# 202 ANNUAL REPORT

DEPARTMENT OF AGRICULTURE REGIONAL FIELD OFFICE 1



# ANNUAL REPORT DEPARTMENT OF AGRICULTURE REGIONAL FIELD OFFICE 1







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#### **Foreword**

As the country ushers further into its post-COVID journey regaining momentum for economic recovery, the agriculture sector despite being the most vulnerable industry has also proven time and again its resiliency as it continues to do its crucial share in the country's economic growth and development.

The agri-fishery sector in Ilocos Region for its part has its share of highs and lows in terms of performance. As it battled the ill effects of the pandemic, alongside the African Swine Fever (ASF), Fall Army Worm (FAW), natural calamities such as strong typhoons, the soaring prices of oil and inputs, and on top of that is climate change, but the embers of hope continue to glow with the sector's consistent positive growth in the past two years after the pandemic.

I am much privileged to continue the legacy of my predecessors in leading the sector in our region as I step into such responsibility this CY 2022. I draw confidence in the knowledge that we at the Department of Agriculture – Regional Field Office I (DA-RFO I) have the unequivocal support of our partners in agricultural development - the Provincial and Municipal Local Government Units, partner agencies, the academe, NGO's and private sector, and most importantly, our farmers and fisherfolk.

I am therefore happy to present this CY 2022 Annual Report of our Department which is a testament of our Dedication, Resiliency, Integrity, Vigilance and Excellence, the very core of our organization's Quality Management System. I share the accomplishments herein with our former OIC Regional Executive Directors Nestor D. Domenden and Atty. Jennilyn M. Dawayan, who initially laid the plans and initial efforts to sustain our region's performance to better serve our clients in the sector and to which I am now tasked to continue.

Amid the many adversities and challenges, the Ilocos Region remains a major player in the production of the country's prime commodities. We remain 100% or more in our Sufficiency Level on Rice, Corn, High-Value Crops such as mango, tomato, eggplant, onion, ampalaya, mungbean, peanut and garlic, and for livestock particularly on goat and cattle.

We continue to be number one in rank across the country in the production of mango, garlic, tomato, eggplant, mungbean and peanut, second in goat and onion production, 3rd in cattle, 4th in Rice, and 5th rank in corn production.

To all the men and women who have worked alongside every leader that God has commissioned to carry on the task of ensuring that quality and safe food is made available and accessible at all times for every Filipino family through the Department of Agriculture, let us continue to harmoniously work together and achieve for our country a Masaganang Agrikultura at Maunlad na Ekonomiya.!

Together, we can certainly do more! Dios ti Agngina!

**NNE Q. BARES, DVN** Regional Executive Director



#### **Executive Summary**

The Ilocos Region's agri-fishery sector consistently showed resiliency while facing the adverse impacts of climate change, pest and disease outbreaks and inflation, and exhibited remarkable performance in CY 2022.

The region continued to exhibit a strong comparative advantage in production of rice, corn, garlic, tomato, eggplant, peanut and mungbean, onion, and goat and cattle.

C1:4	2022 Produc	ction (MT)	0/ Cl	Dle
Commodity	<b>Ilocos Region</b>	Philippines	% Share	Rank
Rice	1,405,075	14,938,689	9.4	4th
Corn	585,756	8,255,610	7.1	5th
Mango	166,032	712,553	23.3	1st
Garlic	4,503	5,885	76.5	1st
Onion	38,990	239,825	16.3	2nd
Tomato	62,806	216,609	29.0	1st
Eggplant	100,383	248,151	40.5	1st
Mungbean	12,356	36,849	33.5	1st
Peanut	12,802	31,519	40.6	1st
Goat	8,519	70,383	12.1	2nd
Cattle	23,367	236,648	9.9	3rd

Palay production grew by 3.30% in 2022 from 1,902,543 metric tons in 2021. This year's production and yield are the highest levels ever recorded in the region.

Corn production level also exhibited growth in 2022. This year's production of 585,756 metric tons, area harvested of 98,123 hectares and yield of 5.97 metric tons per hectare, which is the same data in 2021, are also the highest levels ever recorded in the region.

Production outputs of major high value crops recorded gains specifically in onion, tomato, eggplant, ampalaya and mungbean increased by 1.32%, 1.66%, 6.44%, 3.02% and 3.97%, respectively, from 2021 level.

In terms of livestock, the region was able to maintain its Foot-and-Mouth Disease-Free (FMD-Free) and Avian Influenza-free (AI-free) status. With the onslaught of the African Swine Fever (ASF), the region was able to mitigate its impact to the swine industry.

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

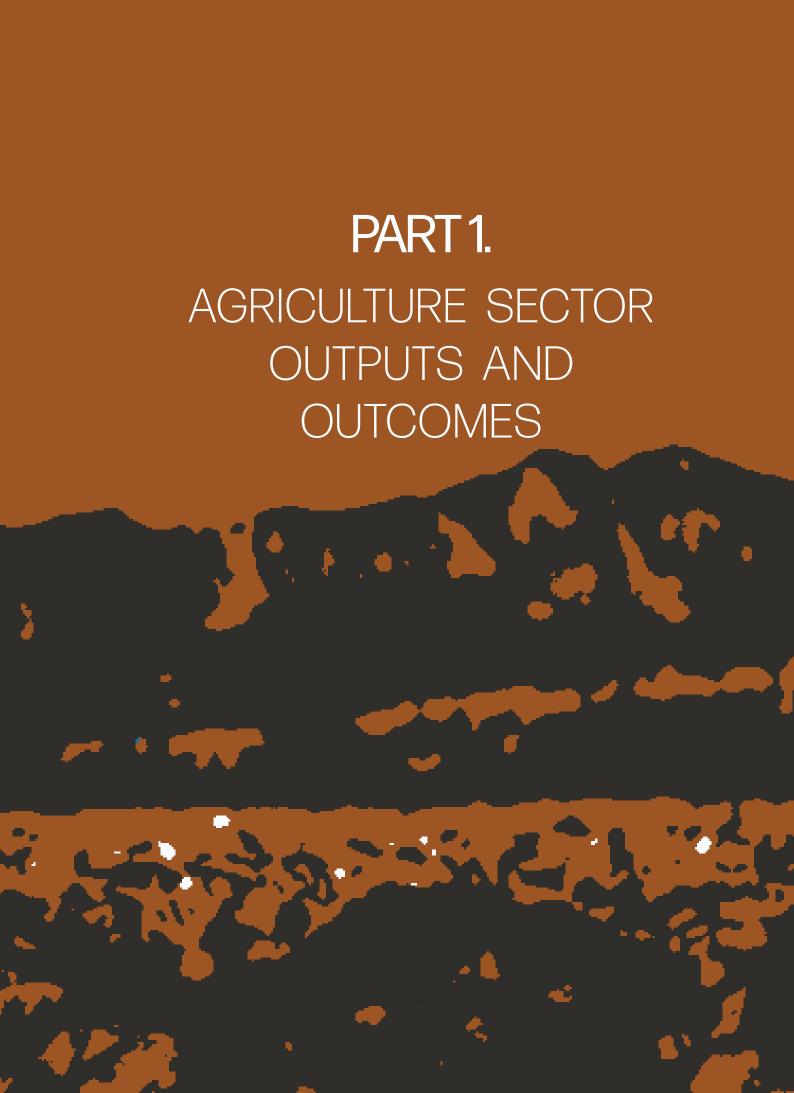
A total of 151,290 individuals and 1,291 groups were benefited from the various interventions of the DA RFO I.

The DA RFO I facilitated implementation, maintenance and continual improvement of the ISO 9001:2015 Certification while the Regional Feed Chemical Analysis Laboratory of the Integrated Laboratories Division sustained its two ISO Certificates—the ISO 9001:2015 and to ISO 14001:2015.

The region also received a total amount of PhP 237.68 Million rehabilitation and recovery funds for Typhoon Ompong, Typhoon Ineng and African Swine Fever (ASF) affected farmers and areas in the region under the Quick Response Fund (QRF) and the National Disaster Risk Reduction and Management Fund (NRRMDF).

The DA RFO I is continuously implementing rural infrastructure and enterprise projects under the Philippine Rural Development Project (PRDP). To date, 28 rural infrastructure sub-projects were approved with total cost of PhP1.47 Billion of which 25 sub-projects were completed, and 71 enterprise sub-projects were completed amounting to PhP306.10 Million.





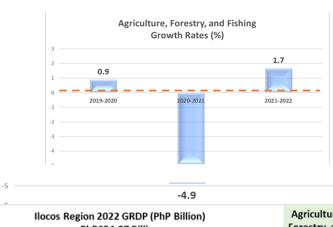


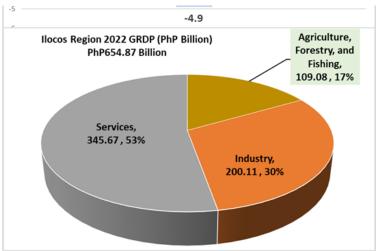
# Gross Regional Domestic Product (GRDP)

Per Philippine Statistics Authority (PSA) data, the Ilocos Region's economy grew by 7.6-percent in 2022 from PhP608.62 in 2021 to PhP654.87 billion in 2022.

The Agriculture, Forestry and Fishing (AFF) sector posted 1.7-percent economic growth from PhP107.28 Billion in 2021 to PhP109.08 Billion in 2022. The region's AFF bounced back from the downfall economy in 2021 due to the effect of pandemic and various disasters such as animal and crop

In decators	At Constant 2018 Prices (PhP' 000)						
Industry	2020	2021	2022				
Agriculture, Forestry,							
and Fishing	112,835,219	107,277,252	109,083,262				
Industry	169,817,032	186,623,498	200,110,620				
Services	299,225,726	314,718,084	345,672,124				
<b>Gross Domestic Product</b>	581,877,977	608,618,834	654,866,006				





pest infestation (e.g. African Swine Fever) and disastrous typhoons. This year's growth was attributed to the improved farm production and productivity.

The AFF's output in 2022 contributed 17% to the regional economy. Among the industry sectors, the Services contributed the highest share at 53% equivalent to PhP345.67 Billion, followed by the Industry at 30% share or PhP200.11 Billion.

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

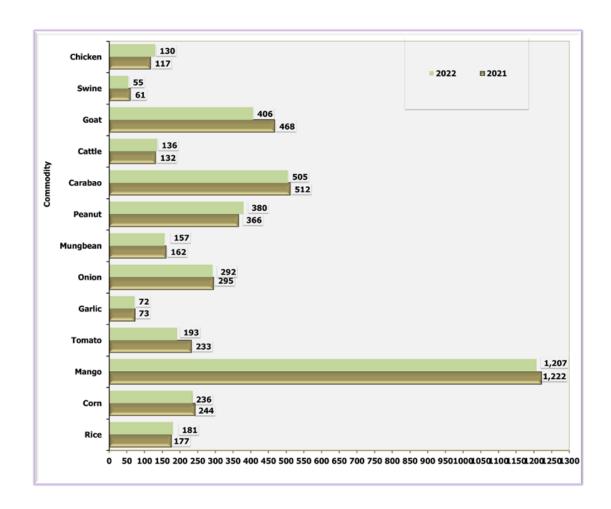
The region continued to be more than sufficient in almost major food commodities.

For rice, the region recorded a sufficiency level of 181% in 2022, 2.17 points higher than the level of 2021 at 177%. Its supply at 1.18 Million metric tons is more than enough to cater the demand of 5.43 Million population in Region 1.

Despite on the decrease in sufficiency level of corn, from 244% to 237%, the supply of corn can still cater the feed requirement of livestock and poultry, and the food for human consumption.

The region is alo more than sufficient in high value crops, except garlic. Mango producuction recorded a sufficiency level of 1,207 %, lower by 1.18 points from the 1,222% level in 2021. The region is still the top producer of mango in the country.

For meat, the region is sufficient in carabo, cattle, goat and chicken. Due to Africal Swine Feve (ASF) infestation, the supply of decreased from 2021-2022.



## Agricultural Commodity Performance A. Rice

In 2022, Ilocos Region's rice production exhibited a positive growth rate of 3.3% from 1,902,543 metric tons in 2021 to 1,965,372 metric tons in 2022 as shown in Table 1. The region sustained its rank as the 4th rice producing region in the country contributing 9.95% to the national rice production of more than 19.76 million metric tons.

Table 1. Rice production, area harvested and yield in Ilocos Region, 2021-2022

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
Province	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR
Ilocos Norte	337,192	330,749	(1.91)	66,213	63,909	(3.48)	5.09	5.18	1.63
Ilocos Sur	244,834	244,414	(0.17)	51,082	49,668	(2.77)	4.79	4.92	2.67
La Union	157,881	171,277	8.48	38,869	38,424	(1.14)	4.06	4.46	9.74
Pangasinan	1,162,636	1,218,933	4.84	251,537	255,407	1.54	4.62	4.77	3.25
Region	1,902,543	1,965,372	3.30	407,701	407,408	(0.07)	4.67	4.82	3.38

The growth in production was attributed to the 3.38% increase in yield per hectare from 4.67 metric tons in 2021 to 4.82 metric tons in 2022. Yield of all provinces posted positive growth in 2022 registering La Union as the highest increase at 9.74%. The Province of Ilocos Norte posted the highest yield level in rice production among the provinces. The Ilocos Region is the 2nd top yielder among the regions, next to Central Luzon, surpassing the national average of 4.11 metric tons per hectare.

This year's yield level is highest yield ever recorded in the region for the past five years. There was a continuous recovery and growth from the 2018 level at 4.24 metric tons, the time where rice incurred losses in production due to destructive typhoons.

The various interventions provided to increase rice production and productivity, coupled with favorable weather condition, are as follows: 1) provision and utilization of hybrid and inbred seeds and fertilizers, provision of production, postharvest and irrigation machineries and equipment, constructed/rehabilitated Small-Scale Irrigation Projects (SSIP) and conduct of training ang training-related activities.



## Agricultural Commodity Performance B. Corn

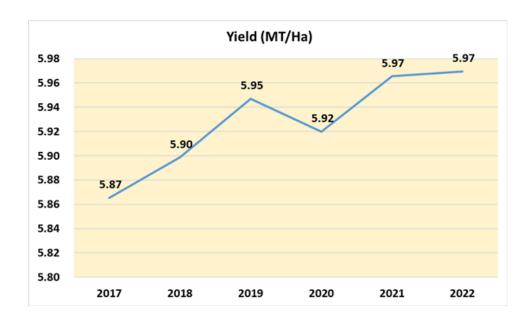
Corn production this year at 585,259 metric tons grew by 2.54% or additional 14,496 metric tons from 571,259 metric tons in 2021. All provinces exhibited growth in production with a recorded highest increase of 4.97% by La Union as shown in Table 2.

Table 1. Rice production, area harvested and yield in Ilocos Region, 2021-2022

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR
llocos Norte	65,496	66,284	1.20	11,615	11,718	0.89	5.64	5.66	0.31
Ilocos Sur	110,736	114,406	3.31	18,903	19,926	5.41	5.86	5.74	(1.99)
La Union	36,794	38,623	4.97	6,848	7,101	3.70	5.37	5.44	1.23
Pangasinan	358,233	366,443	2.29	58,395	59,378	1.68	6.13	6.17	0.60
Region	571,259	585,756	2.54	95,761	98,123	2.47	5.97	5.97	0.07

The increment in production was attributed to the increase of area harvested and yield per hectare. There was a recorded increase of 2.47% or additional 2,362 hectares in area harvested from 2021 level. Among the provinces, Ilocos Sur posted the highest increase in area at 5.41% this year from the previous year level.

In terms of yield, the region sustained its level at 5.97 metric tons per hectare, same with the level in 2021 and the highest yield recorded in the region. Also, this year's level is the second highest yield in the country, next to Central Luzon at 6.09 metric tons per hectare. There was an increase of 1.7% or 100 kg from the 5.87 metric tons per hectare in 2017.



## Agricultural Commodity Performance C. Mango

Despite of the decrease in mango production, the Ilocos Region still maintained its rank as the top producing region in the country. Its production at 172,469 metric tons contributed 23.3% share to the national aggregates of 712,553 metric tons.

Mango production declined by 3.73% or 6,473 metric tons from 166,032 metric tons in 2021 as shown in Table 3. Production in all provinces went down except for Ilocos Sur which increased by 13.82 from 2021 level.

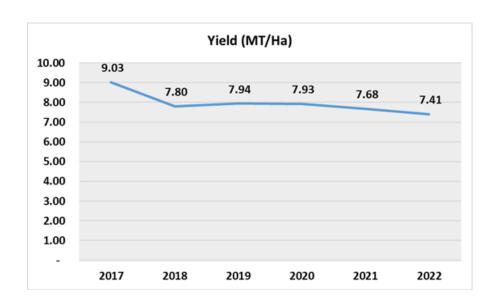
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Dun din an	Production (MT)				Area (Ha)			Yield (MT/Ha)		
Province	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR	
llocos Norte	25,200	22,888	(9.17)	4,753	4,753	-	5.30	4.82	(9.17)	
Ilocos Sur	10,525	11,979	13.82	1,303	1,304	0.10	8.08	9.19	13.71	
La Union	14,324	13,670	(4.57)	2,476	2,476	-	5.79	5.52	(4.57)	
Pangasinan	122,421	117,494	(4.02)	13,917	13,873	(0.32)	8.80	8.47	(3.72)	
Region	172,469	166,032	(3.73)	22,448	22,406	(0.19)	7.68	7.41	(3.55)	

Table 3. Mango production, area harvested and yield in Ilocos Region, 2021-2022

The decline in production was attributed to the decrease in area harvested and yield. The area harvested decreased by 0.19% from 22,448 in 2021 hectares to 22,406 hectares in 2022.

In terms of yield per hectare, it declined by 3.55% from 7.68 metric tons in previous year to 7.41 metric tons this year. This year's level recorded a 21.9% decrease from 9.03 metric tons in 2017. Nevertheless, the region is still the highest yielder among the mango producing regions and higher by 91.56% from the national yield level of 3.87 metric tons per hectare.

The decrease in mango outputs was caused by the Cecid Fly infestation and typhoons during the fruiting stage of mango plantings.



## Agricultural Commodity Performance D. Garlic and Onion

Ilocos Region remains to be the top producer of garlic contributing 77% of the national output of 5,885 metric tons in 2022. As shown in Table 4, the region produced 4,502.58 metric tons in 2022, lower by 1.50% than the 2021 production level.

Table 4. Garlic and Onion production, area harvested and yield in Ilocos Region, 2021-2022

Commodity/	Prod	uction (MT	)	Α	rea (Ha)		Yie	ld (MT/I	la)
Province	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR
Garlic	4,571	4,503	(1.50)	1,886	1,865	(1.12)	2.42	2.41	(0.38)
Ilocos Norte	4,427	4,376	(1.15)	1,820	1,801	(1.05)	2.43	2.43	(0.10)
Ilocos Sur	144	126	(12.31)	66	64	(3.03)	2.18	1.97	(9.57)
La Union	-	-	-	-	-	-	-	-	-
Pangasinan	-	-	-	-	-	-	-	-	-
Onion	38,968	38,990	0.05	4,303	4,359	1.29	9.06	8.95	(1.22)
Ilocos Norte	18,632	18,389	(1.31)	2,122	2,113	(0.39)	8.78	8.70	(0.92)
Ilocos Sur	18,348	17,609	(4.03)	1,728	1,690	(2.22)	10.62	10.42	(1.85)
La Union	323	380	17.73	33	33	-	9.71	11.44	17.73
Pangasinan	1,665	2,612	56.83	420	522	24.41	3.97	5.00	26.06

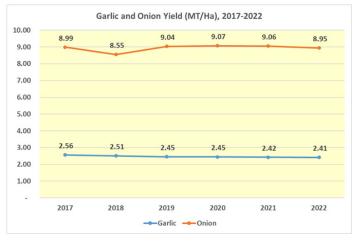
Also, the area harvested and yield in garlic went down this year by 1.12% and 0.38%, respectively. The negative growth rates in garlic outputs were attributed to production losses and damages caused by pest infestation and unfavorable weather condition.

For onion, the region is still the 2nd top producing region, next to Central Luzon. This year's production at 38,990 metric tons recorded a slight growth of 0.05% from 38,968 metric tons in 2021. Area harvested also increased by 1.29% or additional 56 hectares from 4,303 hectares in the previous year.

However, yield level per hectare in onion declined by 1.22% from 9.06 metric tons in 2021 to 8.95 metric tons in 2022 due to Armyworm infestation.

For the past five years, yield level per hectare of garlic in the region is decreasing from 2.56 metric tons in 2017 to 2.41 metric ton in 20222 due to pest infestation and unfavorable weather condition. Highest garlic yield recorded so far was in 2017 at 2.56 metric tons per hectare.

On the other hand, highest yield of onion was attained in 2020 at 9.07 metric tons.



# Agricultural Commodity Performance E. Legumes (Peanut & Mungbean)

Ilocos Region's peanut and mungbean production shared the biggest chunk of the national outputs in 2022 at 41% and 34%, respectively.

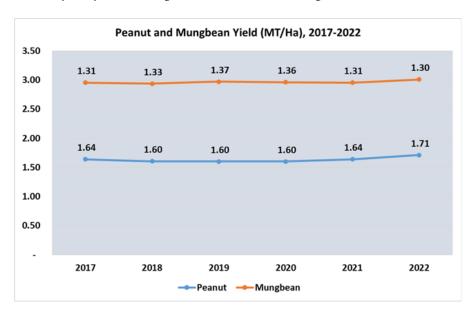
As shown in Table 5, peanut production exhibited positive growth at 4.85% from 12.210 metric tons in 2021 to 12,802 metric tons in 2022. All provinces posted growth in production with a recorded highest increase of 9.33% from the Province of Ilocos Sur. Moreover, area harvested increased by 0.41% or additional 31 hectares from the 2021 level. Also, yield per hectare in peanut grew by 4.42% from 1.64 metric tons on the previous to 1.71 metric tons this year.

Table 5. Peanut and Mungbean production, area harvested and yield in Ilocos Region, 2021-2022

	U	1							
Commodity/	Produ	ction (MT)	)	Α	rea (Ha)		Yie	ld (MT/H	ła)
Province	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR
Peanut	12,210	12,802	4.85	7,445	7,476	0.41	1.64	1.71	4.42
Ilocos Norte	1,560	1,617	3.67	1,125	1,150	2.23	1.39	1.41	1.41
Ilocos Sur	2,038	2,228	9.33	1,338	1,339	0.06	1.52	1.66	9.27
La Union	2,914	3,134	7.52	2,008	2,011	0.14	1.45	1.56	7.37
Pangasinan	5,698	5,823	2.20	2,974	2,976	0.07	1.92	1.96	2.13
Mungbean	12,573	12,356	(1.72)	9,570	9,527	(0.45)	1.31	1.30	(1.28)
Ilocos Norte	5,498	5,402	(1.75)	4,546	4,495	(1.10)	1.21	1.20	(0.65)
Ilocos Sur	1,042	1,032	(0.97)	726	725	(0.09)	1.44	1.42	(0.88)
La Union	256	275	7.42	233	241	3.31	1.10	1.14	3.97
Pangasinan	5,778	5,648	(2.24)	4,066	4,066	-	1.42	1.39	(2.24)

On the other hand, mungbean production at 12,356 metric tons this year dropped by 1.72% from 2021 level. The negative growth in production was due to the declined area harvested and yield at 0.45% and 1.28% from the 2021 data.

From 2017-2022, yield mungbean showed steady trend ranging 1.30 metric tons to 1.37 metric tons per hectare. There was a slight increase in yield trend of peanut from 1.64 metric tons in 2017 to 1.71 metric tons in 2022. This year's yield is the highest ever recorded in the region.



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

Tomato, eggplant and ampalaya are among the major component-ingredients of a pinakbet food in Ilocos Region. In terms of production, the region ranks 1st in tomato and eggplant, and 3rd in ampalaya contributing 29%, 40% and 12%, respectively, to the aggregates of production in the country.

Among the pinakbet vegetables, eggplant and ampalaya outputs posted positive growth this year from 2021 data as shown in Table 6.

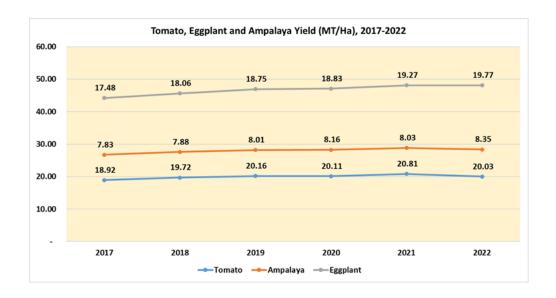
Table 6. Tomato, Eggplant and Ampalaya production, area harvested and yield in Ilocos Region, 2021-2022

Commodity/	Prod	Production (MT)			Area (Ha)			Yield (MT/Ha)		
Province	2021	2022	% GR	2021	2022	% GR	2021	2022	% GR	
Tomato	75,127	62,806	(16.40)	3,611	3,136	(13.14)	20.81	20.03	(3.76)	
Ilocos Norte	26,910	24,008	(10.79)	1,308	1,160	(11.31)	20.58	20.70	0.59	
Ilocos Sur	26,448	17,041	(35.57)	982	655	(33.25)	26.93	26.00	(3.47)	
La Union	2,368	2,315	(2.23)	171	171	(0.05)	13.86	13.56	(2.18)	
Pangasinan	19,400	19,442	0.21	1,150	1,150	0.02	16.87	16.90	0.19	
Eggplant	97,759	100,383	2.68	5,073	5,079	0.12	19.27	19.77	2.56	
Ilocos Norte	8,228	8,519	3.54	669	673	0.56	12.29	12.66	2.96	
Ilocos Sur	6,886	7,986	15.96	397	401	1.02	17.33	19.90	14.80	
La Union	2,508	2,435	(2.89)	224	224	0.05	11.19	10.87	(2.94)	
Pangasinan	80,137	81,443	1.63	3,782	3,780	(0.05)	21.19	21.55	1.68	
Ampalaya	10,400	10,831	4.15	1,295	1,297	0.09	8.03	8.35	4.05	
Ilocos Norte	3,410	3,470	1.78	404	401	(0.75)	8.43	8.65	2.56	
Ilocos Sur	2,331	2,605	11.76	162	166	2.48	14.39	15.69	9.06	
La Union	2,075	2,159	4.03	322	323	0.06	6.43	6.69	3.97	
Pangasinan	2,585	2,598	0.49	407	407	-	6.36	6.39	0.49	

This year's eggplant area harvested and yield grew by 0.12% and 2.56%, respectively, which resulted to a positive growth in production at 2.68% from 2097,759 metric tons in 2021 to 100,383 metric tons in 2022. Ampalaya recorded an increase of 4.15% in production, 0.09% in area harvested and 4.05% in yield per hectare.

However, tomato production went down by 16.40% from 75,127 metric tons in 2021. This negative growth was attributed to the decreased area harvested at 13.14% and yield at 3.76% from the previous year's levels.

From 2017-2022, all the commodities showed slight increasing trend in yield. Epplant yield per hectare improved from 17.48 metric tons in 2017 to 19.77 metric tons in 2022. Likewise, ampalaya yield increased from 7.83 metric tons in 2017 to 8.35 metric tons per hectare in 2022. Also, tomato yield grew from 18.92 metric tons in 2017 to 20.03 metric tons in 2022.



#### Agricultural Commodity Performance G. Livestock

The over-al production of livestock and poultry commodities posted 1.74% increase from 2021 level.

As shown in Table 7, only carabao recorded a growth by 3.14% of additional 267 metric tons from 8,473 metric tons in 2021 or 8,740 metric tons in 2022.

The swine industry in the region is still recouping with the downfall in production since 2021 due African Swine Fever (ASF) infestation. The DA RFO I distributed animal stocks, and drugs and biologics to augment production in 2022.

Chicken production exhibited growth at 13.60% from 76,280 metric tons in 2021 to 86,652 metric tons in 2022.

Records in Table 8 shows that carabao and chicken grew in inventory by 3.32% and 8.04%, respectively, in 2022.

The over-all livestock and poultry inventory posted 7.42% from 54.94 Million heads in 2021 to 59.02 Million heads in 2022.





Table 7. Livestock and Poultry Production (MT), Ilocos Region, 2021-2022

Commodity	Production (MT)							
Commodity	2021	2022	% GR					
Livestock	100,847	93,688	- 7.10					
Carabao	8,473	8,740	3.14					
Cattle	25,106	23,367	- 6.92					
Swine	57,660	53,062	- 7.97					
Goat	9,608	8,519	- 11.33					
Poultry	77,413	87,667	13.25					
Chicken	76,280	86,652	13.60					
Duck	1,133	1,015	- 10.41					
Total	178,259	181,355	1.74					

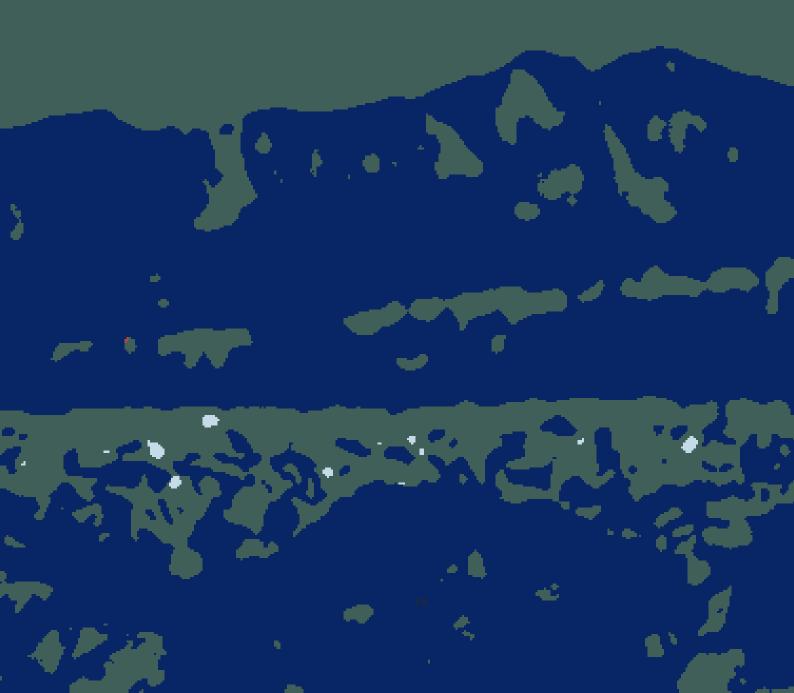
Table 8. Livestock and Poultry Inventory (Heads), Ilocos Region, 2021-2022

Commodity	Inve	Inventory (Heads)						
commodity	2021	2022		% GR				
Livestock	1,374,549	1,234,845	-	10.16				
Carabao	28,240	29,177		3.32				
Cattle	110,915	98,732	-	10.98				
Swine	710,752	643,674	-	9.44				
Goat	524,642	463,262	-	11.70				
Poultry	53,562,774	57,780,496		7.87				
Chicken	53,004,843	57,266,005		8.04				
Duck	557,931	514,491	-	7.79				
Total	54,937,323	59,015,341		7.42				



## PART 2.

## INPUTS - PROGRAMS/ PROJECTS/ACTIVITIES





# Rice Banner Program A. Production Support Services

- 1. Procurement and distribution of high quality seeds
- A. Procured and distributed 2,245,755 kg of hybrid rice seeds including the additional procurement from savings that is equivalent to 149,717 hectares and 1,996,440 kg of certified inbred seeds equivalent to 49,911 hectares
- B. Procured and distributed buffers tocks of 400,000 kg of certified seeds and 83,325 kg of hybrid seeds
- 2. Distribution of Fertilizer Discount Voucher(FDV)
- A. FDV covering 35,619 hectares of hybrid rice and 13,632 hectares of inbred seeds were claimed by 54,446 individuals-farmers







#### B. Extension Support Services, Education and Training Services

- 1. Establishment of demonstration farm sites
- Established 10 demonstration sites of Community Hybrid Rice Cluster Technology Demonstration Farms 6 sites in Pangasinan and 4 sites in Ilocos Norte Each where each site is composed of 100 hectares' contiguous area within an irrigation turn-out. The techno demo 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, and the technology of producing 6.5 metric tons for wet season and 8.0 metric tons for dry season using hybrid varieties. Interventions provided were as follows:



Inputs	Wet Season  Recommended rate/ ha	Dry Season  Recommended rate/ ha	Sources	
Hybrid seeds	15kg	15 kg	DA	
Urea	3 bags	3 bags	DA (e-voucher)	
Complete	1 bag	1 bags	DA	
Ammonium Phosphate	1 bag		DA	
Soil Ameliorant	4kg	4kg	DA	
Foliar Fertilizer (BioPrime)	50 pack		DA	
Muriate of Potash	1 bag	1 bag	Farmers counterpart	
Organic Fertilizer	10 bags	10 bags	DA (wet Season) and Farmers counterpart (Dry Season)	
Signboard (tarpaulin)	1 piece	1 piece	DA	
Placards	1 per variety	1 per variety	c/o Seed company	



# C. Agricultural Machinery, Equipment, Facility Support Services

 $\bullet$   $\,$  Distributed 182 farm production and pos harvest machineries and equipment valued at PhP107 Million

Name of Farm Machinery/Equipment	Provinces (No. of units distributed)				Total
	Pangasinan	La Union	Ilocos Sur	Ilocos Norte	Total
Rice Combine Harvester	10	2	2	2	16
Recirculating Dryer	4	1	1	2	8
Four Wheel Tractor	6	4	3	4	17
Precision Seeder	3	-	-	-	3
Hand Tractor	24	4	4	6	38
Pump and Engine Set	50	16	16	18	100

Rehabilitation of Canal Lining in Brgy. Oya-oy, Bacnotan, La Union





Installation of Sabangan SPFS-8 in Brgy. Sabangan, San Juan, La Union





Installation of Casilagan SPFS-8 in Brgy. Casilagan, Sto. Tomas, La Union





#### D. Irrigation Network Services

• Constructed and rehabilitated 25 Small Scale Irrigation Projects such as Small Water Impounding Projects (SWIP), Diversion Dams (DD) and Solar-Powered Irrigation/Fertigation Systems (SPI/FS) serving 448 hectares with at least 412 jobs generated.

Installation of Urbiztondo SPFS-8 in Brgy. Urbiztondo, San Juan, La Union







## Corn Banner Program A. Production Support Services

- a. Procurement and distribution of high-quality seeds
- Distributed 62 bags of Registered OPV glutinous white corn seeds at 20 kg/bag for 62 hectares and 165,000 cassava seed pieces produced from the stations
- b. Procurement and distribution of various seeds as buffer stock
- Distributed 16,092 bags of GM Hybrid yellow corn seeds at 9 kg/bag for 894 hectares as immediate response to areas affected with various calamities and pest/disease infestations.



# B. Extension support, Education and Training Services

- a. Conduct of trainings and training-related events
- Conducted 24 batches training and training-related events benefiting 836 farmers
- Conducted four batches of entrepreneurial training where each trained 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
- Conducted four batches of cassava livelihood trainings
- Conducted other trainings:
  - 10 batches of Farmer Field School on Corn Production in collaboration with the LGUs thru the Agricultural Extension Workers;
  - 2 batches of corn cluster development training;
  - 1 batch of cassava cluster development training;
  - 2 batches of silage production training; and
  - 1 batch of sorghum production training.



b. Establishment of technology demonstrations and model farms:

- Established 13 sites for corn techno-demos
- Established 3 corn model farms in Villasis, Pangasinan, Aringay, La Union and Banna, Ilocos Norte where each site covers 50 ha showcasing a fully mechanized corn production technology from planting to harvesting
- Established one cassava model farm in Rosario, La Union and one sorghum techno-demo in Natividad, Pangasinan





#### C. Irrigation Network Services

• Distributed a total of 89 units pump and engine set for shallow tube wells (STWs) benefiting 37 farmer groups or associations region wide

# D. Agriculture and Fishery Machinery,Equipment and Facilities Support Services

• Distributed 4 units of 65 HP four-wheel drive farm tractor, 4 units of hammer mill, 4 units of corn husker-sheller, and 4 units of cassava grater with presser.



# High Value Crops Development Program A. Production Support Services

- Procured and distributed one unit of hauling truck for use at the DA station.
- Distributed the following assorted vegetables seeds and farm production supplies and equipment:
  - o 64,000 kg of shallot bulbs covering 64 hectares
  - o 360 kg of Red Onion covering 90 hectares
  - o 450 kg of lowland vegetable covering 150 hectares
  - o 50,000 kg of flower inducers
  - o 360,000 pc of bagging materials





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

- Conducted 12 Package of Technology (POT) training for mango, vegetable and onion benefiting 301 farmers and 119 AEWs
- Distributed fertilizers for the rejuvenation/fertilization of old and unproductive trees of mango, cacao and coffee.

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

• Distributed 6,624 various farm production and pos harvest machineries and equipment, and facilities benefiting 221 group beneficiaries

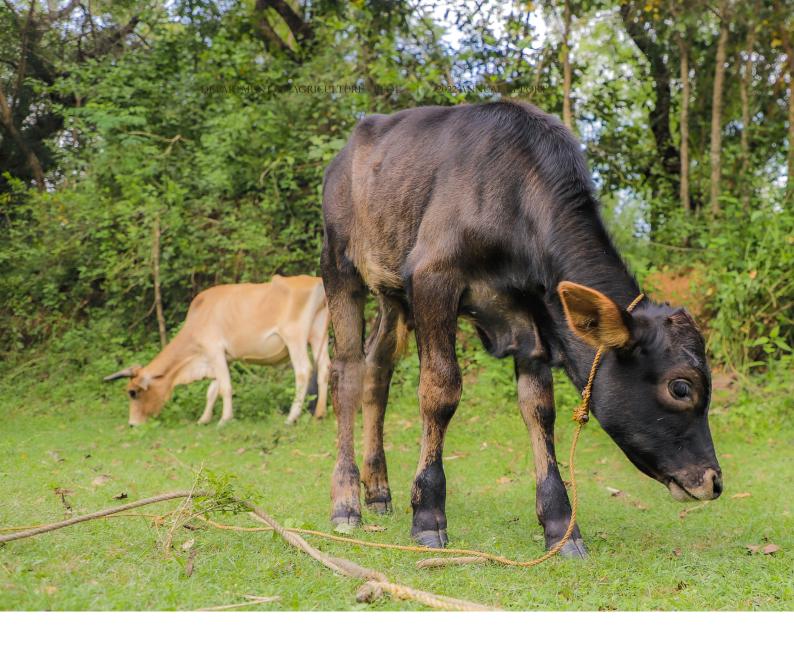




Interventions	Distributed	No. of Beneficiaries (Groups)
Vegetable seeder (no.)	28	20
Multi-cultivator (no.)	16	12
Power sprayer (no.)	28	7
Knapsack sprayer (no.)	470	38
Pole/power pruner/shear (no.)	55	11
Lifting machine (no.)	1	1
School garden (no.)	100	100
Urban agriculture garden (no.)	8	8
Gulayan sa Barangay (no.)	17	17
Plastic crates (no.)	2,900	14
Hauling truck (no,)	1	1

### D. Irrigation Network Services

 $\bullet \qquad \text{Distributed 30 units of pump and engine sets with service area of 90 hectares benefiting 13 group beneficiaries} \\$ 



# Livestock Banner Program A. Production Support Services

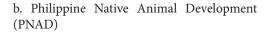
- a. Genetic improvement and animal health program
- Distributed a total of 8,090 pieces of semen straws under the Unified National Artificial Insemination Program (UNAIP) with 2,761 animals inseminated
- Provided 570 pieces semen straw of Wagyu breed inseminating 570 Brahman Cattle heads for the Piddig Wagyu Cross Breed Project in Piddig, Ilocos Norte with 79 heifers produced.











- Established and maintained two (2) PNAD sites for the purification of phenotypic characteristics of the native breed such as white snout, white spot at the tip of tail, white socks, and white belly where animal supplies such as vitamins, dewormer, and feeds were distributed to Mariano Marcos State University (MMSU) in Dingras, Ilocos Norte and Don Mariano Marcos Memorial State University (DMMMSU) in Bacnotan, La Union.
- C. Distribution of forage seeds and planting materials
- Distributed 200 kilograms of various forage seeds to 25 group beneficiaries in the four (4) provinces.
- Maintained 30 hectares of forage area in support to ruminant production.







- d. Development, maintenance, and rehabilitation/upgrading of government stock farms and other facilities
- Maintained five (5) multiplier farms in DA-RFO 1 stations which will serve as the source of quality breeder stocks to be given to interested farmers and raisers.
- $\bullet$  Distributed 5 heads of cattle, 17 heads of goats, 17 heads of sheep and 20,000 pieces various forage planting materials benefitting 15 FCAs and 8 individual recipients.
- e. Support to Prevention and Control of Economically Important Diseases
- Distributed 200,000 doses of various veterinary drugs and biologics to LGUs through the Provincial Veterinary Offices for the prevention of economically important diseases like hog cholera, Newcastle disease, rabies and Blackleg.
- Established 149 cluster sites under the Calibrated Repopulation Sentinel Protocol with 6,705 weaners and 13,410 bags of feeds provided to 2,235 beneficiaries.
- Distributed 20 units power sprayer to 20 LGUs in support to boarder protection and disinfection activities in support to the prevention and control of ASF in the region.







Distribution of swine feeds and various animal supplies for Sentinel Protocol in Ilocos Sur



Distribution of sentinel animals in Nagulian, La Union



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

- DA-RFO1 maintains its collaboration and strong linkage with LGU partners in the implementation of various programs and projects in the region.
- A total of 210 AEWs and 56 Meat Inspectors were given incentives for their untiring support and active participation in the providing interventions to our clients.

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

- Awarded PhP11.375 Million to four (4) LGUs and two (2) FCAs for the establishment of multiplier farms for cattle, goat, chicken, duck and rabbit under the Livestock Economic Enterprise Development (LEED).
- Awarded PhP220 Million to 40 FCAs at PhP5.5 Million each for the implementation of Community-Based Swine Production through Clustering and Consolidation Project to increase the swine inventory through the establishment of breeder farms and production farms adopting the clustering and consolidation concept with expected 865MT pork production by June 2023.



# Organic Agriculture Program A. Production Support Services

To date, the Ilocos Region has 1,043 hectares devoted to organic farming based on the cumulative Organic Agriculture (OA) areas from 2012-2021.

- Produced and distributed the following production inputs:
- $\bullet$  570 kg of black and red rice seeds, 700 kg of OPV white corn seeds, 22 kg of vegetable seeds, 100 kg of mungbean seeds benefiting 50 farmer groups and 16 individuals;
- 654 heads of native chicken, 267 heads of Muscovy duck and 5 heads of upgraded goats with 30 group and 5 individual beneficiaries.

# B. Extension Support, Education and Training Services

- Conducted/Supported the following trainings and training-related events:
  - a. 2 batches of Consultation-Workshop with OA Stakeholders on the Installation of Internal Control System (ICS) for Smallholder Groups with two (2) group-participants in Pangasinan and La Union
  - b. 1 batch of training for the Senior Citizens with 30 participants
  - c. 2 batches of trainings for the Gender and Development Program with 60 participants
  - d. 6 batches of trainings on OA Production Technologies with 115 individuals
  - e. 1 consultative-workshop on OA Roadmap with the LGU partners in all provinces of Region 1

Picture 1. Awarded the organic certificate to the Pangasinan Core Group with the BAFS Director and OIC-RTD for Research and Regulations of the DA-RFO I







Picture 2. Awarded/distributed inputs and farm supplies to the farmer-group beneficiaries' region wide







Picture 3. Conducted different trainings and consultative meetings with LGU partners and stakeholders













- Established and maintained two (2) OA demo farms located in Cabugao, Ilocos Sur and in City of San Fernando, La to showcase OA production technologies
- Assisted the Agas Farm Bukid of Mangatarem, Pangasinan in the renewal of certification of their products (300,000 gallons organic plant supplement).
- Conducted the 4th Regional Organic Agriculture Congress (ROAC) on September 29, 2022 at Purok Marcela Resort, Lingayen, Pangasinan which was attended by 100 participants comprised of organic agriculture practitioners, LGU partners, NOAP- National OA Program Coordinating Office (NPCO) Staff and some Local Chief Executives in Pangasinan.
- Distributed IEC materials on OA and molasses to the walk-in clients and participants during the briefing conducted in support to the OA Month Celebration.

Picture 4.Photos taken during the Regional Organic Agriculture Congress







Picture 5. Conducted briefing with DA employees in support to OA Month Celebration







Picture 6. Awarded the farm machineries and equipment to the qualified FCAs region wide







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

- Distributed 4 units of shredders, 16 units of power sprayer and 49 units of soil auger to 36 farmer groups
- Distributed post-harvest machinery & equipment such as 7 units of rice mill, 1 unit of multigrain thresher, 1 unit of soybean cleaner/sorter/grader, 1 unit of soybean grinder, 1 unit of tofu maker, 1 unit of chest freezer, 1 unit of soybean roasting machine, 1 unit of preparation table and 2 units of pelletizer to the 15 farmer groups.

### D. Irrigation Network Services Sub-Program

• Distributed 29 units of pump and engine set with 87 hectares service area generated benefiting 14 farmer associations/ cooperatives region wide.

Picture 7. Awarded the pump and engine set to the qualified FCAs in the region









## **HALAL PROGRAM**

A. Conduct of Training on Production Processes of DA Assisted Halal Products

- Two-day awareness seminar conducted by the Halal Food Industry Development Program (HFIDP) of the DA-RFO1. Held at Regency Hotel, Calasiao, Pangasinan on April 20-21, 2022.
- Provides the food manufacturers, processors, and entrepreneurs on updates and information on the Halal Certification Standards and Food Safety Process in accordance with Islamic Laws and Principles which means permitted, acceptable, lawful, allowed, un-prohibited and legal as Mr. Ismail Abaya Maharajah, Co-founder of One Halal Philippines, area noted in his discussion on the Fundamentals of Halal
- With the high market potential of Halal products in the world and which started to penetrate the Philippine Market, the DA-HFIDP is taking full advantage for the promotion of Halal products in the country and in every region.
- One-on-one interview and inspection of products was done with the participants signifying their interest to be Halal certified, with the help of Mr. Ismail Abaya Maharajah.



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#### B. Conduct of Training on Halal Butchering / Slaughtering and Halal Farming System

- The Department of Agriculture in Ilocos Region, through the Halal Food Industry Development Program (HFIDP) conducted a one-day seminar cum practical demo on animal slaughtering following the Islamic way on April 28, 2022 held at the Center for Bamboo Development Farm located at Brgy. Ambalite, Pugo, La Union.
- Seminar cum demo paved way for the participants to abreast with the practical and technical know-how in animal slaughtering using the Islamic principles.
- Dr. Rafael 'Ismael' Abaya Maharajah III underscored the need for animal raisers to indulge in producing animals and poultry production, especially in ruminants like goats and rabbits because of the increasing

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demand for these products by the Muslim community.

- One major requirement that the Muslims take into consideration is the Halal certification not only for the animal product and by-product itself but for the slaughterhouse as well as the process that these products are being prepared.
- A hands-on demo was done by the resource persons using the goat, rabbit, and chicken.

E. Establishments that are Halal Certified

Name of Company	Address	Status
Anjo Farms	San Fabian, Pangasinan	Halal Certified
E-Mars Bagoong	Lingayen, Pangasinan	Halal Certified
JB's Aquafarms and Seafood Products	Binmaley, Pangasinan	On- process of application for certification
JB's Bagoong	Lingayen Pangasinan	On- process of application for certification
Cacao Federico	Mangaldan, Pangasinan	For application



### **RESEARCH**

#### ILOCOS INTEGRATED AGRICULTURAL RESEARCH CENTER

#### Conduct of Rice R&D

- 1. Innovative Family Enterprise Development on Rice-rice+duck farming system
- 2. Innovative Family Enterprise Development on Rice+vegetables+free-range chicken farming system

#### IFED sites in La Union

IFED sites	Stocks awarded	Feeds (bags)	Biologics (set) <sup>1/</sup>	Azolla (kg)	Forages (pcs)	African Night Crawler (kg)
San Fernando City and Bagulin, La Union  - Cabarsican, Pacpaco, Nagyubuyuban, Dagup, Sumadag, Cambaly, Bolaen, Paitan East, Capantolan	1200	91	2	9	205	45

- 3. NEXT-GEN PLUS: Increasing access to adaptive rice varieties in Region 1
- 4. Multi-Location testing of hybrid rice varieties in Ilocos Region
- 5. Field validation on the effectiveness of different plant growth enhancers on rice production in Ilocos
- 6. RCM field evaluation trial on quality seeds, salinity and PRISM integration

#### Conduct of Corn R&D

- 1. Multi-location Trial of Hybrid Yellow Corn Varieties under Ilocos Condition
- 2. Field validation on the effectiveness of different plant growth enhancers on corn production in Ilocos
- 3. Management of Fall armyworm using Commercial Biological Pesticides on White Corn in Ilocos Region
- 4. Innovative Family Enterprise Development (IFED) through improved young and green corn production
- 5. Upscaling on Nutrient Expert-based fertilizer recommendation thru SSNM principle
  - 12 sites were established from the period of October 15-November 28, 2022.
  - includes 2 sites each in Ilocos Norte, La Union, and Ilocos Sur while 6 in Pangasinan representing each district by province.
  - Project were established in 0.5 hectares per site where in 1,000 m2 accounts for the research area. All of the sites were allocated space for the research component with 500 m2 each.

PROVINCE	DISTRICT NO.	SITE	COOPERA TOR	DATE ESTABLISHED
ILOCOS NORTE	1	Calayab, Laoag City, Ilocos Norte	Imelda Tolentino	November 9, 2022
NORTE	2	Morong, Badoc Ilocos Norte	Melbert Idnay	November 4, 2022
	1	Macabiag, Sinait, Ilocos Sur	Maryline Valencia	November 25, 2022
ILOCOS SUR	2	Langlanca Primero, Candon City, Ilocos Sur	Manuel Cudiamat	November 2, 2022
LA UNION	1	Dangdangla ,San Juan, La Union	Sonny Guerlan	October 26, 2022
LA ONION	2	Tabtabungo, Rosario, La Union	Maximo Emocling Molina	November 11, 2022
	1	Dacap Norte, Bani, Pangasinan	Noli Artstis Bergonia	November 9, 2022
	2	Bayaoas, Urbiztondo, Pangasinan	Federico Pidlaoan Valerio	October 18, 2022
	3	Alacan, Malasiqui, Pangasinan	Filomino Lopez. Ferrer	November 28, 3022
PA NGA SINA N	4	Guesang, Mangaldan, Pangasinan	Nestor De Vera Cuison	October 28, 2022
	5	Gualsic, Alcala, Pangasinan	Cesar Macalanda Ramirez	November 18, 2022
	6	San Miguel, Natividad, Pangasinan	Pablo R. Estillore Jr.	October 15, 2022
	то	TAL	12	

6. On-Farm Participatory Evaluation and Field Validation of Nutrient Expert for Cassava – A Tool for Sustainable Cassava Yield Intensification in Region I

#### Other R&D

- 1. Efficacy testing of Trichoderma harzianum against stem rot on peanut
- 2 Field validation on the effectiveness of different growth enhancers on bulb and solanaceuos crops in Ilocos
- 3. Management of major insect-pests of vegetables (tomato and eggplant) using commercial biological pesticides
- 4. Performance of improved breeds of chicken under Ilocos Condition

#### Other PSS

- 1. Production and distribution of quality planting materials(fruit trees)
  - Produced a total of 18,556
  - A total of 9,527 seedlings distributed seedlings/seeds
  - A total of 236 individuals and 20 groups
- 2. Production of quality planting materials (forage)
  - Produced a total of 2,909
  - 2,874 total number of distributed seedlings/seeds
  - 10 individuals and 7 groups

- 3. Production of quality planting materials (OPV Vegetable Seeds)
  - Produced a total of 68
  - A total of 165 seedlings/seeds distributed
  - 39 individuals and 2 groups

ESETS

Enhancing Technology Transfer of Improved Technologies

Venue	Date	Technologies transferred	No. of participants
DA-ILIARC, Sapilang Bacnotan, La Union	December 7, 2022	Vegetable production, vermicomposting, free-range chicken and ruminant production technology cum silage-making	21
Suyo, Bagulin, La Union	December 8, 2022	Vegetable production, vermicomposting, free range chicken and ruminant production technology cum silage-making	9
Arosip, Bacnotan, La Union	December 9, 2022	Vegetable production, vermicomposting, free-range chicken and ruminant production technology cum silage-making	29
Poblacion, Bagulin, La Union	December 13, 2022	Vegetable production, vermicomposting, free-range chicken and ruminant production technology cum silage-making	32
		Total	91

#### ILOCOS NORTE RESEARCH AND EXPERIMENT CENTER - BATAC

#### Conduct of Rice R&D

A. Efficient deployment systems for NextGen varieties enhanced genetically through modern breeding technologies contributing to increased productivity in the Philippines

- Component 1: Validation of Variety Profiles and Recommendation Domains
  - Twenty-one (21) municipalities and two (2) cities were classified according to the predominant ecosystem
  - A total of 213 respondents were interviewed in Ilocos Norte
- Component 2: Participatory Performance Testing and Validation Researcher Managed (PPTV-RM) under Different Ecosystem
- Component 3: Techno demo cum inbred rice seed production on farm (registered seeds)
- Component 4: On-station Rice Seed Production
- B. Sustaining productivity and profitability of rice based farming communities through promotion of improved production technologies
- C. Innovative family enterprise on poultry-based (rice+vegetables+free-range chicken) farming system in Ilocos region
- D. Field validation on the effectiveness of different plant growth enhancers on rice production in Ilocos
- E. Rice crop manager (RCM) field evaluation trial on quality seeds, salinity and with prism integration



#### Corn R&D

- A. Multi-location testing of newly released hybrid yellow corn varieties under Ilocos condition
- B. Field validation on the effectiveness of different plant growth enhancers on corn production in Ilocos

#### Other R4D on Various Program

A. Field validation on the effectiveness of different plant growth enhancers on garlic production in Ilocos B. Field validation on the effectiveness of different plant growth enhancers on shallot production in Ilocos C.Field validation on the effectiveness of different plant growth enhancers on tomato production in Ilocos D. Field validation on the effectiveness of different plant growth enhancers on eggplant production in Ilocos

#### **R&D Support Facility**

- A total area of 6.35 hectares were maintained including 9 office buildings, 15 other structures, 31 other machineries and equipment, 21 office equipment, 33 ICT equipment's and 4 RP motor vehicles
- As of 2022, infrastructure was established namely, employee's quarter, multi-purpose machineries shed, irrigational main and sub-canal and operation building.

#### Other Production Support Services (PSS) on Various Regular Program

A. Production and Distribution of Various Fruit Tree as Planting Material

- A total of 20,008 regular target of fruit seedlings production
- An accomplishment of 20,054 assorted fruit tree seedling was produced
- A total of 14,445 assorted fruit tree seedlings was distributed to various walk in client and group/association

#### B. Production and Distribution of OPV Vegetable Seeds as Planting Material

- A total accomplished/produced were 225kgs of mungbean in terms of seed distribution,
- A total of 25kgs was distributed to farmer cooperators of CPAR Mungbean at Dingras, Ilocos Norte.

#### ESETS on Various Regular Program

- Accomplished the targeted 48 farmers/AEW to be trained with 3 package of technology
- Conducted a training on improved technologies on crops as techno-offering to inclusive agribusiness in Ilocos Norte



#### Production Support Services (PSS) on High Value Crop Development Program

A. OPV Lowland Seed Buffer Production

- A total of 218kilos of assorted vegetables (legumes-215kgs and solanaceous-3kgs) were produced
- A total of 144.75 kilos seeds were distributed (legumes-142.5kgs and solanaceous-2.25kgs) to 119 beneficiaries.

#### B. .Production of Grafted Mango Seedlings

- One (1) fruit tree nurseries were maintained
- A total of 2,450 grafted mango seedlings were produced over the 3,000 target to propagate
- 158 seedlings were distributed to walk in client

#### C. Production of Sexual Fruit Tree Seedlings

• A total of 5,050 assorted fruit tree seedlings were produced and 2,080 pieces were distributed to 129 beneficiaries

#### D. Greenhouse & Screenhouse (off-season vegetable production & production of vegetable seedlings)

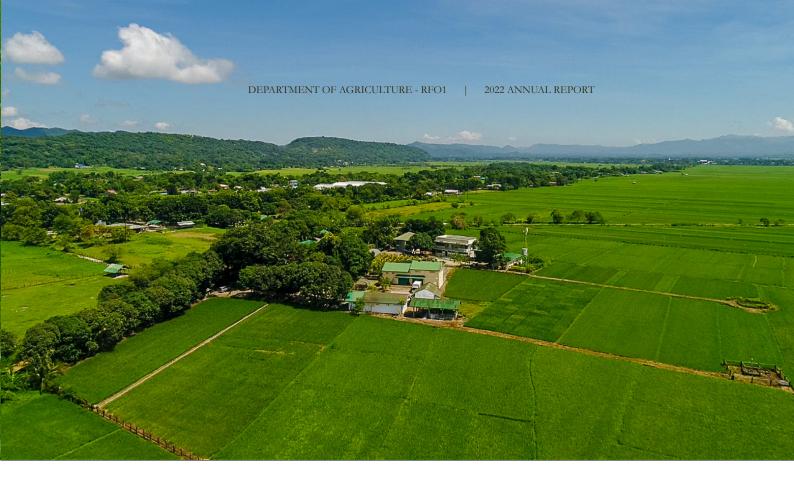
- 1 unit greenhouse was maintained.
- Production technologies of crops with 128 kgs of vegetables.
- Production of 125 trays of vegetable seedlings was also produced and distributed to PNP batac, PNP Laoag, walk in client
- E. Mango foundation Scion Grove
- 1 scion groves with 60 certified lamao and guimaras varieties were maintained
- Twenty (20) certified trees are maintained as sources of scion for asexual propagation.
- Forty (40) remaining trees were used in fruit production as source of seeds for sexual propagation.

#### F. Storage Bodega

• Maintained one (1) HVC and Corn cold storage bodega

#### Production Support Services (PSS) on Organic Agriculture Program

- a. Support to organic seed production (Red/Black Rice, Cowpea)
- b. Farm Waste Utilization thru Vermicomposting



#### Corn R&D

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- B. Field validation on the effectiveness of different plant growth enhancers on corn production in Ilocos

#### Other R4D on Various Program

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A. OPV Lowland Seed Buffer Production

- A total of 218kilos of assorted vegetables (legumes-215kgs and solanaceous-3kgs) were produced
- A total of 144.75 kilos seeds were distributed (legumes-142.5kgs and solanaceous-2.25kgs) to 119 beneficiaries.

#### B. .Production of Grafted Mango Seedlings

- One (1) fruit tree nurseries were maintained
- A total of 2,450 grafted mango seedlings were produced over the 3,000 target to propagate
- 158 seedlings were distributed to walk in client

#### C. Production of Sexual Fruit Tree Seedlings

• A total of 5,050 assorted fruit tree seedlings were produced and 2,080 pieces were distributed to 129 beneficiaries

#### D. Greenhouse & Screenhouse (off-season vegetable production & production of vegetable seedlings)

- 1 unit greenhouse was maintained.
- Production technologies of crops with 128 kgs of vegetables.
- Production of 125 trays of vegetable seedlings was also produced and distributed to PNP batac, PNP Laoag, walk in client

#### E. Mango foundation Scion Grove

- 1 scion groves with 60 certified lamao and guimaras varieties were maintained
- Twenty (20) certified trees are maintained as sources of scion for asexual propagation.
- Forty (40) remaining trees were used in fruit production as source of seeds for sexual propagation.

#### F. Storage Bodega

• Maintained one (1) HVC and Corn cold storage bodega

#### Production Support Services (PSS) on Organic Agriculture Program



#### Organic Agriculture Program

- a. Organically-grown goat Production
- Maintaining 20 head breeder does and one (1) breeder bucks with offspring produced of 0 heads since stocks are not in good condition as breeder.
- Twelve (12) heads were ready for loaned wherein six (6) of which were loaned out to the qualified beneficiary from Community College Demo Farm Campus of Labnig, San Juan, Ilocos Sur.
- To sustain their feeding requirements, a 1.0-hectare forage production area was subdivided into 10 paddocks planted with different improved forage and grasses as source of their roughages.

#### b. Organically-grown crops production

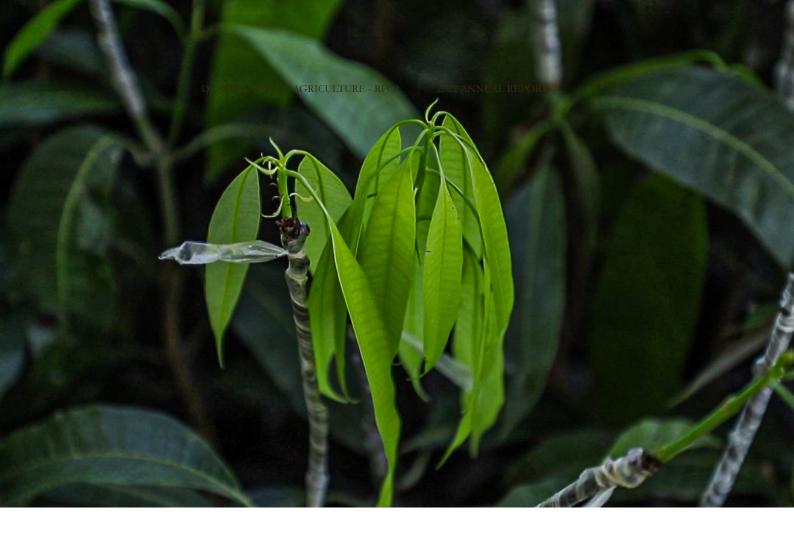
- 50 kilos were distributed to two (2) LGU beneficiaries
- c. Waste Management and Utilization
- One (1) facility maintained in the station and produced a total of 11 kg vermiworms, 10,185 kg vermicompost and 1,823kg vermicast.
- Seven (7) kg of vermiworms were distributed to AMIA Farmers in Sta. Lucia Ilocos Sur

#### High Value Crops Program

- a. Lowland buffer seed production
- A total of 200.65 kilogram (kg) of various lowland vegetable seeds were produced with 185.15 kg and 15.50 kg seeds in legumes and cucurbits respectively.
- 216 beneficiaries were benefited from the quality seeds with a total of 176.32 kg of seeds received which includes walk-in client, farmers, technician/agricultural extension worker, local government units (LGU), schools, farmer and community organizations

#### b. Production Facilities Maintained

- b1. Greenhouse (Propagation of vegetable seedlings)
- Production of vegetable seedlings were done and 57 trays of assorted vegetableswere distributed to 37



walk-in farmers in Ilocos Norte and IFED project beneficiaries at Brgy. Camguidan, City of Batac, Ilocos Norte.

b2. Nursery (Propagation of Mango and other fruit tree seedlings)

#### Grafted Mango Seedlings Production

- For asexual propagation, a total of 3,033 grafted mango seedlings were produced
- $\bullet$  1,150 seedlings were distributed to 114 walk-in clients composed of 83 males, 22 females and 2 groups in Ilocos Norte.
- To date, there were 5,052 mango seedlings were also produced as root stocks for grafting.

#### Production of other fruit seedlings

- One (1) fruit tree nursery was maintained
- A total of 3,183 seedlings of assorted fruit trees were distributed to 80 individual clients that includes Walk-in client,4Ps LGUs of Batac City, Pinili, Banna, Nueva Era, Paoay, Sarrat & Piddig Ilocos Norte, and PNP Dingras Ilocos Norte.

#### c. Seed Storage

• One (1) cold Storage was maintained

#### d. Mango foundation/scion grove

• 84 certified Lamao variety were maintained for fruit production and as source of seeds for sexual propagation.

#### e. Clonal garden

 $\bullet$  One (1) clonal garden was maintained with 30 coffee trees maintained which a total of 2kilograms coffee fruits was harvested at ten (10) bearing trees.



#### **ILOCOS SUR RESEARCH CENTER**

#### Regional Rice R4D Project Related (Production-related)

A. Innovative Family Enterprise Development on Rice + Vegetable+ Free Range Chicken Farming System) (IFED Rice + Vegetable + Chicken)

Component 1. Enhancing productivity of selected pinakbet vegetables through the use of seaweed-based plant growth enhancer

Component 2. Technology demonstration on the improved technology on rice vegetable+ free range chicken farming system thru IFED approach

B. Field validation on the effectiveness of different plant growth enhancers on rice production in Ilocos.

#### **DA-IRRI Collaboration Projects**

- A. NEXT GEN PLUS: Increasing access to adaptive rice varieties in Region1
- A1. Establishment of Participatory Performance Testing and Validation
- A2. On-farm techno-demo cum seed production on inbred rice

#### Corn

- 1. Multi-location trial of hybrid yellow corn varieties under Ilocos condition
- 2.Field validation on the effectiveness of different plant growth enhancers on hybrid yellow corn production in Ilocos
- 3. Field Validation of Commercial Biopesticides against Corn Fall Armyworm
- 4.Innovative family enterprise development (IFED) on Young Corn and Green corn in Region 1
- 5. Comparative Performance of Promising White Corn Varieties in Ilocos Sur
- 6. Comparative Performance of Single and Double Ear Yellow Corn Varieties in Ilocos Sur



#### Other R4D Projects

1. Field validation on the effectiveness of different plant growth enhancers on bulb and solanaceous crops in Ilocos.

### <u>Production Support Services</u>

- Accomplished 103% of fruit tree seedlings production or 12,488 seedling exceeding the annual target.
- Also targeted 10,590 yearly interventions on the distribution of had catered to 10,850 on regular and 1000 assorted fruit-bearing trees on additional targets
- Planting materials were distributed to walk-in clients consists of one hundred thirty-four (134) individuals, and sixteen (16) groups of beneficiaries

### <u>Enhancing Technology Transfer of Improved Technologies</u>

• Conducted a two-day training series on enhanced POT of vegetable production using Biological Control Agent and Improved Chicken Production.

#### **Vermicompost Production**

- Maintained four (4) beds
- Produced a total 250 bags (@ 25kgs/bag)







### REGULATORY

- composed of three (3) sections namely: Registration and Licensing Section, Plant/Animal Pest and Disease Monitoring and Surveillance and Early Warning Section, andInspection/Certification/Accreditation Section
- despite the occurrence of Avian Influenza (AI) Outbreak in the province of Ilocos Norte and Ilocos Sur, the division had efficiently coped with its targets and most had even surpassed its targets set.
- A. Registration and Licensing Section
- task to implement laws such as
- Republic Act 1556 (The Livestock and Poultry Feeds Act), RA 3720 (Food, Drugs and Devices, And Cosmetics Act);
- DA-Administrative Order No. 08, series of 2004(Revised Guidelines On The Registration And Licensing Of Livestock,
- Poultry And By-Products Handler's And Livestock Transport Carriers),
- RA 8485 (Animal Welfare Act) and other pertinent rules and regulations.
- aims at protecting consumers from unsafe, ineffective or fraudulent feeds being offered for public sale.
- assures that live animal, livestock and poultry alike and animal by-products being traded in and out of the region are free from diseases and ensure no harmed laboratory animals were used during scientific researches and all animal facilities conforms to the set standards.
- allotted with an operational budget of five hundred fifteen thousand pesos (PHP 515,000.00). Regulatory Documents Issued

#### B. Issuance of Certification/Accreditation

- DA Administrative Order No. 08 series of 2004 otherwise known as the Revised Guidelines on the registration and licensing of Livestock Transport Carriers, all Livestock Transport Carriers are required to secure a Registration Certificate for Accreditation of Livestock Transport vehicles and vessels in the Philippines with the end view of maintaining disease free areas and achieving safe, clean and orderly handling of commodities through various stages of marketing and/or distributing channels.
- total of 204 applicants were evaluated, inspected and endorsed to Bureau of Animal Industry-Animal Health and Welfare Division for the accreditation of Poultry & Livestock Transport Carriers.

Activity	Target	Annual Accomplishment	% Accomplishment
Registration of Accreditation of Transport Carrier, No. of applications endorsed to BAI	40	80	200
Renewal of Accreditation of Transport Carrier, No. of application endorsed to BAI	120	124	103
TOTAL	160	204	128

#### C. Issuance of Permit

#### C.1. Animal Research Permits

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

#### C.2. Animal Show Permits

• 5 applicants of Animal Show Permit were endorsed to the Bureau of Animal Industry.

Table2. No. of Permits issued

Activity	Target	Annual Accomplishment	% Accomplishment
Animal Research Permit	10	28	280
Animal Show Permit	5	5	100

#### D. Registration

#### D.1. Registration of Feed Establishment

• endorsed 204 new feed establishments, 912 Feed Distributors/Retailers/Dealers were renewed for this year's operation and endorsed to the Bureau of Animal Industry

Table 3. No. of Registered Feed Establishments

Activity	Target	Annual Accomplishment	% Accomplishment
Registration of New Feed Establishments	100	204	204
Renewal of Registration of Feed establishments	1,193	912	76
TOTAL	1,293	1,116	86

#### D.2. Registration of Livestock, Poultry & By-Products Handler's (LPH)

• total of 184 applicants were evaluated, inspected and endorsed to Bureau of Animal Industry-Animal Health and Welfare Division for the registration certificate of Poultry & Livestock Handlers.



Table 4. No. of Registered Livestock, Poultry & By-Products Handler's

Activity	Target	Annual Accomplishment	% Accomplishment
Registration Certificate of Livestock, Poultry & By-Products Handler's (LPH)	40	64	160
Renewal of Certificate of Livestock, Poultry and Handlers (LPH)	120	120	100
TOTAL	160	184	115

#### D.3. Animal Welfare Facilities

• 54 new animal facilities and 50 facilities for renewal were endorsed to Bureau of Animal Industry for registration and accreditation.

Table 5. No. of Registered Animal Welfare Facilities registered

Activity	Target	Annual Accomplishment	%
Registration of Animal Facilities	10	54	540
Renewal of Animal Facilities	40	50	125
TOTAL	50	104	208

#### D.4. Animal Show Veterinarian Accreditation

• 5 applications endorsed to Bureau of Animal Industry for Animal Show Veterinarian

#### D.5. Good Agricultural Practices

• 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

Table 6. No. of GAP applications endorsed to BPI

Activity	Target	Annual Accomplishment	%
Processing of application for certification as GAP Farms	40	61	153
Pre-assessment of PhilGAP applicants	38	42	111
Monitoring of GAP Certified farms	18	28	156





#### D.6. Good Animal Husbandry Practices

- 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.
- Low accomplishment in the processing of application for certification as GAHP farms

Table 7. No. of GAHP applications endorsed to BAI

Activity	Target	Annual Accomplishment	%
Processing of application for certification as GAHP Farms	5	1	20
Pre-assessment of PhilGAP applicants	5	5	100

#### E. Quality Control And Inspection

• allotted with an operational budget of One Million Four Hundred Forty Two Thousand Pesos (Php 1,442,000.00) for monitoring and inspection.

#### F. Monitoring & Inspection of Agriculture Facilities and Products

- F.1. Monitoring & Inspection of Feed Establishments
- to ensure that registered Feed Establishments continually complies with the rules and regulations as prescribed under the IRR of RA 1556.
- routine inspection and collection of feed samples from the Feed Establishments
- •total of one thousand two hundred ninety three (1,293) inspection of establishments was done.

#### F.2. Monitoring & Inspection of Animal Facilities

- to ensure that registered Animal Facilities continually complies with the rules and regulations as prescribed under the IRR of RA 8485.
- routine inspection and evaluation of the different areas of the animal facility.
- total of one hundred nine (109) inspections on establishments were done.

#### F.3. Monitoring & Inspection of Agriculture Products

- total of two thousand five hundred four (2,504) feed samples were collected from different feed establishments for laboratory analysis to test the quality assurance of feed and feed ingredients being sold in the market
- six hundred twenty six (626) corn samples grits, cracked and whole, were also collected and



#### submitted for aflatoxin analysis

#### F.4. Plant Pests and Diseases Monitoring

- to monitor the incidences of plant pest in the region. Importance of surveillance and monitoring such as early detection of pest, delimiting the spread of pests, and improving pest management
- F.5. Animal Disease Monitoring, Surveillance and Early Warning Services/ Activities (Monitoring and Surveillance of African Swine Fever (ASF) Re-Ocurrence in Ilocos Norte and Ilocos Sur)
- continues to monitor the re-ocurrence of African Swine Fever in Burgos and Solsona, Ilocos Norte as well as in Vigan City, Ilocos Sur.
- $\bullet$  conduct of field investigations, culling operations and cleaning and disinfection procedures were initiated by the Division, PVO and MAO

#### F.6. Collection of Samples for Testing of Avian Influenza (AI)

- faced new challenge particularly the occurrence of Avian Influenza or Bird Flu in Ilocos Norte and Ilocos Sur
- conduct of collection of samples such as oropharengeal/cloacal swabbing and blood sampling.

#### G. Validation of Sentineling Program beneficiaries

- in partnership with the Livestock Banner Program conducted validation/evaluation of identified beneficiaries of Sentineling Program.
- beneficiaries were identified by their respective Local Government Units (LGUs). \
- tasked to assess their pens, if it is in compliance with cleaning and proper disinfection procedures including Biosecurity Level 1.

#### H. African Swine Fever (ASF) Zoning Progression

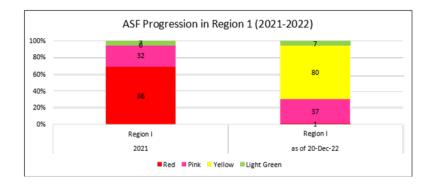
• no reported outbreak for at least 40 days from the last day of cleaning and disinfection, subject to pertinent guidelines are subject for recovery from Infected to Buffer Zones, to Surveillance Zones.





Prov.	Total City/Mun	Infected RedZone	Buffer PinkZone	Lifted from Red	Lift	ed to Yell	low	Protected Zone	Remarks
	Oley / Press	Reuzone	T MINEONE	to Pink	From Red	From Pink	Total	Zone	
Pang	48	34	14	34	34	13	47	-	
La Union	20	14	6	14	14	6	20	-	
Ilocos Sur	34	19	8	19	1	8	9	7	
Ilocos Norte	23	19	4	18	0	4	4	-	
Total	125	86	32	85	49	31	80	7	

• 80 municipalities lifted to Yellow Zone, 7 municipalities lifted to Yellow Green Zone, 37 municipalities still in Pink Zone while 1 municipality still in Red Zone.



#### I. Other activities

Land Use Reclassification (LUR) Certification

• The office issued twelve (12) DA Certification for Land Use Reclassification constituting 28.76 hectares reclassified, and twelve (12) field investigations conducted.



## AGRIBUSINESS AND MARKETING ASSISTANCE DIVISION

#### I. KADIWA NI ANI AT KITA PROGRAM

#### A. KADIWA ni Ani at Kita Selling Activities

The Agribusiness and Marketing Assistance Division in partnership with the Local Government Units, government agencies and private institutions had continuously implemented the KADIWA ni Ani at Kita Projects in the Ilocos Region through various modalities. Anchored on its twin objectives "Mataas na Ani" at "Mataas na Kita" the project serves as an alternative market for the local agri-fishery producers by directly selling their produce to consumers hence, farmer-producers will gain higher income.

In year 2022, the recorded volume of commodities sold were 52,294.93 kilograms of rice, 9,974.92 kilograms of fruits, 32,296.27 kilograms of vegetables, 5,971.35 kilograms of fresh and processed meat, 35,368.81 kilograms of fishery products, and 53,399 pieces of eggs valued at Php11,455,916.00.

#### B. Enhanced KADIWA Financial Grant Assistance

To ensure the availability of food and to facilitate and/or minimize disruption to the food supply chain, the Agribusiness and Marketing Assistance Division had facilitated the approval of financial grant assistance to 3 Local Government Units in Pangasinan and La Union worth Php6,000,000.00. Said grant is an insertion fund of Senator Francis "Kiko" Pangilinan to capacitate farmers and fisherfolk to become reliable and efficient food commodity suppliers.



Name of LGU	Amount Granted (Php)	<b>Grant Purpose</b>	Conduit FCA
LGU Alcala, Pangasinan	2,000,000.00 Procurement of		Alcala Onion, Rice and Corn Growers MPC
LGU Lingayen, Pangasinan	2,000,000.00	vehicle	
LGU San Fernando, La Union	2,000,000.00		

#### II. MARKET LINKAGE OF AGRICULTURAL AND FISHERY COMMODITIES

Ilocos Region is known to be the top producer of certain high value crops such as garlic, mango, peanut, mungbean and other lowland vegetables (pinakbet). With the continuous intervention from the DA, farmers and fisherfolks of the region are able to produce in large volume with competitive quality. However, these producers faced challenges particularly in the marketing of their produce since some of the farmers don't have direct access to institutional markets and/or farmers produced were consolidated by intermediaries thus, the farmer's profit margin is reduced.

Addressing the dilemma being faced by the farmers in marketing their produced commodities, the Department of Agriculture through the Agribusiness and Marketing Assistance Division facilitated networking of farmers' associations/cooperatives to institutional markets. This strategy sought to minimize marketing cost borne by the farmers by eliminating intermediaries in the chain vis-à-vis expanding market opportunities.

There were 11 market linkages facilitated benefitting 12 farmers groups producing mungbean, lowland vegetables, onion, garlic, glutinous corn, and peanut. A total of 114.75 tons of various agricultural products were sold with a par value of Php7,209,951.00.



### INTEGRATED LABORATORIES DIVISION

The Integrated Laboratories Division has been supporting the implementation of the different programs, projects and activities (PPAs) of DA-RFO I though provision of critical data for regulations and enforcement, research and development, standards development, production, extension and marketing services for the agriculture and fishery sector in the Ilocos Region. These roles are being carried out through the various specialized services of the four (4) component laboratories of the ILD, namely Regional Animal Disease Diagnostics Laboratory (RADDL), Regional Crop Protection Center (RCPC), Regional Feed Chemical Analysis Laboratory (RFCAL), and Regional Soils Laboratory (RSL)

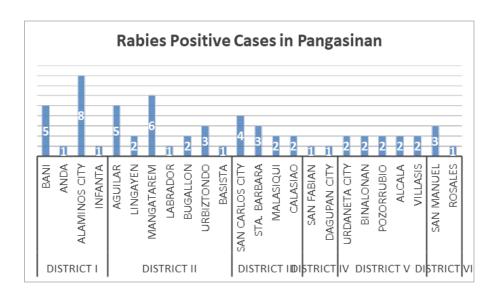
#### REGIONAL ANIMAL DISEASE DIAGNOSTIC LABORATORY

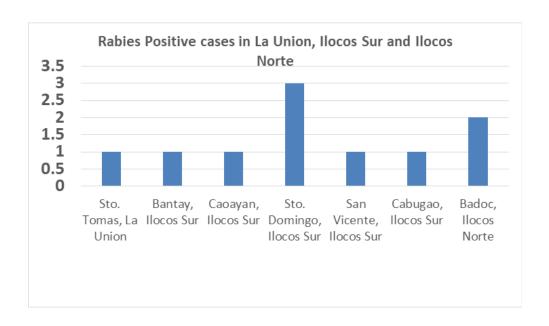
#### 1. VIROLOGY

#### A. Rabies Examination

- A total of 214 rabies samples were examined of which 48 % were found positive.
- Figure no. 1 & 2 shows that Alaminos City acquired the highest incidence of rabies among the provinces in Region 1.
- The annual accomplishment for rabies test is shown in table no. 1.

Table 1				
ANNUAL TARGET ANNUAL ACCOMP % ACCOMP				
200 samples	214 samples	107		

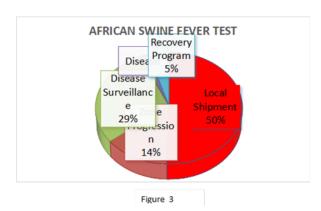




#### B. African Swine fever

- A total of 6702 samples were examined.
- Figure no. 3 shows that African Swine Fever disease outbreaks was still detected in the region in small sporadic and isolated cases
- The annual accomplishment for ASF test is shown in table no. 2

Table 2				
ANNUAL TARGET ANNUAL ACCOMP % ACCOMP				
6,500 samples	6,702 samples	103		

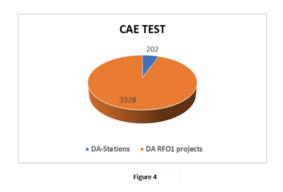


#### 2. IMMUNOSEROLOGY

A. Caprine Arthritis Encephalitis (CAE)

- CAE is a debilitating disease that affects goats and sheep the BAI quarantine and DA-Regulatory Division requires negative CAE test result of goats intended for local shipment.
- Annual disease surveillance monitoring was also performed by RADDL at the DA stations were goats are being raised.
- Table no.3 shows the annual accomplishment of RADDL for CAE test
- Figure no. 4 showed a remarkable increase of samples tested vs the annual target. This was due to the large number of samples received for local shipment purpose and majority were from the DA RFO 1 assisted project thru livestock Banner and Balik probinsya and 4K program. Only 6 % of samples tested came from DA RFO1 stations.

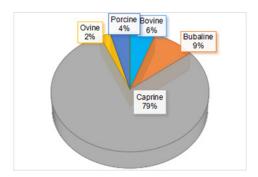
Table3				
ANNUAL TARGET	ANNUAL ACCOMP	% ACCOMP		
1,200 samples	3,530 samples	294		



#### B. Brucellosis Test

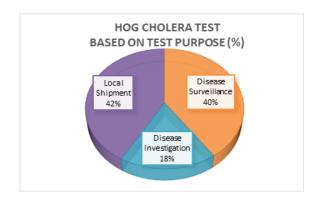
- $\bullet$  Table no.4 shows the annual accomplishment of RADDL for Brucellosis test where there is 384 % accomplishment vs target.
- Goats for local shipment not only requires CAE test but also Brucellosis test. This is the reason why majority (79%) of samples tested for brucellosis were from goats. On the other hand, a total of 12% of samples tested came from animals raised at DA stations( Sheep 2% .pigs 4%, and cattle 6 %) for animal health monitoring at DA stations. There are also samples that came from carabao (9 %)for local shipment purposes. (see fig. No. 5).

Table 4				
ANNUAL TARGET	ANNUAL ACCOMP	% ACCOMP		
1,200 samples	4,608 samples	384		



- C. Hog Cholera Test & Porcine Respiratory & Reproductive Disease Syndrome(PRRS)
- $\bullet$  Table no. 5 shows the annual accomplishment of RADDL for Hog Cholera and Hog PRRS test which is 144 % and 228, respectively.

Table 5					
	ANNUAL TARGET	ANNUAL	% ACCOMP		
		ACCOMP			
Hog Cholera	100	144	144		
PRRS	100	228	228		



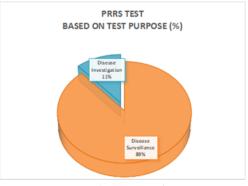


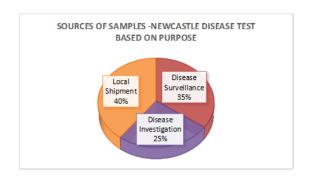
Figure 7

#### D. Newcastle Disease(ND) Test

- ND test is performed to determine the presence of ND antibody of vaccinated chickens or unvaccinated chickens.
- It is also performed as a diffrential diagnostic tool for Avian Influenza Disease such in the case of disease investigation.

Table no. 6 shows the annual accomplishment of RADDL for ND test.					
Table 6					
ANNUAL TARGET ANNUAL % ACCOMP					
ACCOMPLISMENT					
495	124				
	Table 6 ANNUAL ACCOMPLISMENT				

Figure 8 shows where the samples came from based on the purpose of test.

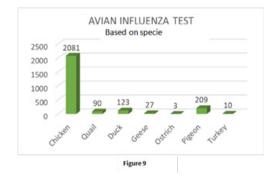


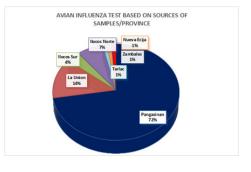
#### E. Avian Influenza

- ELISA test method is performed as disease screening for various purposes such as in disease investigation and surveillance.
- Test is also requested by clients as a requirement for the application of Bird Flu free Certificate.
- All samples that were positive from ELISA test were send to ADDRL for confirmatory test.
- Figure no. 9 and 10 shows that majority of the samples came from chickens in Pangasinan for Local shipment purposes.

Table no. 7 shows the annual accomplishment of RADDL for ND test which is  $496\ \%.$ 

Table 7					
ANNUAL TARGET	ANNUAL ACCOMP	% ACCOMP			
700	3,051	436			

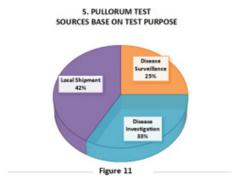




#### F. Salmonella pullorum Test

- The purpose of test is also thesame with Newcastle Disease and avian Influenza i.e for regulations, disease surveillance, and disease outbreak investigation.
- Table no. 8 show the annual accomplishment of RADDL for Salmonella Pullorum which is 102 %.
- Figure no. 11 shows where the samples came from based on the purpose of test.

Table8					
ANNUALTARGET	ANNUAL ACCOMP	% ACCOMP			
500	508	102			
		•			



#### 3. BACTERIOLOGY TEST

#### A. Bacterial Isolation & Antibiotic Susceptibility test

- Majority of samples were from commercial poultry raisers who availed antibiotic sensitivity testing (AST). Table no. 9 shows the annual accomplishment of RADDL for Bacteriology.
- RADDL 1 have used Analytical Profile Index (API) kits. The API is a biochemical test developed for quick identification of clinically relevant bacteria and performed gram staining for more accuracy and specificity of test results.

Table 9					
ANNUAL T	ARGET	ANNUAL ACCOMP	% ACCOMP		
Bacterial Isolation	100	102	102		
Antibiotic Sensitivity	100	102	102		
API	50	52	104		
Gram Stain	100	102	102		

- The commonly Isolated/Identified bacteria are as follows:
  - Pasteurella spp.
  - E. coli
  - Salmonella spp.
  - Klebsiella spp.
  - Gram Positive:
  - Staphylococcus spp.
  - Streptococcus spp.

For Antibiotic Susceptibility Test, below are the list of antibiotics where the above bacteria are sensitive:

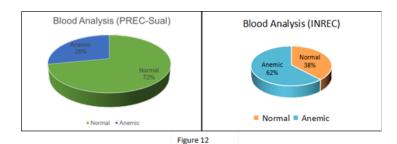
 Norfloxacin, Cefotaxime Ceftazidine Imipenem, Meropenem, Ciprofloxacin, Gentamicin,
 Sulfamethoxazole/Trimethoprim.

#### 4. PATHOLOGY

#### A. Blood Analysis

- Blood analysis using Pack Cell Volume Test or hematocrit test was performed to determine health status of sheep and goats from the two DA RFO 1 stations.
- Figure no. 12 shows the no. of animals in percentage with normal and abnormal PCV test result.

Table no. 10				
ANNUAL TARGET	ANNUAL ACCOMP	% ACCOMP		
200	200	100		



B. Necropsy

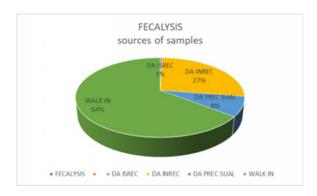
- A total of 10 necropsy procedures were performed.
- Necropsy samples came from DA stations (2 goats and 2 chickens samples) for disease investigation and walk-in clients (6 chicken sample) for bacterial isolation and sensitivity testing.
- The annual accomplishment of RADDL for Necropsy is 100 %.

#### 5. PARASITOLOGY

#### A Fecalysis

- Figure no. 13 shows that majority of the samples tested (64%) were from walk in clients specifically student conducting their thesis on organic dewormer for native chickens.
- The rest of the samples tested were from DA RFO1 stations.
- $\bullet$  Table no. 11 shows the RADDL annual accomplishment for fecalysis.

Table 11				
ANNUAL TARGET	ANNUAL	% ACCOMP		
	ACCOMPLISHMENT			
600	1,511	252		



#### B. Trainings attended:

- On September 5-9, 2022 the RADDL veterinarians and staffs namely Dr. Conie Diaz, Dr. Steciousneil Agustin, Dr. Charish Maala and Ms Divine Mercy Gutierez undergone hands on training on bacteriology test. The 4-day training entitled "Refresher Training and Proficiency Test on Bacterial Identification and Anti- microbial Susceptibility Test" was sponsored by the BAI-ADDRL and UN-FAO. It was a follow up activity to the virtual training the RADDL had on April 2022.
- Some of the activity involved the inoculation of bacterial organisms using different culture media (Figure no. 14) and Inoculation of organism using biochemical test (Figure no. 15).
- The RADDL participants received a proficiency training certificate after an evaluation conducted by the trainers
- On November 23-24, 2022, Dr. Steciousneil Agustin participated in the Trainer's Training on Rabies Test at BAI-ADDRL. The training was organized by JICA-JAPOHR and the Bureau of Animal Industry (BAI). The training focussed on the Rabies Immuno-Chromatography Test (RICT) using the lateral flow device kit
- The project aims to introduce an alternative test method for rabies diagnosis in the areas where FAT diagnostic laboratory facility is absent (Figure no. 16)

#### REGIONAL CROP PROTECTION CENTER

#### A. Plant Pest Laboratory Diagnosis

• The purpose of the activity is to diagnose the submitted plant/specimen by our farmer clienteles and guide our technicians in recommending proper pest control management.

Table 1. Plant pest laboratory diagnosis by test/type for January to December 2022,						
Region 1.						
Bacteriology	Mycology	Entomology				
Bacterial wilt,	Anthracnose,	Leafhopper,				
BLS, and soft	downy mildew,	aphids, corn				
rot	Phomopsis blight,	earworm,				
	Curvularia leaf spot	cutworm, spotted				
	and Fusarium Wilt,	beetle, cucumber				
	Phytoptora	beetle				
	Bacteriology Bacterial wilt, BLS, and soft	Bacteriology Bacterial wilt, BLS, and soft rot  Mycology Anthracnose, downy mildew, Phomopsis blight, Curvularia leaf spot and Fusarium Wilt, Phytoptora				

#### B. Field Diagnosis of Reported Plant Pest

• This aims to diagnose the submitted plant/specimen by the farmer-clienteles and guide the agricultural technicians in recommending proper pest control management.

Table 2: Field diagnosis conducted by crops from January to December 2022.					
COMMODITY	COMMODITY TOTAL AREA AFFECTED				
	(ha)				
Corn	128.79	56.37			
Rice	86.87	38.02			
Onion	9.09	3.98			
Other Vegetables	3.72	1.63			
Total	228.47				

COMMODITY	PESTS	AREA (ha.)	FIELD (no.)
	Fall armyworm	87.99	96
	Fall armyworm  Corn plant hopper  Stalk rot  Corn earworm  Leaf spot  Brown Planthopper  Stem borer  Rice black bug  Bacterial leaf streak  Bacterial leaf blight  Leaf blast  Rice tungro virus (RTV)  Rodent injury/infestation  Onion Armyworm  Anthracnose/twister disease  Onion leaf miner  Cutworm  Eggplant fruit and shoot borer  Fruit rot (Colletotrichum melong enae)  Phomopsis blight  Fruitfly (Bactrocera sp.)  Cutworm (Spodoptera	23.30	23
Corn	Stalk rot	1.00	1
	Corn earworm	1.00	1
	Leaf spot	15.50	3
	Brown Planthopper	14.96	12
	Stem borer	0.50	1
	Rice black bug	6.35	8
Diag	Bacterial leaf streak	12.88	10
Rice	Bacterial leaf blight	8.74	11
	Leaf blast	18.43	37
	Rice tungro virus (RTV)	3.61	3
	Rodent injury/infestation	21.40	44
	Onion Armyworm	11.80	2
Onion		9.09	18
		2.30	3
		1.00	2
	borer	0.60	2
Eggplant		1.26	6
	Phomopsis blight	0.50	1
	Fruitfly (Bactrocera sp.)	0.60	2
Tomato	Cutworm (Spodoptera litura)	0.01	2
Sitao	Pod Borer (Maruca vitrata)	0.25	1
Okra	Aphids	0.50	3
Okra	Mosaic virus	0.01	1

#### C. Production of Biological Control Agents (BCAs)

• Six (6) BCAs produced are the following Metarhizium anisoplaie, Trichogramma evanescens, Euborellia annulata, Nuclear Polyhedrosis Virus (NPV), Trichoderma harsianum, and Beuveria bassiana which are available at Regional Crop Protection Center (RCPC), Tebag, Sta. Barbara, Pangasinan

#### Trichogramma evanescens

- Target and actual accomplishment in the production and distribution is presented in Table 4.
- A corresponding 155,000 tricho cards was targeted for this year's regular production activities vis avis financial plan.

#### Euborella annulata

- Produced a total of 2,435 earwig colonies versus the target with 81 % actual accomplishment (Table 4)
- Areas of concern for distribution were 70 % for the province of Pangasinan while 15 %, 8 %, and 7 % were La Union, Ilocos Sur, and Ilocos Norte, respectively.

Table 4. Biological Control Agents (BCA) Production and distribution for CY 2022 regular targets as of December 31, 2022.					
Biological Control Agents (BCA)	Target	Actual Accomp as of December 31, 2022	% Accomp	Remarks	
a. Metarhizium anisoplaie	20,000	31,605	158	High production due to high demand of takers intended for rice, and vegetables in Region 1	
b. Trichogramma evanescens	150,000	155,000	103		
c. Euborellia annulata	3,000	3,087	103		
d. Nuclear Polyhedrosis Virus (NPV)	5,000	510	10		
e. Trichoderma harsianum	1500	2165	144		
f. Beuveria bassiana	3750	9763	260	High production due to high demand of takers intended for rice, and vegetables in Region 1	

- D. Pesticide Residue Analysis for High Value Crops in Region 1
- Aims to promote awareness of the safety of major crops from pesticide residue.
- Data gathered were clienteles name and address, commodity submitted/sampled/variety, pesticide applied and frequency of application, stage of the crop, date of sampling, analysis, and release of certificate of analysis.

Table 5. Number of samples analyzed per month

Month	Total	Remarks
March	24	
April	98	
May	10	
June	10	All samples were negative from carbamates
July	23	and organophosphates. Top vegetable samples
August	29	collected/submitted (eggplant, okra, tomato,
September	31	and Baguio vegetables) with a total of 24
October	18	barangays and 27 municipalities in Region 1.
November	40	
December	21	
Total	304	

#### E. Other Activities

FAO Regional Workshop on Fall Armyworm (FAW) Control in Asia and the Pacific

- Eight (8) countries, including the Philippines were chosen as pilot site for the Global Action (GA) Plan for Fall Armyworm (FAW) control in the world.
- In the Philippines, the implementation was started in Ilocos Region on CY 2021 main corn cropping season, particularly in the Province of Pangasinan.

#### Field Visit, Poster and Exhibit Viewing

- 23 UN-FAO Representatives/Delegates from various countries
- International activity was also participated by the National Crop Protection Center (NCPC), Bureau of Plant Industry (BPI), Municipal Government of Binalonan, Provincial Government of Pangasinan,

Farmer-partners and DA-RFO I, giving a total of 160 participants at Binalonan, Pangasinan

- The 1.30-hectare Participatory Technology Development (PTD) field at Brgy. Camangaan, Binalonan, Pangasinan is showcasing combinations of pest management strategies for Fall Armyworm (FAW), which were adopted from last corn season IPM-FFS trials.
- 25 pcs. Pheromone lures were installed at 11 days after planting (DAP), serving the whole area.
- Messages of support for the program were gained from DA-RFO I, Municipal and Provincial Government of Binalonan and Pangasinan.
- Three (3) exhibits established at Binalonan Gymnasium, namely: Biological Control Agents (BCAs), Integrated Pest Management Farmer Field School, and Pest Monitoring (Bantay-Peste).
- Technical information pertaining to BCAs were presented via tarpualins, flyers, and Audio-Visual Presentation.
- Also, BCA samples displayed being displyed, while featuring the village-level mass production

Table 6. Participatory Technology Development adoption options

Option	Variety 1	Variety 2
1	Trichogramma + Beauveria + NPV	Trichogramma + Beauveria + NPV
2	Trichogramma + Metarhizium + NPV	Trichogramma + Metarhizium + NPV
3	Trichogramma + NPV + Beauveria	Trichogramma + NPV + Beauveria
4	Trichogramma + Bt Spray	Trichogramma + Bt Spray

<sup>\*</sup>NPV - Nuclear Polyhedrosis Virus

#### Technical Workshop

- Six (6) DA-RFO I personnel participated the Technical Workshop on October 12, 2022 at Holiday Inn and Suites, Makati City.
- The participants were divided into three (3), for the break out session to work on the following: 1) Policy and Farmers; 2) IPM package, validation and demonstration; and, 3) Communication and partnership.

Production of Virus-Free Planting Materials of Garlic through Tissue Culture Technology" and "Enhancement of Virus Indexing Laboratories in Support to the Production of Virus-free Planting Materials of Garlic

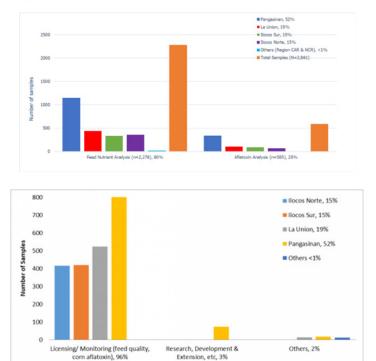
Table 7: Initial results of tissue-cultured garlic in Pangasinan.				
Parameters/Cultured 2019 2020 2021				
Number of bottles on multiplication stage	440	642	1180	760
Number of bottles on bulbing stage	-	175	-	38
Number of bulblets produced/harvested	-	-	85	30

#### REGIONAL FEED CHEMICAL ANALYSIS LABORATORY

#### Sample population

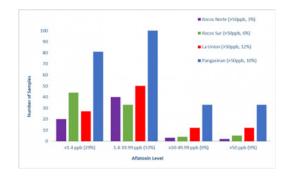
- A total of 2,861 samples comprised of feed products, corn and other feed ingredients were subjected to laboratory testing using approved standard methods
- Of the 2,861 samples, 2,276 (or 80%) samples were subjected to nutrient analysis (moisture, ash, crude protein, crude fat, crude fiber, calcium & phosphorus), while 585 samples were subjected to total aflatoxin analysis (AFB1, AFB2, AFG1 & AFG2). Herein, majority (52%) of the samples were from the province of Pangasinan (Figure 1). Other samples received by the laboratory were from CAR, particularly from SUCs.

• As to the purpose, majority (96%) of the samples were intended for licensing, monitoring activities for quality and safety (Figure 2). On the other hand, some of the samples were intended for research purposes submitted by researchers from the Research Division and from other institutions (SUCs, research institutions).



#### Results

• Based on aflatoxin analysis conducted, majority of the samples had aflatoxin level below the maximum allowable limit. Herein, 82% of the samples passed the 20 ppb maximum limit for human food application, while 91% passed the 50ppb maximum limit for feed application (Figure 3). The incidence of aflatoxin contamination (above 50 ppb maximum limit) was observed minimal (less than 5%) in samples collected from feed manufacturers/distributors and retail outlets in Ilocos Norte. Likewise, relatively low incidence of aflatoxin contamination (above 50 ppb maximum limit) was noted in samples collected from Ilocos Sur at only 6%.



Integrated Management System (IMS, ISO 9001:2015 QMS and ISO 14001:2015 EMS)

• The laboratory is now on its 4th year of being an ISO 9001: 2015 Quality Management System & ISO 14001: 2015 Environmental Management System or Integrated Management System (IMS) certified.

#### Re-assessment Audit of RFCAL's IMS

- To continually improve the quality and efficiency of laboratory services to their customers and to ensure compliance to applicable statutory regulations, the ILD-RFCAL maintained its certification to ISO 9001:2015 Quality Management System and ISO 14001:2015 Environmental Management System from the Certification International Philippines, Inc. as per Surveillance audit held on December 23, 2022 via GoToMeeting
- Based on the Audit Report, the implementation and maintenance of the laboratory's IMS was found still generally in accordance with the requirements of ISO 9001: 2015 and ISO 14001: 2015 standards, hence ILD-RFCAL was commended for continued IMS certification.
- Surveillance audit covered the laboratory's operations in IRIAL, Tebag, Sta. Barbara, Pangasinan with the scope "Provision of laboratory services in support to the regulatory functions of DA-RFO1".
- Herein, only three (3) minor nonconformities was raised, while previous five (5) minor non-conformities were closed. As such, the recognition of the Ilocos Region to be the first and only DA-RFO laboratory in the country to obtain an Integrated Management System (IMS) certification (agency with multiple ISO certifications) was maintained.
- Hence, continuous improvement of laboratory processes and procedures, and enhancing technical competencies of staff coupled with upgrading of laboratory facility and equipment are being undertaken.

Figure 4. Re-Assessment Audit of the Integrated Management System (ISO 9001: 2015 QMS & ISO 14001: 2015 EMS) certification of the Regional Feed Chemical Analysis Laboratory, by the Certification International Phils., Inc. via GoToMeeting, Dec. 23, 2022 (Lead Auditor: EDGARDO V. ELERA; Team Member: MARLON P. CAMPUED)



#### Planning Workshops, Emergency Preparedness and Response Trainings/ Drills

- To maintain effective conformity to ISO standards, the ILD-RFCAL had been implementing various activities that could ensure consistency in the execution of the RFCAL's functions-- provision of laboratory services mainly to support regulatory functions of DA-RFOI.
- Emergency Preparedness and Response (EPR) trainings and drills were undertaken to instill constant awareness and capacitate staff in responding safely to occupational emergencies (Figure 5-8).



Figure 5. Management Review held on (L.) July 22, 2022 and (R.) December 14, 2022 at IRIAL Building, Sta. Barbara, Pangasinan



**Figure 6.** Chemical Spill Drill and review of emergency response procedures in collaboration with Emergency Preparedness and Response Team held on September 16, 2022 at IRIAL Building, Tebag, Sta. Barbara, Pangasinan



Figure 7. Occupational Health & Safety Training and Fire Drill (Simulation), October 14, 2022; ILD Building, Sta. Barbara, Pangasinan: Simulation drill exercises for fire/earthquake emergency situation; Demonstration on how to use emergency/firesafety equipment such as firealarm, fire extinguisher



Figure 8. Emergency First Aid and Simulation Drill in collaboration with Provincial Disaster Risk Reduction Management Office- Pangasinan held on September 27-28, 2022 at ILD Building Tebag, Sta Barbara, Pangasinan



Figure 8. Occupational First Aid and Basic Life Support Training in collaboration with Philippine Red Cross-Pangasinan Chapter held on August 18-19, 2022 at 1LD Building, Tebag, Sta. Barbara, Pangasinan

Environment Protection through Solid and Hazardous Wastes Management

- As part of the commitment of the laboratory to ensure environment protection, the ILD-RFCAL has been managing its solid and hazardous wastes generation (Figure 9).
- The ILD-RFCAL achieved and even surpassed their environmental objective by attaining 65.9% reduction of paper usage through back-to-back printing and e-copy archiving, and 71.35% solid waste minimization by recycling and composting.
- Likewise, no seepage and no dumping of hazardous wastes were observed.
- Solid and hazardous wastes generation were monitored and reported to DENR-EMB in a quarterly basis.



Figure 9. Laboratory Material Recovery Facility at 1RIAL Building, Sta. Barbara, Pangasinan

Enhancing laboratory competency of staff towards ISO 17025: 2017 Accreditation

- Proficiency Testing (PT) or Inter-laboratory Comparison
- To assess the performance of the laboratory in conducting various physicochemical analyses of feed products and feed ingredients
- ILD-RFCAL 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.).
- 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, calcium, phosphorus, and potassium.
- Performance assessment by the PT provider showed that ILD-RFCAL obtained satisfactory results for six (6) out of eight (8) test parameters or 75%, having Z score of -2.67 to 2.52 (Table 1).
- $\bullet$  Nonetheless, results of analysis for all the parameters were within the acceptable Z score range of  $\pm 3.0$ . This indicates that analytical results of the laboratory on the aforementioned test parameters are valid and can be trusted.

Table 1. Summary of Individual Proficiency Testing (PT) Report of the ILD-RFCAL (Lab. ID AF0982) during the Animal Feed Proficiency Scheme (AFPS) Round 50 of the LGC Standards Proficiency Testing, Queens Road, Teddington, Middlesex, TW11 0LY, UK, England

No.	Test Parameter	Nominated	Assigne	d Value	Z Score Remarks	
NO.	1 es t Par ameter	Result	Mean	SD	Z Score	kemarks
1	Moisture Content (%)	8.12 ± 0.14	9.46	0.407	-2.67	Questionable
2	Crude Protein (%)	14.51 ± 0.59	16.36	0.442	0.01	Satisfactory
3	Ash Content (%)	16.37 ± 0.33	2.38	0.395	-0.67	Satisfactory
4	Crude Fat (%)	2.13 ± 0.25	14.32	0.836	0.27	Satisfactory
5	Crude Fiber (%)	4.02 ± 0.16	4.692	0.7486	-1.43	Satisfactory
6	Phosphorus (g/kg)	4.26 ± 0.07	4.66	0.349	-0.86	Satisfactory
7	Calcium (g/kg))	57.97 ± 2.84	46.30	4.810	2.52	Questionable
8	Potassium (g/kg)	6.75 ± 0.16	7.55	0.646	-1.06	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)

#### **REGIONAL SOILS LABORATORY**

• Regional Soils Laboratory (RSL) of the DA-RFO1's Integrated Laboratories Division, provides technical support services by extending laboratory tests of soil fertility parameters through chemical and physical characterization along with the conduct of special assay on fertilizer, compost, water and plant tissue.

#### Provision of Laboratory Services

The laboratory has conducted various laboratory analysis in soil with the following parameters:

- Organic Matter (Walkley-Black Method)
- Available Phosphorus (Olsen Method)
- Available Potassium (Cold-Sulfuric Extraction/Flame Emission Spectroscopy)
- Exchangeable Potassium (Ammonium Acetate pH=7, Atomic Emission Spectroscopy)
- Available Micronutrients (Zinc, Copper, Manganese, Iron) (DTPA Extraction/Atomic Absorption Spectroscopy)
- pH (1:1 and 1:5 Soil:water)
- Electric Conductivity (1:1 and 1:5 Soil:water)
- Moisture Content (Air-dried basis) (Gravimetric Method)
- Texture (Feel Method)
- Soil samples analyzed came from the Yamang Lupa Research Project of the Research Division and production areas of various municipalities/cities of Ilocos Region. The laboratory also provided support in soil analysis of samples from walk-in clients (farmers, students, private companies) and other government agencies/institutions (BSWM, LGUs, DENR, BPI and NIA).
- The laboratory also analyzed fertilizer, irrigation water and plant tissue samples. The samples came from DA-RFO 1 (Research Division thru the stations) farmers, Local Government Units (LGU), students, other government agencies and private companies.
- The laboratory also provided technical support in terms of soil sampling demonstrations to LGUs, soil profiling/characterization in research stations and LGUs, on-field conduct of Soil Testing using Soil test kits and technology transfer thru conduct of lectures.

#### I. RESULTS/FINDINGS

• A total of 2,788 samples of soil, fertilizer, water and plant tissue were analyzed by the laboratory. Further details are provided in the table below.

Table 1. Number of samples received and analyzed

Sample Type	No. of samples received/ analyzed	% Share
Soil	2,460	88.24
Fertilizer	192	6.87
Water	80	2.87
Plant Tissue	56	2.00
Total	2,788	

#### A. Soil Analysis Summary

• The laboratory analyzed 2,460 soil samples submitted by various clients (e.g., farmers, LGUs, Government Agencies, SUCs, Private Sector, Research Division, Field Operations Division and DA Research Stations). Below is the breakdown of samples submitted by type of client.

Table 2. Number of samples received by type of client

Client Type	No. of samples received/analyzed	% Share
Farmers	83	3.37
LGUs	549	22.32
Students	295	12.00
Other Govt Agencies (BSWM, BPI, DENR, NIA, DMMMSU)	55	2.24
DA-RFO 1 (FOD, Research Division including Stations)	1,457	59.23
Private Sector	21	0.85
Total	2,460	

• A total of 1,920 fertilizer recommendations were released for various crops such as rice, corn, high value commercial crops (onion, garlic, mango, pepper, cacao, etc.) and fruit trees. Other data from results of analysis were used by student and researchers in their thesis and research projects.

#### B. Fertilizer Analysis Summary

- A total of 192 samples were analyzed. The samples were in the form of inorganic and organic fertilizers.
- Out of the 192 samples, 31 were inorganic fertilizers (urea, muriate of potash, complete fertilizer) and 161 were organic fertilizers (compost, fermented plant juice, vermicast, etc.).
- This year, the laboratory analyzed 79 samples that mostly came from Thesis students from various SUCs (DMMMSU, PSU, BSU) in the region followed by 59 samples from the Research Division, specifically the research stations in Sual and ILIARC, and from Field Operations Division.
- The rest of the samples came from farmers, other agencies and private companies.

#### C. Water Analysis Summary

- Samples were collected from various irrigation systems (NIA irrigation canals, SPIS, CIS, Deep wells) in various municipalities of Pangasinan, farmers' irrigation system and from research stations.
- 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

- Various clients availed laboratory services for plant tissue analysis.
- Analyze 56 samples that were submitted by the Pangasinan Research and Experiment Center (PREC) and Bureau of Soils and Water Management.
- Samples were analyzed by their nutrient content such Total NPK, Total Micronutrients and moisture content.

#### E. Clients Served

- A total of 353 clients were served with laboratory services by RSL.
- Clients were composed of farmers, students, LGUs and DA-RFO 1 (Research Division and FOD), other government agencies and private sector. Below is the breakdown of the clients provided with laboratory services.

Table 3. Number of	lients served by type
--------------------	-----------------------

CLASSIFICATION	NO. OF CLIENTS	% Share		
Students	181	51.27		
Farmer	38	10.76		
Private Institution	22	6.23		
Other Govt. Agencies	14	3.97		
DA (Stations, FOD, R&D)	66	18.70		
LGU's (OPAg, MAO's)	32	9.07		
TOTAL	353			

• Majority of the clients served were thesis students and the DA-RFO 1 Research stations with 51.27% and 18.70%, respectively. Also, 100% satisfaction rate was obtained from all of the client satisfaction feedback accomplished by clients.

#### F. Other Activities

#### 1. Technical Assistance to LGUs, Farmer Association and SUC

Soil quality testing and soil evaluation re: Watershed Characterization and Vulnerability Assessment (WCVA) of Vical river watershed located in San Juan and Magsingal, Ilocos Sur

- Vical River watershed in San Juan and Magsingal, Ilocos Sur has undergone a soil quality and soil evaluation assessment to determine the fertility status and physical properties of the soil in the area.
- The results of the assessment showed that the soil in the Vical River watershed has generally good physical quality, with most areas having good to moderate workability and tilth, good internal and external drainage, and good water retention.
- · However, the fertility status of the soil varied with some areas having low to moderately low levels

of organic matter, available phosphorous ranging from low to very high, and all areas having very high available potassium.

- The pH ranges from 6.20 to 8.12, indicating that it is slightly acidic to moderately alkaline.
- Based on these findings, the RSL made recommendations for improving the soil quality in the Vical River watershed, including implementing soil conservation measures and conducting further studies to identify ways to enhance soil fertility and productivity.



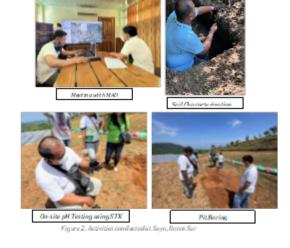
Figure 1. Soil Sampling and Profiling at Magsingal, Ilocos Sur

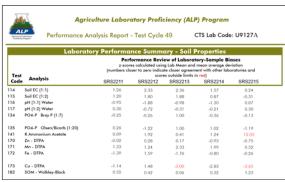
Soil sampling and testing of crop production areas in Suyo, Ilocos Sur

- A total of 291 soil samples were collected by the LGU and was submitted for analysis in the laboratory.
- As per the request of the local government of Suyo, Ilocos Sur, RSL conducted a meeting with local chief executive and the municipal agriculture office in the conduct of site validation and planning of soil sampling activities.

#### 2. Proficiency Testing Program

- RSL participated in three proficiency testing (PT) program for the year 2022.
- Proficiency Testing is an interlaboratory comparison of test results wherein participating laboratories were sent samples by a third party PT provider.
- The results will be statistically compared to other laboratories to measure accuracy and precision.
- Good performance (preferably z score of +/-2.00) indicates that the laboratory is competent with respect to the parameters being tested. The following are the PT Scheme that RSL joined:
- a)Agricultural Laboratory Proficiency (ALP) Program;





For the ALP PT scheme, RSL got 95% (57/60 data point) of z-score within the set z-score (+/- 3.00) limit of the PT provider. For z-score +/- 2.00, RSL got 88% (53/60 data point) rating for the parameters shown in the figure (left).

b) Food and Fertilizer Technology Center-Taiwan Agricultural Research Institute (FFTC-TARI). Results obtained by RSL were marked red.

Figure 3. Soil Analysis results for Bray 1, Total organic carbon, Exchangeable K and Total Nitrogen

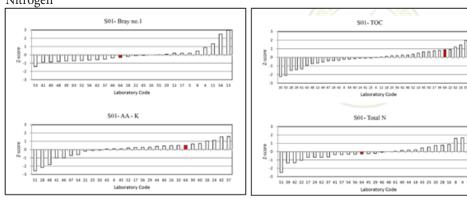
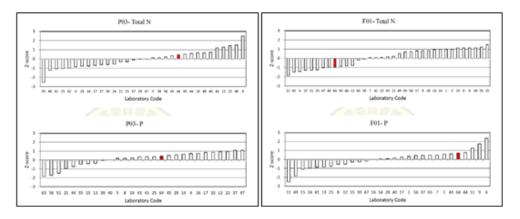


Figure 4. Results from Fertilizer and Plant Tissue PT samples for Total Nitrogen and Phosphorus



- For the FFTC-TARI PT scheme the laboratory was able to obtain 94% rating (15/16 data point) of z-score within the set z-score limit of the PT provider for Soil, Fertilizer and Plant Tissue (pH, Total Organic Carbon, Total Nitrogen, Available Phosphorus, Exchangeable Potassium, Total Phosphorus and Total Potassium).
- a) Philippine National Soil Laboratory Network (PHILNASOLAN) PT Scheme by Bureau of Soils and Water Management

Figure 5. Certificate of Laboratory Excellence from Bureau of Soils and Water Management for obtaining 100% acceptable data from PT Scheme 2022



- For the PHILNASOLAN PT program, RSL obtained 100% accepted data for pH, Organic Carbon, Available Phosphorus and Exchangeable Potassium.
- 3. Capacity Building of Laboratory Staff

Training on soil physical analysis

- RSL staff, particularly the agriculturists, had undergone hands-on training on Soil Physical analyses for particle size distribution, bulk density and water holding capacity on June 27 to July 1, 2022 at the national reference laboratory of RSLs,
- The Bureau of Soils and Water Management. This training is part of the effort of RSL in upgrading its service thru capacity-building to offer additional soil analyses parameters in terms of physical properties of the soil.

Figure 6. The hands-on training participated by the Agriculturists of RSL 1 (Top Left: Awarding of training certificates; Top Right: Particle Size Determination; Bottom left: Bulk Density Analysis; Bottom right: Particle Size Determination)



### Training on soil chemical analysis

- RSL's chemists and chemical technician also undergone hands-on training on soil chemical analyses as well as fertilizer, water and plant tissue on October 3-7, 2022 hosted by Bureau of Soil and Water Management.
- The staffs were trained on new and updated test methods.
- Composed of quality assurance and quality control procedures and techniques. The training was part of the efforts of BSWM to capacitate regional laboratories and be at par with global standards. The training was also attended by RSLs from regions 9, 10 and 12.

Figure 6. Hands-on Training of RSL 1 staff on Fertilizer, Water and Plant Tissue Analysis (Top left & right: Group photo during the awarding of training certificates; Bottom left-right: Three RSL 1 staff during their training)



Training on operation and maintenance of ICP-OES and CNS elemental analyzer

- The BSWM, under the National Soil Health Program (NSHP) has donated various state-of-the-art laboratory equipment to all the regional soil laboratories nationwide.
- Among the equipment donated are the ICP-OES and CNS Analyzer. Three of the chemists from RSL 1 had the chance to undergo hands-on training on the operation and maintenance of the above-mentioned equipment in Singapore on November 2-6, 2022 for the ICP-OES and November 7-9, 2022 for the CNS Elemental Analyzer .
- These equipment will help provide faster and more efficient laboratory service in terms of soil analysis. It will also provide additional testing capability to RSL.

Figure 7. Hands-on Training of Operation and Maintenance of ICO-OES and CNS Analyzer at Singapore. (Top Left: RSL 1, 2, 3, CAR and 4A Trainees with Agilent Technologies trainers; Top right: RSL 1, 2, 3 and CAR Trainees with Thermo Fisher Scientific Trainer; Bottom left-right: RSL 1 trainees during training)



#### Other relevant trainings

- RSL staffs also undergone various relevant trainings sponsored by BSWM and other agencies. Among these trainings are Equipment Maintenance and Calibration, Sample Receiving and Processing, Soil Microbiological Analyses, Soil Test Kit reagents preparation and Control of Documents conducted by BSWM thru a series of training from October 7 to 21, 2022. RSL staff also attended ISO 17025 Awareness conducted by Philippine Accreditation Bureau on October 18, 2022 via Zoom Meeting platform.
- The staff were also able to participate in the Philippine Chemistry Congress (PCC) on September 29 to October 1, 2022 via Whova Platform and Philippine Agriculture Association Congress (PAAC) on July 21-23, 2022 via Zoom Meeting Platform.



# REGISTRY SYSTEM FOR BASIC SECTORS IN AGRICULTURE

Three components of this program is continuously implemented, particularly, profiling of farmers and fishers, georeferencing of farm lots, and the Interventions Monitoring System, in collaboration with City/Municipal Agriculture Offices in the region.

#### Profiling of Farmers

- DA-ICTS has already reported Nineteen Thousand Eight Hundred Sixty (19,860) farmers enrolled or registered in the Farmers and Fisherfolk Registry System (FFRS) for the Ilocos Region
- Another Eight Thousand Seven Hundred Twenty-Six (8,726) for the 2nd Semester
- RSBSA-RPMO I recorded 1,327.38 verified hectares for the first semester and 9,680.14 for the second semester based on the Rice Crop Manager Advisory Service (RCMAS)
- 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)
  - unconditional cash assistance of P5,000 was loaded into the accounts of 267,257 rice farmer-beneficiaries who are tilling an area of two hectares or less
- RSBSA- RPMO I hired five (5) project assistants who will perform administrative assistance, 12 provincial/district validators who will act as encoders and verifiers and 38 field assistants who will conduct geo-tagging of farm lots
- RSBSA-RPMO I will continue to update, validate, and monitor the registry system in order to provide the "OneDA family" with a reliable and credible database to ensure that agricultural interventions are appropriately targeted and implemented



## YOUNG FARMERS CHALLENGE PROGRAM

- A total of 73 enterprises owned and operated by 109 youth beneficiaries were provided a start-up capital for their chosen agri-related enterprises.
- Provincial winners were granted with P50,000 for the individual proponents and P100,000 for the group proponents
- Regional Level awardees were provided additional 150,000.00 per enterprise.
- Provided business development services that include capacity building through trainings and mentoring assistance, market linkage and business networking, and assistance in business and product development registration and certification, among others.
- A total of 6 trainings was conducted (Agro-Entrepreneurship; Agribusiness Financial Literacy; Product Development, Packaging and Labeling; Digital Marketing; Good Agriculture Practice and Good Animal Husbandry Practices)







## GENDER AND DEVELOPMENT

#### Organization-focused

- Collaborated with the Agribusiness Marketing Assistance Division in the conduct of a Kadiwa ni Ani at Kita Trade Fair as part of celebrating the 2022 National Women's Month held on March 7-11, 2022 at DA-RFO I Ground Floor, Aguila Road, Sevilla, City of San Fernando, La Union.
- 14 exhibitors from various municipalities of La Union and Pangasinan participated in the week-long selling of agricultural products and delicacies
- Exhibitors were members and officers of the:
  - Ubagan Fisherfolks Association
  - Damortis Fisherfolks Association
  - Kabulig Farmers Association ti Santol La Union Inc.
  - Farmers Delight Food Product's Manufacturing
  - National Food Authority
  - Shake D'Pulp Lemonade and Fruit Shake
  - Dapuyens Vigan's Delicacies
  - Uncle Tom Food Products

- Lacong Multi-Purpose Cooperative
- Vel Shierra Integrated Farm
- JJM Food Products
- Chadel Food Products
- Cacao Growers and Marketing Cooperative
- Integrated Small Fishpond Owners
- Lesses Multi-Purpose Cooperative
- The KADIWA project generated a total sale of Four Hundred Seventy-Two Thousand Nine Hundred Sixty-Six Pesos (Php472,966.00).
- Ms. Leah Astrude Santiago, a farmer and organic practitioner from Mangatarem, Pangasinan was awarded as the Regional Winner for the Search for Outstanding Rural Women during the event.
- Ms. Santiago received from DA a plaque of recognition and eventually became the Region's representative in the National Search.









- An Online Webinar on Mental Health Challenges was conducted with the invited resource speakers from the Department of Health and Population Commission and virtually participated in by 40 DA-RFO I employees.
- $\bullet$  GAD Unit has also printed and displayed the 2022 Official banner of the program strategically situated in six (6) offices/satellite stations of the DA-RFO I.
- DA-RFO I's GAD Unit hosted the last quarter Regional Gender and Development Committee (RGADC-1) regular meeting conducted on December 2, 2022 at DA-RFO I 5th Floor Conference Room
- Highlighted by the conferment of eight (8) Resource Pools for Gender and Development in Re-gion 1 (R1GRPool)
- Seminar on Violence and Harassment in the Workplace cum Safe Spaces Act was conducted on December 6, 2022 at the DA-RFO I, 5th Floor Conference Room, participated in by 30 DA Em-ployees
- GAD initiated the conduct of GAD Focal Point System (GFPS) Semi-Annual meeting together with the Report Planning Officer of the five major Banner Programs and Operating Units on December 13-14, 2022 at DA-RFO I 2nd Floor Conference Room, Office of the OIC-Field Opera-tions Division











#### Client-Focused

- Three women's association from the provinces of La Union, Ilocos Sur and Ilocos Norte (La Union Vibrant Women Incorporated of Bangar, La Union; Aquib Rural Improvement Club of Santa Maria, Ilocos Sur; and Federated Rural Improvement Club of Badoc, Ilocos Norte) were provided with agriinputs such as assorted vegetable seeds, garden tools and vermicast on March 22-23, 2022.
- Training on Mushroom Production and Processing held at the City of San Fernando in La Union participated in by the members of the San Fernando City Fishlanding Center Marketing Coopera-tive on May 20, 2022
- DA through the GFPS has provided mushroom fruiting bags as an initial intervention aside from the hands-on mushroom processing training that they have participated in where they were taught of value-adding activities tu into rning mushroomcrispy mushroom, siomai and embutido.
- •GFPS conducted a briefing on vegetable production and distributed assorted vegetable seeds and garden tools to the Sapsapang Women's Auto Savings Group of Barangay San Jose, Caba, La Union and Salukag Paltit Rural Improvement Club of Badoc, Ilocos Norte and the Pagbennecan Agriculture and Fisheries Association (PAFA), Inc. of Pagbennecan, Balaoan, La Union on June 24, 2022, June 30, 2022, and September 20, 2022, respectively.
- Two (2) associations were also awarded with mushroom production kits after having participated in the briefing of mushroom production and management training on July 7, 2022 in Laoac and Natividad, Pangasinan (D. Alarcio Women's Rural Improvement Club of Laoac and Amandiego Rural Improvement Club of Natividad,)









- Recognition of empowered women in agriculture represented by Ms. Evelyn G. Banan from the municipality of Caba, La Union through the Search for Outstanding Rural Women in Agriculture
- Search Committee had a courtesy call to La Union Provincial Governor Raphaelle Veronica Ortega-David on July 20, 2022 and Hon. Donna R. Crispino, Mayor of Caba, La Union on July 21, 2022 for the 3-day field validation
- Search for Outstanding Rural Women is an annual activity of the DA under its GAD-GESI
- Sapsapang Women's Auto Savings Group of San Jose Caba, La Union have undergone an orientation on Chicken Production on September 15, 2022
- Ms. Filomena A. Bugaoan, Alternate GAD Focal of DA-RFOI together with Mr. Pedencio M. Ramos, Jr., Livestock Coordinator, personally handed out to the group the 40 heads of pullet, 20 heads cockerel and 10 bags of layer mash at Barangay San Jose Caba, La Union held on October 18, 2022.
- Ms. Milagros Zamora, President of Poblacion Sun Rise Poultry and Livestock Raisers Association, and Mr. Manolito Peña, President of ISAC High School Batch '79 Farmers Association received from DA through GAD a total of 135 heads of pullet, 20 heads of cockerel and 10 bags of layer mash on October 19, 2020 at the Sta. Maria Sports Complex, Sta. Maria, Ilocos Sur
- DA-GAD also spearheaded the awarding of National Winners for the CY 2022 Search for Outstanding Rural Women held at PhilRice, City of Muñoz, Nueva Ecija. Region I's nominee of the Search in the person of Mrs. Evelyn G. Banan from Barangay San Jose, Caba, La Union received a consolation prize in the amount of Php20,000 plus a plaque and certificate of recognition



Project Name: Concreting of Buga to Currimao, Brgy. Sideg FMR

Location: Brgy. Sideg, Paoay, Ilocos Norte
Project Amount: Php 20,000,000
Implementing Agency: DPWH-Ilocos Norte 2nd DEO



Project Name: Concreting of Brgy. Nagpanaoan FMR Location: Brgy. Nagpanaoan, Santa, Ilocos Sur Project Amount: Php 12,000,000 Implementing Agency: DPWH-Ilocos Sur 2nd DEO



Project Name: Concreting of Brgy. San Agustin FMR Location: Brgy. San Agustin, San Nicolas, Ilocos Norte Project Amount: Php 10,000,000 Implementing Agency: DPWH-Ilocos Norte 2nd DEO



Project Name: Concreting of Brgy. Nagbacalan to Brgy. Sungadan FMR

Location: Brgy. Nagbacalan and Brgy. Sungadan, Paoay, Ilocos Norte

Project Amount: Php 12,000,000 Implementing Agency: DPWH-Ilocos Sur 2nd DEC

## FARM TO MARKET ROAD

- $\bullet$  Funded the construction of 40 Farm-to-Market Roads (FMRs) with more than 47.33 kilometres length valued at Php 568 Million
- Only 33 FMRs were completed and the remaining 7 FMRs are on-going construction
- $\bullet$  Majority of the FMR projects are in Pangasinan with 15 FMR projects with 17.09 kilometers in length and valued at Php 205 Million
- $\bullet$  Followed by Ilocos Sur with 14 FMR projects and total length of 16.75 kilometers amounting to Php 201 Million
- Ilocos Norte has a total of 9 FMR projects valued at Php 138 Million
- La Union has 2 FMR projects amounting to Php 24 Million

PROVINCE / DISTRICT	Accomplished			On-going			Total		
	No. of FMRs	Length (in km.)	Allocation (in '000)	No. of FMRs	Length (in km.)	Allocation (in '000)	No. of FMRs	Est. length (in km.)	Allocation (in '000)
REG'L TOTAL	33	38.84	446,000.00	7	10.17	122,000.00	40	47.33	568,000.00
ILOCOS NORTE	8	11.50	118,000.00	1	1.67	20,000.00	9	11.50	138,000.00
District 1	2	2.67	32,000.00				2	2.67	32,000.00
District 2	6	8.83	86,000.00	1	1.67	20,000.00	7	8.83	106,000.00
ILOCOS SUR	9	9.50	114,000.00	5	7.25	87,000.00	14	16.75	201,000.00
DIstrict 1	2	2.00	24,000.00	4	5.75	69,000.00	6	7.75	93,000.00
District 2	7	7.50	90,000.00	1	1.5	18,000.00	8	9.00	108,000.00
LA UNION	2	2.00	24,000.00				2	2.00	24,000.00
District 1	1	1.00	12,000.00				1	1.00	12,000.00
District 2	1	1.00	12,000.00				1	1.00	12,000.00
PANGASINAN	14	15.84	190,000.00	1	1.25	15,000.00	15	17.09	205,000.00
District 1	1	1.00	12,000.00				1	1.00	12,000.00
District 2	1	1.00	12,000.00				1	1.00	12,000.00
District 3	3	3.50	42,000.00				3	3.50	42,000.00
District 4	5	5.17	62,000.00				5	5.17	62,000.00
District 5	1	1.00	12,000.00				1	1.00	12,000.00
District 6	3	4.17	50,000.00	1	1.25	15,000.00	4	5.42	65,000.00



## KABUHAYAN AT KAUNLARAN NG KABABAYANG KATUTUBO (4K) PROGRAM

#### **Social Preparation Component**

This aims to capacitate the ICCs and IPs through agricultural skills training such as training on mushroom production and processing, a package of technology for vegetable production, chicken and duck production, and leadership training. These trainings aimed to increase the knowledge and productivity of the beneficiaries to improve the economic situation in the country. Participants atsuch conferences strongly advocated for gender and development, in which men's and women's participation in and involvement in IPs and ICCs were highly valued. 10 IPOs out of the 9 IPOs with a total of 250 beneficiaries were trained on the Values Formation, Leadership, Organization Strengthening of which 25 members/ IPO were attended. Moreover, on the conduct of training on the agri-fishery related activities 3 were implemented with corresponding starter kits. There were 48 members of the Cagaling Palina Pugo Farmers Association in Pugo, La Union who benefitted on the project.













#### **Production and Livelihood Component**

The distributed agricultural inputs such as vegetable seeds, fertilizers, garden tools and plastic crates, likewise, agri-machineries, equipment and facility specifically multipurpose cultivators, vegetable seeders, egg incubator, power sprayer and pump and engine set and construction of greenhouse were distributed to different IPOs in the region. 16 Indigenous Peoples Organization within the 10 Ancestral Domain namely; Adams and Carasi Ilocos Norte; Nagbukel, Lidlidda, and Sugpon Ilocos Sur; BAgulin, San Gabriel and Pugo La Union; Sison and Fianza, San Nicolas, Pangasinan were distributed with various agricultural interventions.









## PHILIPPINE RURAL DEVELOPMENT PROJECT

Php170M proposed enterprise subprojects for Ilocos Region gets RPAB approval

In a unanimous agreement, the Regional Project Advisory Board (RPAB) of the Regional Project Coordination Office I (RPCO I), approved three IREAP subprojects proposed under the Philippine Rural Development Project (PRDP) in Ilocos Region with a total project cost of about P170 million pesos supporting the onion, tomato and mungbean commodities.

Presented during the 26th RPAB meeting conducted by the RPCO l in Bauang, La Union, the proposed Mungbean Production, Consolidation & Marketing of the Angio-Taculit Multi-purpose Cooperative of San Fabian, Pangasinan worth P13,611,925; the Multi-purpose Storage Facility & Marketing Enterprise of San Joaquin Multi-purpose Cooperative of Sarrat, Ilocos Norte worth P44,616,870; and the Establishment of Onion Cold Storage (Consolidation & Marketing) worth P111,847,988 of the Nueva Segovia Consortium

of Cooperatives (NSCC) of Caoayan, Ilocos Sur has passed the scrutiny of the RPAB members and were all endorsed for funding under DA-PRDP Additional Financing 2 (AF2).

The RPAB members recognized the importance of the proposed IREAP subprojects in creating not only livelihood opportunities for farmers but in securing sufficient supply of the three important commodities in Ilocos Region.

Region I currently ranks no. I in the production of tomato and mungbean and 2nd in onion production. But with issues on lack of proper storage facilities as well as marketing support, farmers continue to struggle in achieving higher income and productivity.

With the funding support that may be provided thru the PRDP to the proposed enterprise development subprojects, problems on high spoilage, shortage of supply, low marketing, and coping with volume requirement of institutional buyers thru consolidation shall be addressed.

Each of the proponent group presented the Feasibility Study, Program of Work and Detailed Civil Works of their proposed enterprises at which the RPAB members made minor comments/suggestions to improve further the project and ensure its successful implementation which is expected to benefit the entire agri sector in Ilocos.

To also apprise the RPAB members on the current status of PRDP implementation in the region, Mr. Roosevelt Peralta, head of the Monitoring & Evaluation Unit of PRDP-RPCO I and OIC-Chief of the Planning, Monitoring & Evaluation Division presented the overview and status of approved and implemented PRDP subprojects in Ilocos Region.

The RPAB meeting was successfully presided by RPCO-I PRDP Deputy Project Director Ms. Doris Joy Garcia, together with the RPAB members namely Engr. Vilmaflor Gascon of DPWH, Mr. Pedro D. Gonzales of DILG, Ms. Emeraldyn B. Cantoria of DAR, Mr. Benjamin Campañano, the RAFC Chair, and Engr. Cezar Manuel A. Cabansag of DENR.





Sec Dar leads groundbreaking ceremony for Php101M worth bridge

One of the most highly anticipated infrastructure subprojects under the Philippine Rural Development Project (PRDP) in the Province of Ilocos Sur is the Construction of Cabaroan-Silag-Pacang (CASIPA) Bridge with Approaches. The bridge will connect six (6) barangays to the provincial road and provide better

access to transportation, city services, and government interventions.

Aside from improved transportation and good business, the CASIPA bridge will literally pave the way for improved access to social services (i.e. access to schools and hospitals/health centers); reduced travel time, transport losses, hauling cost; and increased production for various agricultural commodities.

Secretary Dar highlighted the positive impact of the construction of bridge to the farmers and the entirety of the agriculture community during the ceremony.

At present, a pipe culvert serves as the bridge for barangays Cabaroan, Silag, Pacang, Langaoan, Ampuagan, and Lesseb. The existing bridge is easily submerged in floodwaters during rainy season forcing some residents of Silag and Pacang to use balsa, an improvised boat made with wood scraps, for transportation.

The CASIPA Bridge, which has a total project cost of Php101,766,095.00, is targeted to begin construction on June 01, 2022. The bridge to be constructed will measure 120.9 linear meters, have 5.6 carriage width, and 358.81 meters approaches having 6.1 carriage width.



SPIS awarded to San Nicolas Bawang and Nateng Farmers Association

As part of the series of project monitoring by the Regional Operations and Maintenance Team (ROMAT) of the DA-RFO I utilizing the PRDP monitoring tools of Operations and Maintenance Audit System (OMAS) and the Rapid Appraisal of Emerging Benefits (RAEB), the Solar Powered Irrigation System (SPIS) awarded to the San Nicolas Bawang & Nateng Farmers Association

Three LGUs in Ilocos Region receive NOL 2 for infra projects

In an awarding ceremony held on July 21, 2022 by the Philippine Rural Development Project (PRDP) North Luzon Cluster, the Municipalities of Bauang, La Union; Sta. Maria, Ilocos Sur; and Bayambang, Pangasinan received the No Objection Letter 2 (NOL2) for their approved I-BUILD Subprojects under PRDP.

The Municipality of Bauang, La Union received its NOL 2 for the project "Rehabilitation and Road Opening of Cabalayangan-Sta. Monica Farm to Market Road" amounting to P98,142,383.71 under the second Additiinal Financing (AF2) of the DA-PRDP.

of San Nicolas, Ilocos Norte has been subjected to said monitoring as part of the mainstreaming of PRDP tools to DA projects implemented under the different banner programs.

The interviews conducted with the project beneficiaries has drawn significant responses and data showing the effectiveness of the project implemented in increasing the income and productivity of the farmer association members who were the direct beneficiaries of the said project.



Sta. Maria, Ilocos Sur likewise received its NOL 2 for the "Construction of Cabaroan-Silang-Pacang CASIPA Bridge with Approaches" with a total contract project of P101,766,095.00 and Bayambang, Pangasinan for its I-BUILD subproject "Improvement of San Gabriel II Farm to Market

Road with Bridge" amounting to P107,932,093.15.

Receiving the awards for said LGUs were Mayor Eulogio Clarence Martin De Guzman of Bauang, La Union, Mayor Brigido Camarillo, Jr. of Sta. Maria, Ilocos Sur and Engr. Eddie Melicorio, Municipal Engineer of Bayambang, Pangasinan.

The awarding of NOL 2 to approved PRDP I-BUILD Subprojects signals the proponent LGUs to proceed with the awarding of contract to the winning bidder/contractor of the project.

The awarding ceremony was spearheaded by North Luzon Cluster Project Director and DA-RFO III Regional Executive Director Crispulo Bautista, Jr. with Ms. Elma Mananes, PSO Deputy Project Director held at Savannah Resort Hotel in Angeles City, Pampanga as part of the highlights of the North Luzon Cluster 2nd Quarter Assessment.





The I-Plan Component of the Regional Project Coordination Office 1 (RPCO1) conducted an orientation on the Enhanced I-PLAN Operations Manual and Capacity Development on Integrating Commodity Investment Plan (PCIP) at Hotel Supreme, Baguio City on July 20-22, 2022.

The I-PLAN enhanced operations manual (EOM) introduces new scientific planning tools in the prioritization of Philippine Rural Development Project (PRDP) funded subprojects and other projects of the government. Aside from socio-ecodrought, erosion, salt water intrusion, and storm

During the rollout, the participants were introduced to the planner's portal which can be accessed at www.daprdp\_plannersportal.net where they can dices. Through the website, planners can generate maps to aid the planning of government-funded nerable sites.

The EOM mobilizes social and environmental safe-



guards early screening, employ multi-risk factors plant hazards for modern and climate-smart proj-

After the training, the participants who were from the Provincial Project Management and Implementation Units and Disaster Risk Reduction and Management Offices of Ilocos Norte, Ilocos Sur, workshop in August 2022 for the updating of their provincial investment commodity plans using the new tools in the EOM.

RPCO 1 I-PLAN Component Head, Ms. Doris Joy Garcia shared that the PRDP aims to mainstream the tools in the EOM to become the primary instruments of planners and the future of planning in the government.



First potable water system project implemented in Vintar, Ilocos Norte

The project, which is worth P3,989,426.01 was completed in 2019 benefitting 124 households in Brgy. San Jose, Vintar, Ilocos Norte providing safe potable water supply to the residents.

#### SLP beneficiaries undergoes entrep training

To capacitate cooperatives that have become proponents of the Small Livelihood Project (SLP) under the Philippine Rural Development Project (PRDP), the IREAP Component of DA-Regional Project Coordination Office I (RPCO I) conducted a Capacity Building Development Training which started today October 6,2022 and will conclude tomorrow, October 7,2022 at the Regency Hotel in Calasiao, Pangasinan.

Proponent Group (PG) members from the Southern Binmaley MPC; Progressive Cooperative of Oraan East MPC; Bayanihan Hundred Island MPC; and BLP Farmers & Irrigators Association were the participants to the training.

As a way to ensure sustainability of the proponents' enterprises that were supported by PRDP, various topics were set to create an over-all knowledge enhancement for the coop members to become effective agribusiness entrepreneurs.



Three resource speakers from the Don Mariano Marcos Memorial State University (DMMMSU) North La Union Campus-Institute of Agribusiness Management were invited to lecture on seven important topics.

Dir. Arnelie Laquidan initially discussed today about Entrepreneurial Mind Setting and Values Formation. She will be lecturing as well about Leadership Management and Skills Training on the second day of the activity.

An important aspect of being an agribusiness entrepreneur is to know how to start, maintain and grow one's business venture.

With this, topics on How to start a business; Human Resource Management; and Internal Control System were discussed today by Dr. Joana Quinquito and will discuss as well the topic on Office and Organizational Management for tomorrow's lecture, together with the topic on Simple Book keeping, Recording and Accounting by Ms. Leny Grace Garcia.

The conduct of the Capability Building Training is an off-shoot of IREAP's business process review activity conducted previously where training needs and other technical assistance needs were identified by the proponents to help them manage efficiently the livelihood assistance provided to them by DA thru PRDP.

The Ilocos Region has a total of 52 approved and implemented SLP under PRDP where 30 of which were awarded to Pangasinan PGs.

DA regular projects adopt PRDP best monitoring tool practices

Imploring the best practices of project monitoring under the Department of Agriculture-Philippine Rural Development Project (DA-PRDP) for DA-awarded projects in Ilocos Region, the Regional Operations & Maintenance Audit Team (ROMAT) of DA-RPCO I and the technical staff of the Planning Monitoring & Evaluation Division (PMED), Regional Agricultural Engineering Division (RAED), and the Field Operations Division (FOD), conducted monitoring and evaluation in Brgy. Turod, Cabugao, Ilocos Sur on November 4, 2022 for a Solar Powered Irrigation System (SPIS) project of the Brgy. Turod, Cabugao, Ilocos Sur Farmers and Irrigators Association worth P5.7M and which was awarded under the Rice Banner Program in 2019.

This is part of the mainstreaming activities under PRDP which seek to integrate the best practices developed thru PRDP into the Department of Agriculture's regular programs and projects for more effective and efficient project implementation.

Utilizing the PRDP tools such as the Operations & Maintenance Audit System (OMAS) and the Rapid Appraisal of Emerging Benefits (RAEB), members of the ROMAT and the technical staff of DA RFO I is set to inspect and evaluate a total of four identified SPIS projects regionwide and look into the effectiveness, efficiency, sustainability and impact of the project to the beneficiaries and the community in general.

Under PRDP, the OMAS is conducted every six months after completing the subproject to monitor the proper operations and maintenance of the project and seeks to establish the strategies adopted by the LGU and project beneficiaries in maintaining the quality and condition of the project to maximize its benefits.

Meanwhile, the RAEB is an evaluation tool designed to assess the impact of implemented subprojects on intended beneficiaries and find out whether the project contributed to the attainment of the Project's development goals. Applying the RAEB tools in the project monitoring and evaluation activity also helps in identifying some of the challenges in project implementation from which the DA can recommend solutions, practices and sustainability measures.

Other than the actual field visitation of the project, the team conducted geotagging, Key Informant Interview (KII) with the municipal agriculturist assigned to oversee the project, spot interview and survey with beneficiaries, and Focus Group Discussion (FGD) with officers of the farmers' association and barangay council to gather relevant data to determine the impact and success of the DA-implemented project in attaining the projected benefits and assess the current efforts and sustainability plans of the Local Government Units (LGUs) for the project.

Based on the responses gathered through the interviews conducted, the SPIS has contributed to the increase in farm productivity and income



and cropping intensity of farmers that benefited from the 15-20 hectare service area of the project directly benefitting a total of 20 farmer members.

Mr. Edgar Garcia, the association president shared that before the project was established, farmers in the area planting rice used to harvest around 5.0-5.5 t/hectare but with the project now providing them sufficient irrigation, they are able to increase their harvest to 6.0-7.0t/hectare. For corn, an increase from 90-120 bags/hectare (@40kg/bag) to 130-200 bags/hectare was obtained after the project.

The project has likewise reduced their cost of production as they were able to save P5,000-P8,000.00 cost on fuel for their irrigation activities throughout their cropping season. Other members were now also able to grow other crops like vegetables, in addition to their rice and corn crops.

Emerging benefits derived from the project was the production of tilapia which the association president initially thought of by putting 3,000 tilapia fingerlings inside the water reservoir/tank connected thru the SPIS as an additional source of food for the association members.

The LGU, through the MAO, has expressed gratitude to DA for the implementation of the project in their municipality which he said has sparked a future plan of duplicating the said project in some other areas in the municipality adopting the design and strategies set by the DA.

In support of the association, the Cabugao LGU has likewise provided various farm machinery and equipment from which the income derived from the rental/use of said machinery is used as part of the operations and maintenance fund of the association.

With the evaluation conducted by the team focusing on the functionality, physical condition, and its social and institutional status, the ROMAT gave the association a rating of 8/10 or "Good" rating as they were able to maintain the project and kept it in good condition, however, record-keeping on the expenses and income and other documentation reports relative to the maintenance of the project has been part of the recommendations to further sustain the project and deliver its maximum benefit to the farming communities in Brgy. Turod, Cabugao, Ilocos Sur.



PLGU partners in PRDP implementation readies climate resilient PCIP

Determined to execute the concepts imparted during the initial orientation briefing on Integrating Climate Risks & Resilience into the Provincial Commodity Investment Plan (PCIP), as part of the Overall Enhancement of the IPLAN Component Operations Manual of the Philippine Rural Development Project (PRDP), the Provincial Project Management and Implementation Units (PPMIU) and Disaster Risk Reduction and Management Offices (DRRMO) of Ilocos Sur, La Union, and Pangasinan convened anew for a follow-up workshop in Baguio City on August 16-19,2022.

In the said workshop spearheaded by RPCO I IPLAN component, the PLGUs were given prescribed templates to work on where they provided the corresponding data identifying risks and climate resiliency factors that should be considered as part of their PCIP to ensure sustainability and efficiency of proposed projects and interventions whether it be under PRDP or as a regular project of the province.

The auto generated templates was provided by the

National Project Coordination Office (NPCO) where data gathered from the PLGUs would be incorporated in the Planners Portal which is part of the move that all innovations of IPLAN and GGU will be accessed in the planner's portal.

In the initial orientation activity, the PLGUs were already oriented on what concepts should be integrated

in their PCIP such as the Climate Resilience Vulnerability Assessment (CRVA), Spatial Planning (where areas are categorized as coastal, lowlands, or highlands), as well as considerations on plant health risks.

The workshop aims to guide PLGUs that in proposing for an intervention, risks & climate resiliency should also be looked on and know the mitigating measures to avoid losses due to unexpected climate and other related risks.

During the 14th World Bank Implementation Support Mission, it was reiterated that one of the deliverables for the I-PLAN component is the integration of Climate Risk Resiliency consideration in the PCIP.



IPLAN Component head Ms. Doris Joy Garcia, who is also the newly designated RPCO I Deputy Project Director and recently as DA-RFO I Regional Technical Director for Operations, conveyed her thanks for the active involvement and interest of the PLGUs in keeping up with various activities and efforts towards further improving the PRDP implementation aiming for a climate resilient and sustainable infra and enterprise subprojects in the regions.

She mentioned the need to continually enhance the IPLAN Operations Manual to cope with the fast-evolving technologies and innovations in project implementation. Like for example, in the Commodity prioritization guide, it now includes the geological hazards such as earthquake, volcanic eruptions among others, because these are not considered in the old EVSA baseline data.

Also joining the group on the second day of the workshop was the new OIC-Regional Executive Director of DA-RFO I, Atty. Jennilyn M. Dawayan who underscored the crucial need for agencies and government units to be ready in addressing risks and climate considerations that may affect projects and investments hence should integrate this in their planning activities. "This could best be done if a Business Continuity and Management Plan be prepared/ adopted as part of the regular planning and programming", she said.

Data generated during the workshop is expected to provide guide for government planners to decide/ identify suitable and sustainable interventions for a particular commodity/enterprise in their locality.



# DISASTER RISK REDUCTION AND MANAGEMENT REHABILITATION AND RECOVERY PROJECTS

Summary of Quick Respond Funds released in 2022

	No. of Bo	eneficiaries		
Calamity	Group	Individuals	Financial (PhP)	
Super Typhoon Neneng		5,932	56,577,262.00	
STY Karding		13,225	30,012,600.00	
STS Florita - 1st Tranche		4,135	57,051,665.00	
STS Florita - 2nd Tranche	8		43,000,000.00	
7.0 Earthquake	39		12,157,360.00	
Freak Rains		3,212	50,026,100.00	
STS Maring - 3rd Tranche		6,661	38,877,450.00	
Total		33,165	287,702,437.00	

Rehabilitation projects for STS Neneng affected farmers

Programs/Projects/Activities	<b>Unit of Measure</b>	Beneficiaries	Financial (PhP)	Physical
Livestock Program			7,847,600.00	
Cattle	head	56	2,520,000.00	56
Goat	head	206	4,980,000.00	249
Chicken	head	60	216,000.00	360
Veterinary drugs	dose	-	131,600.00	6,250
Fisheries			5,114,962.00	
A. Provision of stocks for aquaculture	2		1,819,962.00	
1. Milkfish (2" BL)	pieces	50	292,520.00	58,504
2. Tilapia (size 14)	pieces	237	283,082.00	283,082
3. Siganid (2" BL)	pieces	54	1,198,560.00	99,880
4. Catfish (2" BL)	pieces	2	6,500.00	1,300
5. Carp (2" BL)	pieces	1	30,000.00	5,000
6. White Shrimp/Tiger Prawn (PL12)	pieces	3	9,300.00	31,000
b. Aquculture Structure (Repair and I	Replacement)		2,225,000.00	
1. Provision of Nets (damage pond dikes)	rolls	89	2,225,000.00	89
c. Fishing Gear and Paraphernalia (R	epair and Replacem	ent)	1,070,000.00	
1. Provision of motorized boat	unit	3	180,000.00	3
2. Provision of Payao	unit/set	5	750,000.00	5
3. Replacement of Loss Fishing Gear and Paraphernalia *Fyke Net and Gill Net)	unit/set	14	140,000.00	28
GRAND TOTAL		5,932	56,577,262.00	

# Rehabilitation projects for STY Karding affected farmers

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
Provision of Bamboo Raft w/Oyster Spat Collectors (Shellfish Culture)	units	2	70,400.00	2
Provision of Nets (damaged fishpond dikes)	roll	1	25,000.00	1
Lantay Cage Materials for BFAR-Regional Seaweed Nursery	units	-	70,000.00	7
Fishing Gear and Paraphernalia		126	4,741,000.00	
Provision of Fish Trap	unit	124	4,526,000.00	124
Repair of damaged fishing boats	unit	2	215,000.00	2
GRAND TOTAL		13,225	30,012,600.00	

### Rehabilitation projects for STS Florita affected farmers - 1st Tranche

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
Irrigation Network Services			29,100,000.00	12
Rehabilitation of Small Water Impounding Project			10,000,000.00	2
Paagan SWIP, Brgy. Paagan, Santol, La Union	sites	1	7,000,000.00	1
Annam SWIP, brgy. Annam, Umingan, Pangasinan	sites	1	3,000,000.00	1
Rehabilitation of Diversion Dam			11,500,000.00	5
Aglipay Gabur DD, Brgy. Aglipay, Pinili, Ilocos Norte	sites	1	4,000,000.00	1
Sitio Daya DD, Brgy. Sitio Daya, Bacnotan, La Union	sites	1	1,000,000.00	1
Salbasaca DD, Brgy. Salincob, Bacnotan, La Union	sites	1	1,500,000.00	1
Oya-oy DD, Brgy. Oya-oy, Bacnotan, La Union	sites	1	2,000,000.00	1
Pocal Pocal DD, Brgy. pocal Pocal, Alaminos City, Pangasinan	sites		3,000,000.00	1
Rehabilitation of Communal Irrigation System			3,600,000.00	4
Butarag CIS, Brgy. Butarag, Del Pilar, Ilocos Sur	sites	1	1,100,000.00	1
Lepting- Nangalisan CIS, Brgy. Tiagan, San Emilio, Ilocos Sur	sites	1	2,500,000.00	1
Rehabilitation of Check Dam			4,000,000.00	1
Burayok Check Dam, Brgy. burayok, Bacnotan, La Union	sites	1	4,000,000.00	1
GRAND TOTAL		9	57,051,665.00	

# Rehabilitation projects for STS Florita affected farmers - 2nd Tranche

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
Quiom DD, Quiom, Batac City, Ilocos Norte	sites	1	3,500,000.00	1
Acosta DD, Nagbacalan, Batac City, Ilocos Norte	sites	1	6,000,000.00	1
Celestino Pucan DD, Batac City, Ilocos Norte		1	4,000,000.00	1
Carmay DD, Batac City, Ilocos Norte	sites	1	4,000,000.00	1
Matanubong DD, Batac City, Ilocos Norte	sites	1	4,000,000.00	1
Banawe DD, Banna, Ilocos Norte	sites	1	3,500,000.00	1
Rehabilitation/ Improvement of Irrigation Canal			13,000,000.00	
Cabaruan Canal Lining, Cabaruan, Bacarra, Ilocos Norte		1	13,000,000.00	1
GRAND TOTAL		8	43,000,000.00	

# Rehabilitation projects for areas affected by 7.0 Magnitude Earthquake

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
DA-BFAR I			6,507,360.00	-
Agricultural Infrastructure				
Repair/Rehabilitation of Postharvest Infrastructure Facilities			108,360.00	
Processing Facility (Rosangis/Bangus Center)	unit	2	63,360.00	2
Fish Landing Center	unit	1	45,000.00	1
Repair/Rehabilitation of Production Infrastructure Facilities			1,926,000.00	
Provincial Hatchery	unit	1	1,620,000.00	1
Nursery tanks	unit	4	306,000.00	4
Agricultural Machineries, Equipment and Facilities Support Services			4,473,000.00	
Provision of ropes for lost payao projects	roll	22	4,320,000.00	216
Provision of Materials for Damaged Outrigger of Fishing Boats	set	9	153,000.00	9
GRAND TOTAL		39	12,157,360.00	

# Rehabilitation projects for farmers affected by freak rains

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
Provision of Agricultural inputs		2,462	50,026,100.00	
Inorganic Fertilizer				
-Ammonium Phosphate (16-20-0)	bags	1,231	5,662,600.00	2,462
-Urea (46-0-0)	bags	1,231	7,878,400.00	2,462
Biostimulants (AMO)	pack (100g/ pack)	1,231	2,585,100.00	3,693
Provision of Animals				
Cattle	heads	750	33,900,000.00	750
GRAND TOTAL		3,212	50,026,100.00	

# Rehabilitation projects for STS Maring affected farmers - 3rd Tranche

Programs/Projects/Activities	Unit of Measure	Beneficiaries	Financial (PhP)	Physical
RICE PROGRAM				
Provision of Fertilizer/Soil Amerliorants			3,828,800.00	5,228
Seaweed-based Foliar Fertilizer with beneficial microorganisms	500g/pack	1,719	1,375,200.00	1,719
Powder Foliar Fertilizer	100g/pack	3,500	2,450,000.00	3,500
Carageenan-based Liquid Foliar Fertilizer	1L/bottle	9	3,600.00	9
HIGH VALUE CROPS DEV'T PROGRAM				
Provision of Seeds			12,563,600.00	17,646
Garlic	kilogram	100	3,320,000.00	16,600
Shallot	100g/pouch	920	1,683,600.00	920
Tomato	kilogram	126	7,560,000.00	126
LIVESTOCK PROGRAM				
Provision of Animals			6,975,000.00	155
Large Ruminants			6,975,000.00	155
Cattle (Upgraded Heifer)	head	155	6,975,000.00	155
Goat (Savings)	head	82		82
*Albendazole (Savings)	liter	5		5
Provision of Drugs and Biologics			10,050.00	30
Veterinary Drugs	dose	30	10,050.00	30
IRRIGATION NETWORK SERVICES		5		
Rehabilitation of Small Scale Irrigation Projects		5	15,500,000.00	5
Dirdirig DD, Burgos, Ilocos Sur	sites	1	4,500,000.00	1
Bessang DD, Burgos, Ilocos Sur	sites	1	3,000,000.00	1
Gayang DD, Gregorio del Pilar, Ilocos Sur	sites	1	3,000,000.00	1
Buriri DD, Paoay, Ilocos Norte	sites	1	3,700,000.00	1
Naguilian CIS, Naguilian, La Union	sites	1	1,300,000.00	1
GRAND TOTAL		6,661	38,877,450.00	

# Small Scale Irrigation Projects for STS Maring and STS Florita affected farmers

Type of	N	Location			Service	
Project	Name of Project	Province	Municipality	Barangay	area restored	
Typhoon Florita						
Irrigation	Cabaruan Canal	Ilocos Norte	Bacarra	Cabaruan	10	
Typhoon Ma	aring					
DD	Bessang DD	Ilocos Sur	Burgos	Bessang		
DD	Gayang DD	Ilocos Sur	Del Pilar	Gayang		
DD	Buriri DD	Ilocos Norte	Paoay	Monte		
CIS	Naguilian CIS	La Union	Naguilian			
SWIP	Ararampang SWIP	La Union	Balaoan			
SWIP	Palac-Palac SWIP	Pangasinan	Umingan	Diaz		
DD	Duripes DD	Ilocos Norte	Bacarra	Duripes		
DD	Pideg II DD	La Union	Tubao			
DD	Cares DD	La Union	Pugo	Cares		
DD	Salbasaca DD	La Union	Bacnotan			
Dam	Balugang Kabwatan	Ilocos Sur	Burgos			
DD	San Vicente DD	Ilocos Sur	Lidlidda	San Vicente		
CIS	San Jose CIS	Ilocos Norte	Vintar	San Jose		
CIS	Bangar CIS	Ilocos Norte	Vintar			
CIS	Malagui CIS	Ilocos Norte	Vintar	Bago		
CIS	Dasay CIS	La Union	San Juan	Dasay		
CIS	Nagsabaran CIS	La Union	San Juan	Nagsabatan		
CIS	Antaguing CIS	La Union	Caba			
CIS	Daleg Takipan CIS	Pangasinan	Mangatarem	Cabaruan		
CIS	Coldit Toboy CIS	Pangasinan	Asingan			
CIS	SWISA ti Burgos CIS	Ilocos Sur	Burgos			
Dam	Cabalayangan Check	La Union	Bauang			

Project cost	Status	Date started	Date completed	Name of beneficiary
13,000,000	Completed	March 13, 2023	October 9, 2023	Sanjera De Sales Inc.
3,000,000	Completed	October 21, 2022	May 24, 2023	
3,000,000	Completed			
3,700,000	Completed	October 20, 2022	February 10, 2023	
1,300,000	Completed			
995,000	Completed			
4,000,000	Completed			
995,000	Completed	April 6, 2022	May 5, 2023	Duripes SWISA Inc.
1,700,000	97%			
3,000,000	Completed			
400,000	Completed			
2,750,000	Completed			
500,000	Completed			
995,000	Completed	April 12, 2022	May 5, 2022	Zanjera San Jose-Abkir F.A
995,000	Completed	April 12, 2022	May 5, 2022	Zanjera Luslusong F.A. Inc
995,000	Completed	April 12, 2022	June 23, 2022	Zanjera Malangui F.A.
985,000	Completed			
400,000	Completed			
995,000	Completed			
3,500,000	Completed			
2,985,000	Completed			
2,710,000	Completed			
1,1000,000	98.29%			



# Implementation, Maintenance and Continual Improvement of Quality Management System

The Department of Agriculture Regional Field Office 1 has maintained the validity of its ISO 9001:2015 Certification. Re-issued on March 28, 2023, the certification will be valid for the next two years, subject to the issuance of a contract for the second surveillance audit.

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