barangay Lanas, Dingras, Ilocos Norte;

• Facilitated the forging of a Supply and Marketing Agreement between the two (2) assisted associations and Nutridense Food Manufacturing Corporation (NMFC). NFMC as an institutional buyer of mungbean is located at Barangay Malanay, Sta. Barbara, Pangasinan which manufactures research-based products with efficacy study by the Food and Nutrition Research Institute of the Department of Trade and Industry;

• Traded a total volume of 14,853.5 kilograms of mungbean successfully with a par value of Php964,756.50; and

• Attended on-call linkages with FCAs and MSMEs to institutional buyers with a total of Php537,750.00 sales generated from the trading of 3 tons of yellow granex onion, 1.5 ton of milled rice, and 1,650 packs of processed products such as bagnet, cornick, and crispy garlic in chili oil.

II. Kadiwa ni Ani at Kita

• Facilitated/established various Kadiwa modalities which include: (1) Kadiwa ni Ani at Kita Retail Selling; (2) Kadiwa ni Ani at Kita On Wheels; and (3) KADIWA Agri-Kart;

• Generated a total sales of Php19,047,424.99 from the 142,416.63 kilograms of assorted fruits and vegetables, rice, fish, and meat products; 71,211.5 liters of milk; and 108,551 pieces of egg with 25,099 household served; and

• Supported the four provinces of Ilocos Region in the nationwide launching of Kadiwa ng Pangulo (KNP) by setting up market stalls and booths within their jurisdiction on July 17, 2023 generating a total sales of Php2,925,087.29 f with 5,104 household served.

Agribusiness Promotion Section and Young Farmers Challenge Program

• Conducted a total of 14 various market related events and activities as follows:
➢ Coordination meeting and linkages to institution and market
➢ Identification and profiling of possible investors
➢ Local investment fora cum credit matching
➢ Validation through stakeholders forum
➢ Business plan preparation with training writeshop

➢ Capacity development trainings to FCAs and young farmer awardees
➢ Quarterly coordination meeting of the Regional Loan Facilitation Team (RLoFT)
➢ Operational planning workshop for credit and financing facility for out-of-school youth
➢ Enterprise profiling and assessment
➢ Business model canvas pitching
➢ Provincial and regional awarding cum regional youth summit
➢ Business development assistance/services to young farmer awardees
➢ Stakeholders' forum
➢ Summit and Regional awarding ceremonies of the Young Farmers Challenge Program (YFCP)

• Participated in the stakeholders consultation dialogue with Senator Imee Marcos together with the young farmers' awardees to update on the status of implementation of KADIWA beneficiaries and young farmers awardees enterprises and to identify the needed assistance of LGUs and farmers in the region which was participated by LGUs, KADIWA beneficiaries, and young-farmers' awardees

• Awarded cash incentives amounting to P80,000 to the 35 young entrepreneurs for the development and improvement of their agri-based enterprises as follows:

Province	Name of Young Farmer	Project Title
Pangasinan	Wilfredo Duqueza, Jr.	WD Free Range Chicken and Vegetable Production
	Ronel P. Bate & Billy Joel T. Briones	RoBIVermicoolture
	Rosy S. Uson	Uson Polyculture Farmstead Aquafarm
	David Christian R. Azarcon	King David's Probiotic Rich Plant-based Livestock Feed Production
	Noilson M. Samson	Samson's Egg and Black Meat Chicken Production
	Rustom L. Pande and Rogelio L. Dalay, Jr.	PD's GOAT FARM
	Daniel C. Distor	PIG-YOUR EAT OUT! (Babuyang Walang Amoy & No Bath Technology)
	Angel C. Bacalan	Capra aegagrus hircus Production
	Christian Lee S. Lapurga	Native Goat
La Union	Mark Gil L. Raguin and Rudy S. Mejia	R & M AQUAPONICS
	Edmer O. Mueca	B.W.A.BOY Eco Farm (Babuyang WalangAmoy and Eco-Friendly Farm)
	Saramae M. Oribello and Jamaica T. Rivera	AGOEÑOS HERBINEGAR
	Starhex RJ L. Consolacion	Narang-ay Integrated Backyard Farming
	Esmael C. Simon and Holly Ann S. Atimpao	H & E Goat Raiser
	Emilfred L. Estolas	MUSHROOM MANIA
Ilocos Sur	June P. Batao-ey	J's Capsicum Greenery
	Charo Kim G. Copio	Upland Catfish
	John Nicole D. Tendenilla	IKONG's BROILER PRODUCTION
	Shierly S. Ombania	Illek Farm (Swine Production using Home-mixed Feeds)
	Kenjie M. Manzano	Manzano's Backyard Mushroom
	Raphael Felix L. Queddeng	Giardino Verde: Vermiculture
Ilocos Norte	Darizel C. Vidad	SPC JUICE
	Ar-jay A. Ballaco and Aisha Uddon	Natural Vegetable Farming Automated Water Drip Irrigation System
	Eugene S. Orosco	Eugene's Piggery Farm: Development of a Traditional Pig Farm to State of the Art Production
	Stephenleigh A. Guitap & Abigail C. Lopez	Naive Native Chicken Farm
	Shaina May L. Ganitano & Kristine Joy C. Tabios	AGRIinAct Integrated Farm
	Roderick H. Dahilig	ROGERS POULTRY

Other Extension Support, Education and Training Services



Institutional Development Unit (IDU)

A. Senior Citizens and Persons with Disability

• Conducted Capability Enhancement Training on Mushroom Production and Value-adding with various SC and PWD organizations in Region 1; and

• Provided 1,000 mushroom fruiting bags to each association as project support or start-up and will be rolled over by the association to ensure the project's continuity.

B. Other Activities

1. Regional Meeting of Small Water Impounding Systems Associations

• Conducted two (2) regional meetings on April and October to update the status of the organizations, plan for CY 2024, and discuss and resolve issues and concerns. It was also an avenue for the election of new sets of Regional SWISA Federation of Region I officers.

2. *Meeting of Farm Service Providers (FSP)*

• Organized ten (10) Farm Service Providers (FSP) Associations which started in the year 2013. The FSP association members are farm workers who provide seasonal farm labor for production areas owned or leased by farmers. Most of them gained their farming knowledge and skills through experience and actual involvement in the field;

• Conducted organizational and capability enhancement and institutional development and rice production technology through the Rice Program wherein each association was provided with farm machinery (3 units rice thresher, 2 units reaper, and 2 hand tractors) to enhance the quality of their farm services and livelihood projects (swine production) to augment their family income; and

• Conducted meetings with the FSP associations to update the organizations' status and activities and DA program updates. Likewise, come up with plans to sustain their association.

3. Briefing for Farmers Cooperatives and Association on the Process of Availing DA Farm Mechanization Program

• Initiated a briefing for FCAs to level up their knowledge and capacitate them so that they would become more knowledgeable and capable of doing their role. venue to apprise and thresh out the challenges that hinder their preparation and submission; and

• Invited resource speakers from the Bureau of Internal Revenue (BIR), the Department of Labor and Employment (DOLE), and the Cooperative Development Authority (CDA) to discuss the programs and the process of application and renewal of Certificate of Good Standing and Certificate of Compliance.

Gender and Development (GAD)



Organizational Focused Activities

• Kicked-off the month-long celebration with the Opening of the Kadiwa ni Ani at Kita Trade Fair held at the DA-RFO1 grounds, City of San Fernando, La Union. DA-RFO1 Regional Executive Director Annie Q. Bares delivered a message made emphasis on the vital role of women not only in the home and in the workplace but as a productive member of society. She also reminded everyone, especially the men employees, to respect, love and nurture women as mother, as co-worker and as individual in as much as they serve as an important partner in nation building;

• Recognized Ms. Evelyn G. Banan for her outstanding contribution as an empowered woman, the CY 2022 Outstanding Rural Women and a National Finalist of the Search for Outstanding Rural Women graced the occasion and shared her testimony of how she was able to contribute her skills, knowledge and resources as a woman, a mother and a community leader in their barangay;

• Conducted a two-day forum on Magna Carta of Women and Gender Programs on March 9-10, 2023 at the DA-RFO1, 5th Floor Conference Room, City of San Fernando, La Union;

• Trained 15 employees of the Department of Agriculture Region 1 in Basic Vehicle Maintenance and Troubleshooting through the initiative of the Gender and Development Program;

• Participated in the coastal clean up at Coastal Underwater Resource Management Actions), a Pawikan Conservation and Protection Program in Ili Norte, San Juan, La Union;

• Convened with the Region 1 GAD Advocates for the culmination of 2023 Women's Month Celebration;

• Conducted training on gender advocacy seminar on Anti-Violence Against Women;

• Conducted training on Basic Self Defense "Every Woman Should Know" in partnership with the Philippine National Police (PNP) Region 1; and

• Initiated the conduct of GAD Focal Point System (GFPS) Semi-Annual meeting.

Client-Focused Activities

• Trained the Sapsapang Women's Auto Savings Group of San Jose Caba, La Union and awarded with incubator;

• Recognized Ms. Lilian A. Guillao, Regional Winner from the municipality of Burgos, Pangasinan as one of the empowered woman in agriculture for Ilocos Region through the Search for Outstanding Rural Women in Agriculture held on July 7, 2023 at the DA-RFO1;

• Trained four (4) associations and awarded with mushroom processing kits;

• Trained two (2) associations in empowering rural women in hands-on training on operation and maintenance of farm mechanization;

• Trained the Laoag City Cassava Growers Farmers Association, Inc. and awarded with cassava processing kits; and

•Trained two (2) associations and awarded with forage chopper.

Research Division



Conduct of technology transfer on improved technologies

Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur

• Conducted technology transfer activities which was held at Cabugao, Ilocos Sur last August 17-18, 2023

• Discussed three (3) topics which includes Improved Package of Technology (POT) on Chicken, Improved Package of Technology (POT) on Mungbean, and Methods on Participatory Adaptive Research in preparation for the implementation of the Mandanas-Garcia Ruling

Ilocos Norte Research and Experiment Center (INREC) Batac, Ilocos Norte site

• Conducted training on October 19, 2023 wherein it was participated by AEW and farmers from the municipality of Pinili, Badoc, Currimao, Batac, San Nicolas, Laoag, and Paoay, Ilocos Norte and 12 INREC Staff (Permanent & COS).

• Provided starter kit as planting materials such vegetable seedlings, hybrid vegetable seeds, mungbean seeds, vermicompost and shallot (1 farmer only)

Ilocos Norte Research and Experiment Center (INREC) Dingras, Ilocos Norte site

• Conducted enhanced technology transfer of improved technologies on October 10, 17, and 26, 2023 benefiting 35 participants per batch of training (at 3 batches)

• Disseminated three (3) improved technologies for crop and livestock production, such as the Package of Technology (POT) on Peanut Production and Processing, POT on Sheep Production and Feed Formulation for Poultry and Livestock, and POT on Pigmented Rice Production and the Production of Organic Foliar Fertilizer and Organic Pesticides to several farmers and AEWs in Ilocos Region

Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union

• Trained a total of 81 individuals which consists of AEWs, local farmer technicians and farmer cooperators of other projects. The technologies transferred include improved production technologies of rice, corn

Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site

• Transferred five (5) improved technologies such as the use of SSNM software, the application and use of BCA, free-range chicken and goat production, and feed formulation to 128 Agricultural Extension Workers (AEWs)

Pangasinan Research and Experiment Center (PREC) Sual, Pangasinan site

• Conducted technology transfer on improved technologies in the station on last June 27, July 21 and August 29, 2023 benefiting 131 farmers and AEWs

Other Research for Development

Other Research for Development	Highlights/Results
Field validation on the effectiveness of different growth enhancers on bulb and solanaceous crops	**Ilocos Sur Research Center (ISReC) site, San Juan, Ilocos Sur** • Aims to determine commercially available plant growth enhancers in increasing yield of eggplant, specifically, to identify the effects of different plant growth enhancers on the agronomic characteristics, to evaluate economic viability of using the different plant growth enhancers and to recommend appropriate plant growth enhancers for vegetable production.

Yield Performance of Tomato and eggplant as affected by different plant growth enhancer, DS 2022-2023.

Crop	Treatment	Yield (t/ha)	Gross Income	Cost of Prod'n	Net Income	Cost/ kgs	BCR
Tomato	No application	7.11	872,000	221,700	84,983	1.02	3.33
	Soil analysis	9.10	957,200	225,700	73,150	9.43	4.24
	SA+ PGE 1 AMO	8.16	109,240	207,600	88,480	7.6	5.26
	SA+ PGE 2 NORINANO	7.98	980,800	22,500	75,580	9.18	4.36
	SA+ PGE 3 GROWMORE	7.09	851,600	220,336	63,126	10.35	3.87
	SA+ PGE 4 NEBB PLUS	9.49	1,139,000	220,200	11,169	0.77	5.73
	SA+ PGE 5 KWIKGRO	7.27	854,000	171,100	-68,290	8.01	4.99
	SA+ PGE 6 SANSKAR	8.59	1,028,000	220,560	80,744	8.58	4.66
Eggplant	No application	3.41	85,400	92,500.00	85,400	80.14	0.5
	Soil analysis	4.02	109,240	121,937.23	109,240	76.02	0.53
	SA+ PGE 1 AMO	6.19	98,080	125,137.23	98,080	91.76	0.44
	SA+ PGE 2 NORINANO	4.58	95,720	129,587.23	95,720	94.32	0.42
	SA+ PGE 3 GROWMORE	4.4	85,160	125,395.23	85,160	103.49	0.39
	SA+ PGE 4 NEBB PLUS	4.35	1,139,000	124,937.23	1,139,000	7.73	5.17
	SA+ PGE 5 KWIKGRO	4.20	87,200	126,437.23	87,200	101.7	0.39
	SA+ PGE 6 SANSKAR	4.66	102,800	125,297.23	102,800	85.82	0.47

Ilocos Norte Research and Experiment Center (INREC) Batac, Ilocos Norte site

For garlic:

• Conducted to determine the importance of supplemental fertilization in crop production and to increase the productivity for bulb crops production in a way of lowering the amount of cost of production;

Other Research and Development	Highlights/Results
Field validation on the effectiveness of different growth enhancers on bulb and solanaceous crops	• Conducted at Pasuquin, Ilocos Norte, during the dry season of 2023 (November to March) and 2024; • As to cultural management, the enhanced POT for garlic production of the DA was followed. Except for the control, all other treatments on plant growth promoters, the recommendation rate and time of application was based on the recommended rate and time of application for the product which is imbedded on the product brochures; and • For the on-farm PGE, PGE garlic was established in two locations, two farmer co-operator at Barangay Surong and one farmer co-operator at Barangay Santa Matilde, Pasuquin, Ilocos Norte. Farmer co-operator from Barangay Santa Matilde is Mr. Marcus Palacay (November 20, 2023) and from Barangay Surong are Mr. Ferdinand Espedido (November 21, 2023) and Mr. Florentino Alberto (November 24, 2023). Garlic plants are now on their bulb formation stage, exhibiting 5-8 leaves. Spraying of treatments is on-going until the last week of January 2024. For shallot: • The station trial is conducted at on farm in Badoc, Ilocos Norte, during the dry season of 2023 (October to December) and 202; • For the on-farm PGE, PGE shallot was established in 3 replications/ cooperator in Barangay Pasuc, Badoc, Ilocos Norte on October 20, 2023, and the cooperator are Elvis Pidut, Jimmy Salem and Charito Baldovi; • The distance between plots was 0.30m and the unit plot size of 6mx4m (24 m2). The application of different plant growth enhancers (PGE) for Shallot was assigned as treatment. The rate of basal and top dressed fertilizer applied was also based on the POT. Composite samples were taken before the conduct of the study and another samples will be taken by treatments after the conduct of the study and will be submitted to the soil laboratory for soil analysis. The application of different PGEs applied was based on manufacturer's recommendation; • Furthermore, Application of PGE treatments was also done in 3 replications with the same schedule. And also fertilizer application was done based on soil analysis; and • Moreover, PGE shallot was harvested on December 27, 2023. Data gathered on germination rate, plant height, number of leaves, bulb size and dry weight are still for consolidation. *For tomato:* • This project was the continuation of the top three result of PGE's from the previous year's research study. The project sites were chosen in coordination with LGU based on the following criteria which is preferably a tomato growing areas, and accessible to any mode of transportation. In the presence of support system of LGU, farmer cooperators were selected based on their willingness to cooperate and participate in the research project.

<table>
<tr><th>Other Research and Development</th><th>Highlights/Results</th></tr>
<tr><td>Field validation on the effectiveness of different growth enhancers on bulb and solanaceous crops</td><td>
Farmers and locations of the research sites in Ilocos Norte, CY 2023
<table>
<tr><th>Variety</th><th>Farmer Cooperator</th><th>Location</th><th>Date Transplanted</th></tr>
<tr><td rowspan="3">Diamante Max F1</td><td>Herminigildo Labuguen</td><td>Sta. Magdalena Sarrat, I.N</td><td>October 2, 2023</td></tr>
<tr><td>Normel Lagura</td><td>Sta. Magdalena Sarrat, I.N</td><td>October 2, 2023</td></tr>
<tr><td>Joear Jahdiel Badua</td><td>San Juan, Sarrat, I.N</td><td>November 10, 2023</td></tr>
</table>
• Re-establishment of typhoon affected areas was done to ensure a better setup for research study. During the seedling stage of the tomato, 10g of Calcium Nitrate were applied at 10-12 days after emergence. Seedlings were hardened for 3 days before transplanting by gradually exposing to full sunlight and withholding moisture. PGE Eggplant was transplanted on the date stated above. Gathered all data based on project protocol. On- going data consolidation on the following parameters; percent fruit set, no. of fruits per plant, fruit weight, fruit size (equatorial diameter and polar length), actual yield for marketable and non-marketable fruits and potential yield.

Farmers and locations of the research sites in Ilocos Norte, CY 2023.
<table>
<tr><th>Variety</th><th>Farmer Cooperator</th><th>Location</th><th>Date Transplanted</th></tr>
<tr><td rowspan="3">Calixto F1</td><td>Rolando Ramos</td><td>Sta. Magdalena Sarrat, I.N</td><td>Sept. 24, 2023</td></tr>
<tr><td>Juanito Ruiz</td><td>San Pedro Sarrat, I.N</td><td>October 23, 2023</td></tr>
<tr><td>Jayjay Ballesteros</td><td>San Juan, Sarrat, I.N</td><td>Sept. 29, 2023</td></tr>
</table>
• Re-establishment of typhoon affected areas was done to ensure a better setup for research study. During the seedling stage of the tomato, 10g of Calcium Nitrate were applied at 10-12 days after emergence. Seedlings were hardened for 3 days before transplanting by gradually exposing to full sunlight and withholding moisture. PGE Eggplant was transplanted on the date stated above. Gathered all data based on project protocol. On- going data consolidation on the following parameters; percent fruit set, no. of fruits per plant, fruit weight, fruit size (equatorial diameter and polar length), actual yield for marketable and non-marketable fruits and potential yield.

Ilocos Integrated Agricultural Research Center (ILIARC) site, Bacnotan, La Union

• Selection of experimental sites and farmer cooperators were identified through the help of the Municipal Agriculture Office;

• The trial was established in 3 experimental sites for both tomato and eggplant with 3 farmer cooperators at Brgy. Inabaan Sur, Brgy. Benteng-Sapialng and Brgy. Gumot-Nacolaran, Rosario, La Union. The treatment plots were distributed following the superimposed layout; and

• PGE treatments were applied based on plot designation in all sites.
</td></tr>
</table>

Other Research and Development	Highlights/Results
Field validation on the effectiveness of different growth enhancers on bulb and solanaceous crops	**Pangasinan Research and Experiment Center (PREC) Sta. Barbara, Pangasinan site** • Based on the initial result, it shows a variance in the measurement of agronomic parameters and yield components of tomato and eggplant production applied with different PGE's. For tomato production, the potential yield, treatment T3 (PGE 1 - AMO) had the highest yield at 10,619.05 kg per hectare, while treatment T1 (no application of PGE - control) had the lowest yield at 4,430.16 kg per hectare. The p-value of 0.0015 indicates a statistically significant difference between the groups. The results suggest that using PGE 1 (AMO) may positively affect the potential yield of tomato plants; • While for eggplant production, treatment T3 (PGE 1 – AMO) also produced the highest yield of 10,156 kg per kilo, and treatment T1 (no application of PGE - control) had the lowest yield at 4,456 kg per hectare; and • The establishment of PGE for WS2023 was established in three sites wherein three farmer-cooperators were selected to serve as the replication of the study. The trial was located at Brgy. Camantiles, Urdaneta City, Pangasinan, Brgy. Tayambani, San Carlos City, Pangasinan, and Brgy. Payar, San Carlos City, Pangasinan. The top three PGE (AMO, NEB88, and Kwikgrow) were applied as treatments which will be compared to Farmer's Practice and Control. The data encoding and analysis of this trial is still ongoing.

Agriculture and Fishery Regulatory Support

A. Registration and Licensing Section





• Evaluated, inspected and endorsed a total of 216 applicants to the Bureau of Animal Industry-Animal Health and Welfare Division for the accreditation of Poultry & Livestock Transport Carriers

• Endorsed 22 researches/studies using laboratory animals to the Bureau of Animal Industry for the issuance of animal research permits

• Endorsed 4 applicants of Animal Show Permit to the Bureau of Animal Industry

• Endorsed 178 new feed establishments and renewed 755 Feed Distributors/Retailers/Dealers for this year's operation and endorsed to the Bureau of Animal Industry

• Endorsed 178 new feed establishments and

renewed 755 Feed Distributors/Retailers/Dealers for this year's operation and endorsed to the Bureau of Animal Industry

• Evaluated, inspected and endorsed a total of 224 applicants to the Bureau of Animal Industry-Animal Health and Welfare Division for the registration certificate of Poultry & Livestock Handlers

• Endorsed 63 new animal facilities and 33 facilities for renewal to Bureau of Animal Industry for registration and accreditation

• Endorsed a total of twelve (12) Animal Show Veterinarians/Organizers to the Bureau of Animal Industry (BAI)

• Promoted and facilitated the Good Agricultural Practice Certification Program to ensure food safety and assure quality of agricultural products while keeping high regard for environmental protection and that of worker's health, safety and welfare

• Promoted and facilitated the Good Agricultural Practice Certification Program to ensure that the farming practices of the establishment provide confidence in consumer's expectations that the final products are safe and fit to human consumption, while ensuring health, safety and comfort to both the farm workers and the animals without any degradation to the environment

B. Quality Control and Inspection

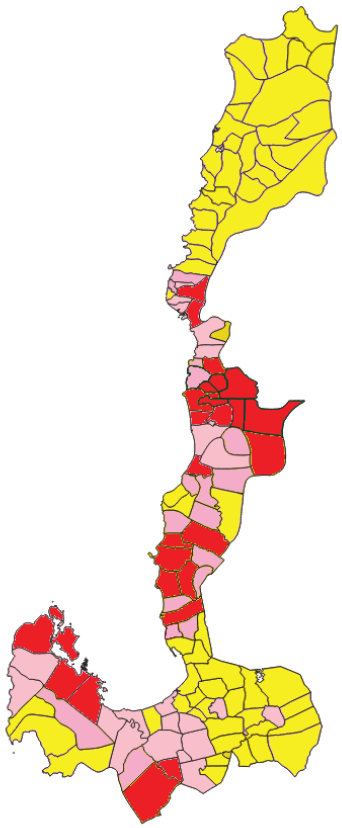
• Monitored and inspected a total of 775 feed establishments and 300 VDAP Outlets to ensure that registered Feed Establishments/VDAP Outlets continually complies with the rules and regulations as prescribed under the IRR of RA 1556

• Inspected a total of 105 establishments to ensure that registered Animal Facilities continually complies with the rules and regulations as prescribed under the IRR of RA 8485

• Collected a total of 1,777 feed samples from different feed establishments for laboratory analysis to test the quality assurance of feed and feed ingredients being sold in the market while 552 corn samples – grits, cracked and whole, were also collected and submitted for aflatoxin analysis

•There were 62 municipalities lifted to Yellow Zone (Surveillance Zone, 37 municipalities lifted to Pink Zone (Buffer Zone) while 26 municipalities were still under Red Zone (Infected Zone) under the African Swine Fever (ASF) Zoning Progression

• Monitored the incidences of plant pests in the region. Importance of surveillance and monitoring such as early detection of pests, delimiting the spread of pests, and improving pest management



PROVINCE	NO. OF CITIES/MUNICIPALITIES			
Ilocos Norte	-	23	-	-
Ilocos Sur	-	7	13	14
La Union	-	5	9	6
Pangasinan	-	27	15	6

Other activities

• Issued a total of 21 certifications to the Local Government Units requesting DA certification for the reclassification of 223 agricultural lots through zoning ordinances

• Recommended 220 out of the 223 agricultural lots to be reclassified while three (3) have remained agricultural because the proposed areas are within the Strategic Agriculture and Fishery Development Zone (SAFDZ) – Sub Crop Development Zone. Prime Agricultural lands are non-negotiable for conversion as per Administrative Order No. 20, series 1992. Further, of the 220 agricultural lots, eleven (11) have pre-mature development (backfilled and construction of buildings). Thus, these agricultural lots are no longer feasible for agricultural production. However, it was recommended that these applications be forwarded to the Department of Agrarian Reform (DAR) for further evaluation and appropriate action since DAR has the sole authority for land conversion.

• Conducted disease investigation, cleaning and disinfection activities, and depopulation activities

• Initiated awareness campaign and dialogue with the Local Chief Executives of the affected and even the adjacent municipalities of Pangasinan, La Union and Ilocos Sur to create awareness on the regulatory activities needed

• Recorded a total of 20 municipalities affected, 97 barangays with 537 affected raisers and a total of 8,560 culled animals

• Conducted training on Regulatory Services cum One-Stop Shop at DA-PREC Sual, Pangasinan which was participated by the Municipal Agriculture Officer, Livestock Inspector and Business Permit Licensing Officer of all municipalities from 1st District of Pangasinan

• Attended the Workshop on Environmental Scanning, Recalibration and Harmonization of Regional Regulatory Services of the Department of Agriculture by four (4) personnel from the Regulatory Division which was initiated by the Office of the Assistant Secretary for Regulations, Ms. Paz Buenavidez

• Initiated the Regional Advisory Committee on Animal Disease Control and Emergency (RAC-ADCE) Meeting which was participated by the Provincial Veterinary Offices of the four provinces of Ilocos Region, personnel from the National Meat Inspection Service and Bureau of Animal Industry

Farm-to-Market Road (FMR)



• The Ilocos Region constructed a total of 136 Farm-to-Market Road (FMR) projects with 158.97 kilometers length which were funded under the 2023 GAA amounting to Php 2,038,350,000.00. Out of the 136 funded FMRs, 24 projects were completed with a corresponding kilometer length of 25.68 km, while the remaining 112 FMR projects are still on-going construction

• Majority of the FMR projects are in Ilocos Norte with 81 FMR projects with 100.81 kilometers in length and valued at Php1,330,600,000.00. Pangasinan has 33 FMR projects with a total length of 32.95 kilometers amounting to Php 395,000,000.00. Ilocos Sur has a total of 12 FMR projects with a total length of 13.91 kilometers valued at Php 167,000,000.00 La Union has 10 FMR projects with a total length of 11.30 kilometers amounting to Php 147,750.000. The details were as follows:

	ACCOMPLISHED			ON-GOING			TOTAL		
	No. of FMRs	LENGTH (KM)	ALLOCATION (in P'000)	No. of FMRs	LENGTH (KM)	ALLOCATION (in P'000)	No. of FMRs	ESTIMATED LENGTH (KM)	ALLOCATION (in P'000)
REGIONAL TOTAL	**24**	**25.68**	**306,750.00**	**112**	**133.29**	**1,731,600.00**	**136**	**158.97**	**2,038,350.00**
ILOCOS NORTE	**-**	**-**	**-**	**81**	**100.81**	**1,330,600.00**	**81**	**100.81**	**1,330,600.00**
DISTRICT 1	-	-	-	52	62.84	803,600.00	52	62.84	803.600.00
DISTRICT 2	-	-	-	29	37.97	527,000.00	29	37.97	527,000.00
ILOCOS SUR	**2**	**2.29**	**27,500.00**	**10**	**11.62**	**139,500.00**	**12**	**13.91**	**167,000.00**
DISTRICT 1	2	2.29	27,500.00	3	3.29	39,500.00	5	5.58	67,000.00
DISTRICT 2	-	-	-	7	8.33	100,00.00	7	8.33	100,000.00
LA UNION	**4**	**3.54**	**41,750.00**	**6**	**7.76**	**104,000.00**	**10**	**11.30**	**145,750.00**
DISTRICT 1	2	1.50	17,250.00	3	3.26	49,500.00	5	4.76	66,750.00
DISTRICT 2	2	2.04	24,500.00	3	4.50	54,500.00	5	6.54	79,000.00
PANGASINAN	**18**	**19.85**	**237,500.00**	**15**	**13.10**	**157,500.00**	**33**	**32.95**	**395,000.00**
DISTRICT 1	6	7.67	92,000.00	-	-	-	6	7.67	92,000.00
DISTRICT 2	-	-	-	6	3.12	37,500.00	6	3.12	37,500.00
DISTRICT 3	2	2.25	27,000.00	2	2.29	27,500.00	4	4.54	54,500.00
DISTRICT 4	-	-	-	6	6.02	72,500.00	6	6.02	72,500.00
DISTRICT 5	5	4.52	54,500.00	-	-	-	5	4.52	54,500.00
DISTRICT 6	5	5.41	64,000.00	1	1.67	20,000.00	6	7.08	84,000.00

Integrated Laboratories Division (ILD)



REGIONAL ANIMAL DISEASE DIAGNOSTIC LABORATORY (RADDL)

• Examined a total of 379 rabies samples of which 66 % were found positive. These positive rabies cases were mostly from dogs. Figure no. 1 shows that Ilocos Norte acquired the highest incidence of rabies among the provinces in Region 1

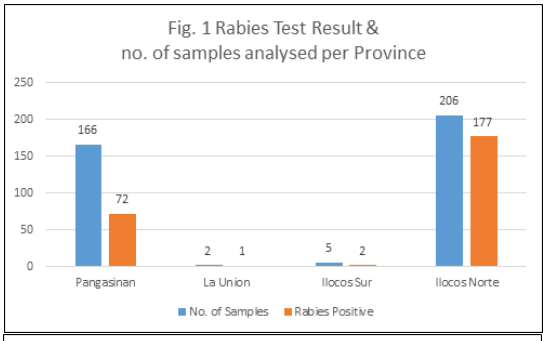
• Examined a total of 11,458 samples of African Swine Fever (ASF). Figure no. 2 shows that African Swine Fever disease outbreaks were confirmed in the Provinces of Pangasinan , La Union and Ilocos Sur where Ilocos Sur had the highest number of samples submitted

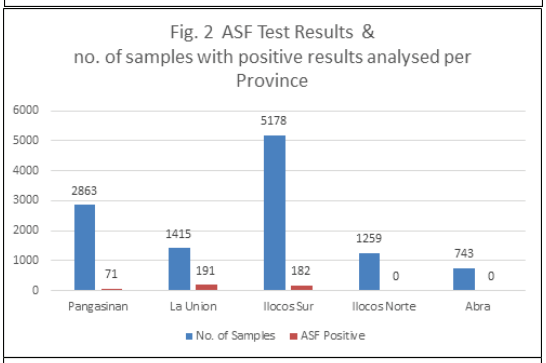
• Examined a total of 4,092 samples for Caprine Arthritis Encephalitis (CAE) test for local shipment purpose (94 %) and majority were from livestock traders with procurement contracts with LGUs and the Department of Agriculture

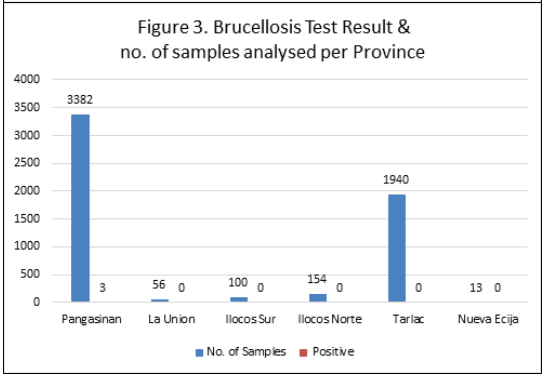
• Examined a total of 5,645 samples for brucellosis test. Figure 3 also shows that the bulk of samples came from Pangasinan and Tarlac where the clients' farm are located

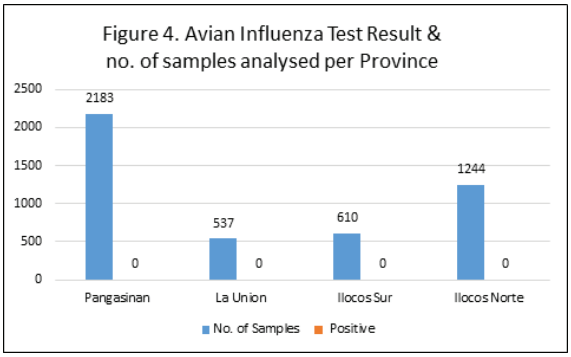
• Examined a total of 210 samples for hog cholera test and 262 samples for PRRS test

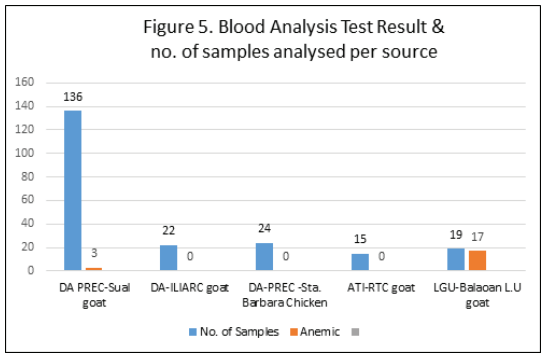
• Examined a total of 508 samples for New Castle (ND) test to determine the presence of ND











antibody of vaccinated chickens or unvaccinated chickens

• Examined a total of 4,574 samples for Avian Influenza test (ELISA test method). Figure 4 shows that majority of the samples came from chickens in Pangasinan for Local shipment purposes

• Examined a total of 502 samples for salmonella pullorum test to screen Salmonellosis in chickens specially layer chickens

• Performed bacterial isolation test to 101 samples and antibiotic susceptibility test to 101 samples to determine the bacterial organism associated with a suspected disease

• Performed Analytical Profile Index (API) test to 59 samples for quick identification of clinically relevant bacteria and performed grain staining to 101 samples for more accuracy and specificity of results

• Performed blood analysis using Pack Cell Volume Test or hematocrit test method to determine level of red blood cell volume in sheep, goat and chicken from the two DA RFO 1 stations namely PREC-Sual Pangasinan, ISREC- Ilocos Sur.Figure no. 5 shows the sources of samples and the number of animals with anemia

• Performed 10 necropsy procedures wherein all samples are chickens

• Performed 2,514 fecalysis test to determine the worm load of poultry and livestock

Regional Crop Protection Center

• Tested 180 samples for the four (4) types of plant pest diagnosis: virology, bacteriology, mycology and entomology as shown in Table 25 to diagnose the submitted plant/specimen by our farmer clientele. This will also guide our technicians in recommending proper pest control management.

• Conducted field diagnosis of reported plant pest with a total of 215 ha total area affected wherein various commodities such as rice, corn, fruits, pinakbet vegetables, garlic and onion are commonly submitted for diagnosis

• Produced and distributed 105,100 tricho cards

• Produced a total of 1,484 earwig colonies. Table 26 shows the BCA production and distribution for CY 2023

• Collected 262 vegetable samples for pesticide residue analysis with a total of 43 farmers and 23 municipalities

Table 25. Plant pest laboratory diagnosis by test/type for January to December 2023, Region 1.

Virology	Bacteriology	Mycology	Entomology
BitterGourd (Namamarako), solanaceous crops (Mosaic Virus), and Papaya (Ring Spot Virus)	Bacterial wilt, Bacterial Leaf Streak, and Bacterial Leaf Blight	Brown Spot, Leaf Blast, False Smut, Sheath blight, Sooty Mold Purple Blotch, Leaf spot, Leaf Blight, Sunscald, corn rust, curvularia leaf spot, diplodia ear rot, banded leaf & sheat blight, panama disease, black and yellow sigatoka	Leafminer, whiteflies, black bean bug, leaf folder, flea beetle, thrips, fruitfly, common cutworm, aphids, onion armyworm, whorl maggot, stem borer, leaf folder, fall armyworm

Techniques per test are the following:
- Virology (Symptomatology)
- Bacteria-Oozing & Microscopy Technique
- Mycology- Microscopy Technique
- Entomology- Microscopy & Dissection Tecchnique

• Established two (2) sites at Brgy. Bungro, Magsingal, Ilocos Sur (site 1) and Brgy. Suyo, Dingras, Ilocos Norte (site 2) during the dry season of CY 2023 (January to May 2023) for the participatory technology development on the management of fall armyworm with emphasis on the utilization of different biological control agents

• Produced and harvested 79 bulblets of garlic from the result of tissue-cultured garlic in Pangasinan

Table 26. Biological Control Agents (BCA) Production and distribution for CY 202 regular targets as of December 31, 2023.

Biological Control Agents	Target	Actual Accomplishment as of Dec. 31, 2023	% Accomplishment	Remarks
a. Metarhizium anisoplaie	12,000	12,587	105	
b. Trichogramma evanescens	100,000	115,300	115	
c. Euborellia annulata	1500	1764	118	
d. Nuclear Polyhedrosis Virus	3000	3175	106	
e. Trichoderma harsianum	1000	1815	182	High production due to high demand of takers intended for bulb and fruit crops in Pangasinan
f. Beuveria bassiana	5000	5694	114	

Regional Feed Chemical Analysis Laboratory

• Analyzed a total of 2,270 samples wherein 1,685 samples (or 74%) were subjected to nutrient analysis (moisture, ash, crude protein, crude fat, crude fiber, calcium & phosphorus), while 585 samples were subjected to total aflatoxin analysis (AFB1, AFB2, AFG1 & AFG2). Figure 6 shows the aflatoxin testing results.

• Participated in the independent proficiency testing program on Animal Feed by the LGC Standards Proficiency Testing, Queens Road, Teddington, Middlesex, TW11 0LY, UK, England (through ChemHub Technologies, Inc.). Herein, the laboratory nominated results for eight (8) test parameters on proximate and mineral elements, namely moisture content, ash content, crude protein content, crude fat, crude fiber,

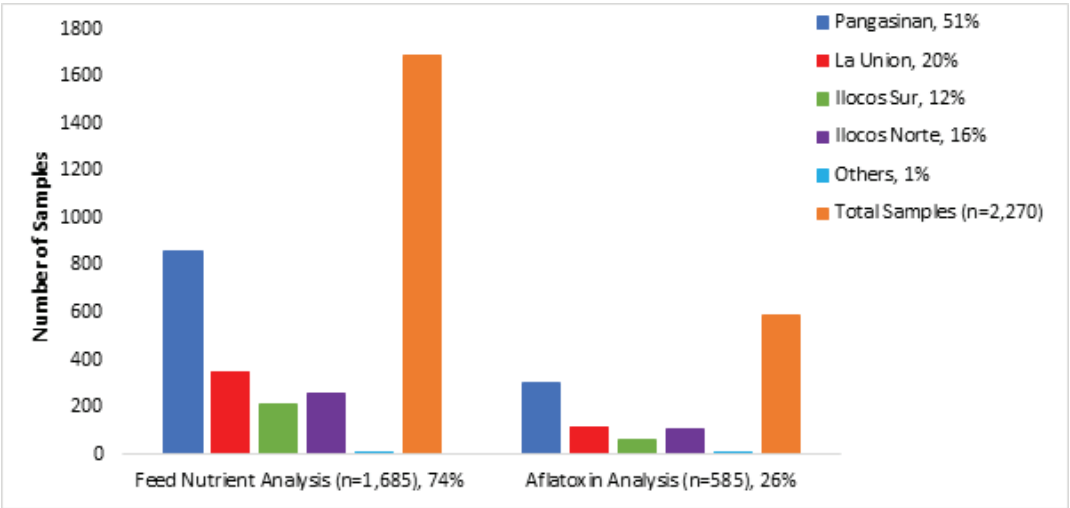


Figure 6. Aflatoxin testing results in Region 1 during CY 2023 (N=585)

Table 1. Summary of Individual Proficiency Testing (PT) Report of the ILD-RFCAL (Lab. ID AF0982) during the Animal Feed Proficiency Scheme (AFPS) Round 54 of the LGC Standards Proficiency Testing, Queens Road, Teddington, Middlesex, TW11 0LY, UK, England

No.	Test Parameter	Nominated Result	Assigned Value		Z Score	Remarks
			Mean	SDPA		
1	Moisture Content (%)	9.48 ± 0.10	9.89	0.50	-0.82	Satisfactory
2	Crude Protein (%)	16.21 ± 0.13	15.14	0.76	1.41	Satisfactory
3	Ash Content (%)	13.67 ± 0.60	13.59	0.68	0.12	Satisfactory
4	Crude Fat (%)	2.34 ± 0.19	2.52	0.25	-0.64	Satisfactory
5	Crude Fiber (%)	5.26 ± 0.34	5.40	0.54	-0.25	Satisfactory
6	Phosphorus (g/kg)	4.01 ± 0.04	4.23	0.42	-0.52	Satisfactory
7	Calcium (g/kg))	39.27 ± 1.38	44.57	4.46	-1.19	Satisfactory
8	Potassium (g/kg)	6.53 ± 0.19	7.32	0.73	-1.09	Satisfactory

Methodology: Moisture, Oven-drying method (AOAC Official Method 930.15); Crude protein, Kjeldahl method (AOAC Official Method 2001.11); Ash, Furnace-ignition method (AOAC Official Method 942.05); Crude fat, AnkomXT10 Filter Bag Technique (AOCS Official Procedure Am 5-04); Crude fiber, Ankom200 Filter Bag Technique (AOCS Approved Procedure Ba 6a-05); Phosphorus, Vanadomolybdate method (ISO 6491. 1998); Calcium, Titrimetry using KMnO4 (AOAC Official Method 927.02); Potassium, Flame photometric method (AOAC Official Method 956.01)

calcium, phosphorus, and potassium. Performance assessment by the PT provider showed that ILD-RFCAL obtained satisfactory results for eight (8) out of eight (8) test parameters or 100%, having Z score of -1.19 to 1.41 (Table 1). This indicates that analytical results of the laboratory on all the aforementioned test parameters are valid and reliable.

Regional Soils Laboratory

Analyzed a total of 2,039 samples of soil, fertilizer, water and plant tissue by the laboratory with a total of 268 clients were served with laboratory services

A. Soil Analysis

• Analyzed 1,628 soil samples submitted by various clients (e.g., farmers, LGUs, Government Agencies, SUCs, Private Sector, Research Division and DA Research Stations)

• Released a total of 1,233 fertilizer recommendations for various crops such as rice, corn, high value commercial crops (onion, garlic, mango, pepper, cacao, etc.) and fruit trees (mango, cacao, coconut, banana)

B. Fertilizer Analysis

• Analyzed a total of 229 samples for the conduct of special assay for fertilizer. The samples were in the form of inorganic and organic fertilizers. Out of the 229 samples, 80 were inorganic fertilizers (urea, muriate of potash, complete fertilizer) and 149 were organic fertilizers (compost, fermented plant juice, vermi cast, etc.)

C. Water Analysis Summary

• Analyzed 54 samples collected from various water impounding and river systems in Bantay, Tagudin and Cabugao of Ilocos Sur as well as in ILIARC-Bacnotan, La Union. All the water samples tested were found suitable for all major crops (rice, corn, various high value crops) except tobacco

D. Plant Tissue Analysis Summary

• Analyzed 128 samples that were submitted by the Bureau of Soils and Water Management (BSWM) from their Adaptive Balanced Fertilization Strategies (ABFS) Project in Region 1 and from research students

Philippine Rural Development Project



The status of the Philippine Rural Development Project implementation in Ilocos Region is discussed below via the accomplishments of its three components, I-PLAN (Planning Component), IBUILD (Infrastructure Development Component) and I-REAP (Enterprise Development Component):

A. I-PLAN Component

At present, all of the Provincial Commodity Investment Plans (PCIPs) in Ilocos Region integrated risks and climate considerations as required by World Bank:

Pangasinan	La Union	Ilocos Sur	Ilocos Norte
Mango Goat Onion Peanut Tomato Mungbean Bangus Coffee	Mango Goat Tomato Peanut Mungbean Coffee	Mango Peanut Goat Onion Tomato Mungbean Garlic Coffee	Mango Onion Tomato Mungbean Garlic Peanut Coffee

B. I-BUILD Component

Ilocos Region has a total of 68 infrastructure subprojects (SPs) amounting to Php 6.22B. Out of this total number of SPs, 25 were already completed, 18 were RPAB-approved, three are on-going in implementation, and 22 are undergoing preparation.

	Completed	RPAB-approved	On-going	SP Preparation
No. of SPs	25	18	3	22
Cost	1.16B	1.15B	310M	3.60B

C. I-REAP Component

Under this component, the Ilocos region has a total of 71 subprojects amounting to Php306.30M. Of this total number of SPs, 66 were already completed amounting to 146.25M and five are still on-going in implementation valued at 160.05M.

	Completed	On-going
No. of SPs	66	5
Cost	146.25M	160.05M

Overall, the portfolio of the PRDP RPCO1 is presented in the table below.

Component	Amount	Number of SPs
I-BUILD	6,219,696,379.51	68
I-REAP	306,296,174.42	71
Total	**6,525,992,553.93**	**139**


LETHAL
247
ZC
DOUBLE ACTION KILLER
EZERTECH

DA-RFO1 KEY OFFICIALS



ANNIE Q. BARES, DVM
Regional Executive Director



DENNIS I. TACTAC, RPAE
RTD for Operations



FLORENTINTO A. ADAME, DVM
OIC-*RTD for Research & Regulations*



ANALIZA R. RAMOS
Chief, Field Operations Division



GILBERT R. RABARA
Chief, Research & Development Division



DORIS JOY C. GARCIA
Chief, Planning, Monitoring & Evaluation Division



CONSTANCIA R. DIAZ, DVM
Chief, Integrated Laboratories Division



ALFIERO P. BANAAG
Chief, Regulatory Division



JACINTA MARISSA D. OLALAN
Chief, Administrative & Finance Division



MARK HARRY PASTOR, RPAE
Chief, Regional Agricultural Engineering Division



WILHELMINA P. CASTAÑEDA
Chief, Agribusiness and Marketing Assistance Division

REGIONAL MANAGEMENT COUNCIL MEMBERS

MS. ANNIE Q. BARES, DVM
Regional Executive Director and Chairman, RMC 1
Department of Agriculture RFO I
City of San Fernando, La Union

MS. ROSARIO SEGUNDINA P. GAERLAN
Regional Director and Vice Chair, RMC 1
Bureau of Fisheries & Aquatic Resources ROI
City of San Fernando, La Union

MR. GIOVANNI PALABAY
OIC-Deputy Administrator for Operations
National Tobacco Administration
Panay Ave., Cor. Scout Reyes St., Quezon City

MS. VILMA C. GAGNI
Center Director
Phil. Carabao Center-La Union
Nagtagaan, Rosario, La Union

DR. CATHERINE P. DABALOS
OIC-Center Director
Phil. Carabao Center-llocos Norte
Batac City, llocos Norte

ENGR. MARY ANN U. BARADI
OIC- Branch Director
PhilRice
Batac City, llocos Norte

DR. ORLANDO C. ONGSOTTO
Acting Director
National Meat Inspection Service
RTO Center I, Anonas, Urdaneta City, Pangasinan

MR. ROGELIO C. EVANGELISTA
Center Director
Agricultural Training Institute Regional Training Center 1
Tebag, Sta. Barbara, Pangasinan

MR. EDEL M. DONDONILLA
Acting Regional Director
Phil. Fiber Industry Dev't. Authority
Wangal, La Trinidad, Benguet

DIR. DIONISIO G. ALVINDIA, Ph.D
Executive Director
Philippine Center for Postharvest and Mechanization
Muñoz, Nueva Ecija

MR. DENNIS D. ANDRES
Regional Manager Ill
Philippine Coconut Authority
Diliman, Quezon City

MR. MELVIN A. RABANG
General Manger
Phil. Fisheries Development Authority
Elliptical Road, Diliman, Quezon City

ENGR. GAUDENCIO M. DE VERA
Regional Irrigation Manager
National lrigation Administration Regional Office I
Urdaneta City, Pangasinan

DR. GINA P. NILO
OIC-Director
Bureau of Soils and Water Management
Elliptical Road, Diliman, Quezon City

MS. LEILA C. DELA PEÑA
OIC- Regional Chief
BPI-National Seed Quality Control Service
Tebag, Sta. Barbara, Pangasinan

MS. JUNE JAY APILADO
Regional Head
BPI-Plan Quarantine Service
City of San Fernando, La Union

DR. ZALDY A. OLIVAS
Regional Veterinary Quarantine Officer
Bureau of Animal Industry
City of San Fernando, La Union

MR. JOSEPH ANDRE JOHN MARTINEZ
OIC-Regional Coordinator
Fertilizer and Pesticide Authority
City of San Fernando, La Union

MS. LOLITA O. SANEDRIN
Regional Manager
National Food Authority
San Juan, La Union

MR. BENJAMIN CAPAÑANO
Chairman
Regional Agricultural and Fishery Council
DA-RFO1, City of San Fernando, La Union

MR. DANTE NOCES
Regional Fisherfolk Representative
Bureau of Fisheries and Aquatic Resources-RO1
City of San Fernando, La Union

LGU PARTNERS



ENGR. MA. TERESA L. BACNAT
OIC-Provincial Agriculturist
Province of Ilocos Norte
Tel No. (077) 770-4237

DR. LOIDA VALENZUELA
Provincial Veterinarian
Province of Ilocos Norte
Tel. No. (077)771-4931



MS. ERLINDA A. BALTAZARO
Provincial Agriculturist
Province of Ilocos Sur
email: mispgis@yahoo.com

DR. DONNA MAE ROSARIO
Provincial Veterinarian
Province of Ilocos Sur
Tel. No. (077)722-8005



MS. SHARON A. VILORIA
OIC-Provincial Agriculturist
Province of La Union

DR. DOMINGO BOBBY CALUB III
OIC-Provincial Veterinarian
Province of La Union
Tel. No. (072)700-0624



Dr. ARCELI G. ROBENIOL
Provincial Agriculturist
Province of Pangasinan
Tel. No. (075) 523-2703

DR. JOVITO G. TABAREJOS
OIC-Provincial Veterinarian
Province of Pangasinan
Tel. No. (075)633-4699



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

Published by:
Department of Agriculture-RFO I
Regional Agriculture & Fisheries Information Section