

2017 Annual Report

Department of Agriculture Ilocos Region

“All for One, Always Number One”



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REGIONAL FIELD OFFICE I
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DA-RFO I Annual Report 2017

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DA-RFO I

ANNUAL REPORT
2017

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FOREWORD



This 2017 Annual Report hallmarks my initial stint as Regional Executive Director of the Department of Agriculture here in Ilocos Region. As I assumed the leadership in August, barely four months left to end the year right, I have much respect for my predecessors who shared my vision of making agriculture always the prime mover of progress in the countryside.

For the past 10 years, I have been tasked to lead from one region to another, and in all instances, I have never faltered in my steps of carrying on my mission with utmost dedication, courage, and determination keeping in mind that as Regional Executive Director, I am first and foremost, a public servant.

From the highlands of Cordillera, to the proud mountain ranges of Cagayan Valley, my beloved home, now my mission has brought me down here in the home of many great and brilliant leaders, the Ilocos Region. Perhaps I am here to teach and at the same time learn.

The Ilocos Region is endowed with vast resources, and with the proper allocation and utilization of these resources, we could certainly ensure food security and sufficiency in this premier region. However, even with the noblest intentions, without the right strategies to efficiently implement our programs and projects in the department, likewise the strong and active support of our partners in agricultural development, food security and sufficiency will always be beyond our grasp.

Determined not only to be at par with leading region, a legacy I have left in my home region, as far as agriculture performance is concerned, I challenged myself and the entire workforce of DA-RFO I that Ilocos region can't only be just among the best, but must strive to be the best, to be Number One.

Hence, taking on the region to end the year strong and in the lead, we defied mediocrity by instigating needed change and implemented new policies to raise the standards of our services to our clients in the agriculture sector.

Together, we struggled, we conquered, and we delivered! We share this testament of great performance to everyone who worked hard and contributed so that we can attain what we envisioned to achieve.

Taking into heart our new battle cry, "Region I, All for One, Always Number One," let us then put our best foot forward and carry on!

LUCRECIO R. ALVIAR, JR., CESO III
Regional Executive Director



RFO1

"All for One. Always Number One!"

VISION

A prime-mover towards a modernized and competitive agriculture sector.

MISSION

We provide suitable, timely and innovative interventions for a sustainable and vibrant agriculture in the Ilocos.

CORE VALUES

Dedication - Serving with a heart.

Resiliency - Overcoming challenges

Integrity - Valuing public trust.

Vigilance - Responding to clients' needs.

Excellence - Raising the bar.

EXECUTIVE SUMMARY

The year 2017 has been a very challenging and remarkable year for the Department of Agriculture Regional Field Office-I. In a span of three quarters, three leaders took the reign and led the agriculture sector in Ilocos Region. Regional Executive Director Valentino Perdido retired from the service in March. The 2nd quarter ushered in with the appointment of a new Regional Executive Director in the person of Director Narciso A. Edillo who took the helm of leading the DA RFO-I until the 1st month of the third quarter. It was in August that the DA RFO-I faced another transition when RED Narciso A. Edillo was reassigned to DA RFO-II, swapping positions with the DA's top-performing RED Lucrecio R. Alviar, Jr.

RED Alviar's high work standards gradually innervated into the culture, systems and procedures of the DA RFO-I. On a mission to make Region I at par with his former protégée Regional Field Office-II, Director Alviar demonstrated a unique stance of work and leadership style which indeed was wholeheartedly accepted and adopted by the DA RFO-I personnel.

The result was overwhelming -- under Director Alviar's leadership and the combined determination and commitment of the entire workforce, DA RFO-I was able to pull-off higher in its performance ranking having attained 96.06% in the financial obligation status during the DA-wide November 30 assessment.

Correspondingly, Ilocos Region maintained its rank as the 4th major rice producing region contributing 9.71% to the national rice production of more than 19.28 million metric tons (Source: Philippine Statistics Authority (PSA)). Palay production grew by 3.71% from 1,805,126 metric tons in 2016 to 1,82,072 metric tons in 2017. The increase in production was attributed to the 3.91% or 0.18 metric tons increment in yield per hectare from 4.37 metric tons in 2016 to 4.56 metric tons in 2017. This year's yield surpassed the highest yield ever recorded in the region at 4.36 metric tons in 2014.

Likewise, the region is a consistent major producer of the country's best quality corn grains, sustaining its rank as the 5th corn producing region in the country from among the thirteen regions. Corn production in the region reached 556,462 metric tons in 2017 which is higher by 9.53% than last year's recorded production of 508,024 metric tons (Source: PSA). The region shared 7.03% to the national aggregate production of 7.91

Million metric tons. Yield per hectare in corn gained 3.65% from the average of 5.66 metric tons in 2016 to 5.87 metric tons in 2017. This year's level recorded the highest yield ever in the region, and still the top yielder among the regions in the country.

With this, Ilocos Region gained fame during the awarding of the 2017 National Quality Corn Awards which bagged a total of 25 awards, Ilocos Sur and Pangasinan were hailed as Top 5 Provinces along with its Provincial Agriculturists and Provincial Corn Coordinators. The awards bestowed upon the region are as follows:

Top 5 Provinces, Provincial Agriculturist and Provincial Coordinator (6 awards)
Ilocos Sur (Hall of Famer)
Pangasinan
Top 25 Municipal/City, Municipal/City Agriculturists and Coordinators (9 awards)
Burgos, Ilocos Sur
Sto. Tomas, Pangasinan
Alcala, Pangasinan
Top 100 Agricultural Extension Workers (9 awards)
Pangasinan-5 awardees
La Union – 1 awardee
Ilocos Sur – 2 awardees
Ilocos Norte– 1 awardee

For high value crops, Region I continued to exhibit a strong comparative advantage as it ranks first in the production of mango, garlic, tomato, eggplant, peanut and mungbean, and the second in onion.

For livestock, Ilocos Region maintained its Foot-and-Mouth Disease (FMD) and Avian Influenza-free status.

Under the Organic Agriculture Program (OAP), a total of 2,582.48 hectares or 19.08% were already converted out of the targeted area of 13,533 hectares of conversion to Organic Agriculture, which is 5% of the total regional production area of 340,000 hectares in Region I, with OA practitioners totaling 3,838.

In terms of sufficiency level, Region 1 continued to be more than sufficient in all food commodities. The region also showed positive growth in value of output of agriculture and fishery by 2.4 percent from PhP41.34Billion in 2016 to PhP42.30 Billion in 2017.

PART I

AGRICULTURE SECTOR

Outcome & Outputs

GROSS REGIONAL DOMESTIC PRODUCT

In 2017, Ilocos Region's Agriculture, Hunting, Forestry and Fishing (AHFF) sector output, at constant prices, was valued at PhP52.85 Billion as shown in Table 1. This value, contributing 19 percent to the total regional output at PhP272.26 Billion (Figure 1), is higher by 5.8 percent than the 2016 output of PhP557.28 Billion.

For the Agriculture and Forestry, value of output increased by 2.4 percent from PhP41.34 Billion in 2016 to PhP42.30 Billion in 2017. The increase was mainly attributed to the positive output in rice, corn, high value crops such as onion, garlic, pinakbet vegetables and legumes, including livestock.

Fishing also recorded an increase of 2.9 percent in 2017 as compared to its level in 2016 at PhP 10.25 Billion.

The Services sector contributed the largest share in the region's output at 52 percent. The sector recorded a positive growth of 6.8 percent in 2017 attaining a total value of PhP141.25 Billion.

The performance of the Industry sector, with 29 percent share to the regional output, also grew by 6.5 percent in 2017 from PhP73.42 Billion in 2016 to PhP78.16 Billion in 2017.

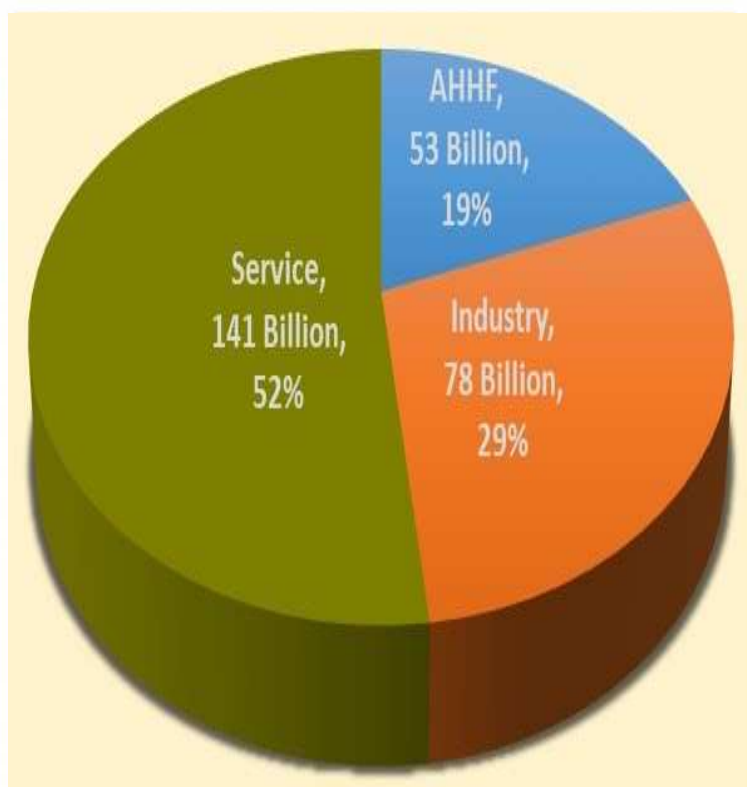


Figure 1. Percent Distribution, at Constant 2000 Prices GRDP by Industrial Origin, CY 2017.

Table 1. Gross Regional Domestic Product (GRDP) by Industrial Origin, Ilocos Region, in Thousand Pesos, at Constant Prices, 2015-2017

Industry	2015	2016	2017	GR(%) 15-16	GR(%) 16-17
Agriculture, Hunting, Forestry and Fishing	52,503,471	51,598,673	52,846,895	(1.7)	2.4
a. Agriculture and Forestry	42,013,392	41,344,872	42,295,371	(1.6)	2.3
b. Fishing	10,490,079	10,253,801	10,551,524	(2.3)	2.9
Industry Sector	62,829,182	73,424,491	78,164,504	16.9	6.5
Service Sector	121,846,102	132,254,106	141,246,088	8.5	6.8
Gross Domestic Product	237,178,755	257,277,270	272,257,487	8.5	5.8

Source: Philippine Statistics Authority (PSA)

FOOD SUFFICIENCY LEVEL

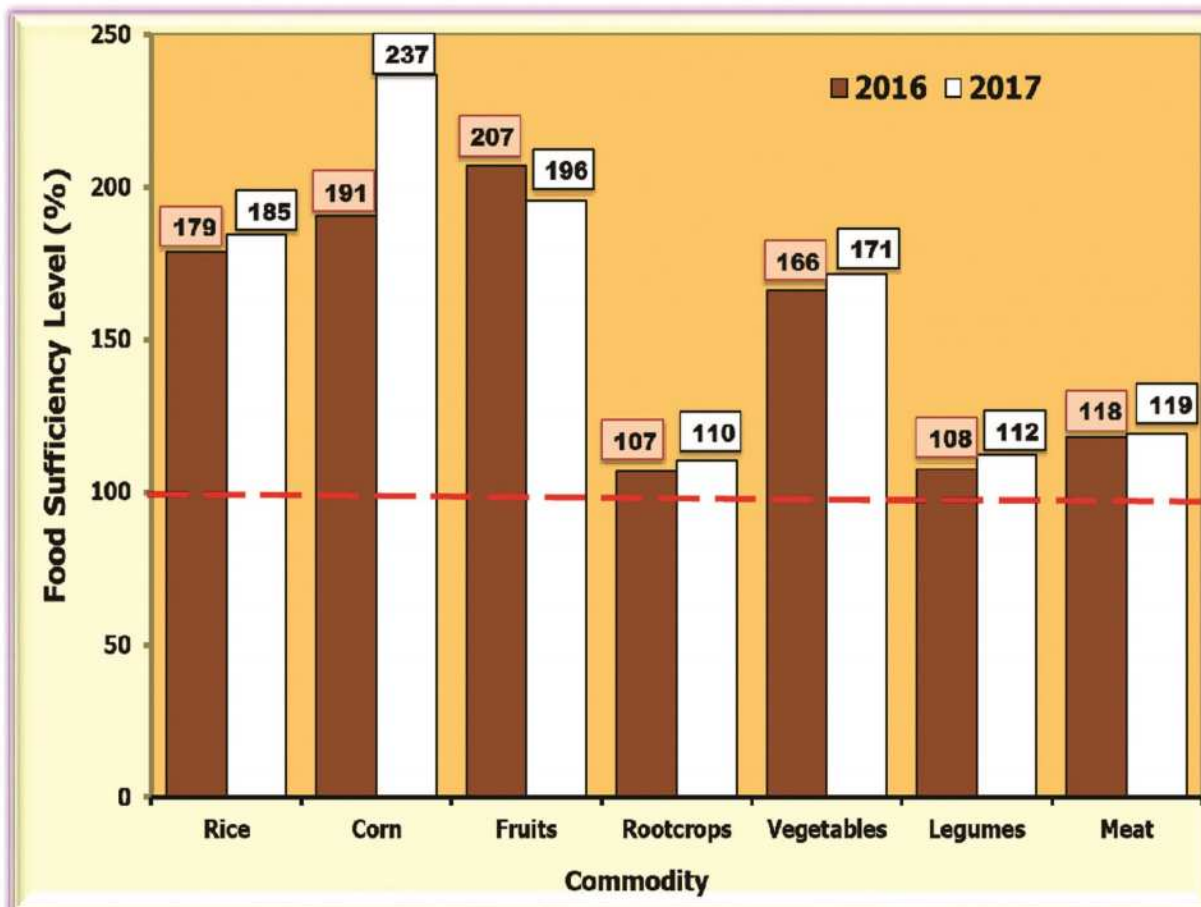


Fig 2. Food Sufficiency Level (%), Ilocos Region, 2007-2017

Source: DA-RFO | (Computation is based on PSA production data)

Figure 2 shows that Ilocos Region continued to be sufficient in all basic food commodities for 2017. Rice registered 185% sufficiency level, increased by 3.3 points as compared to 179% of 2016. Rice production this year at 1.801 million metric tons is more than enough to cater the 613,997 metric tons of clean rice requirement of almost 5.13 million populace in the region.

Likewise, corn production is more than sufficient to cater the requirement of human and livestock consumption. Sufficiency level of corn attained 237% in 2017, higher by 24 points than the 2016 level of 191%. Corn production, with total production of 556,462 metric tons, has a surplus of 321,396 metric tons to meet the requirement of animals and human at 266,320 metric tons and 35,087 metric tons, respectively.

Sufficiency level of fruits is also more than sufficient. However, it went down by 5.49 points from 237% in 2016 to 207% in 2017.

The decrease was mainly due to the declined supply of mango in all provinces due to damages caused by different typhoons and the Cecid Fly infestation during flowering and fruit formation stages.

Supply of vegetables in the region is also sufficient, attaining 171% this year with 3.07 points increase from 166% in 2016.

Production of legumes, specifically mungbean and peanut, has surplus in production achieving 112% sufficiency level in 2017. It recorded an increase of 4.39 points from 108% sufficiency level in 2016.

On the other hand, sufficiency level of rootcrops remains at 110% this year.

For meat, the region is still sufficient attaining 119%, 1.02 points higher than the 2016 level of 118%. Meat supply recorded a positive growth in 2017.

COMMODITY PERFORMANCE

RICE

Table 2 shows that Ilocos Region's palay production grew by 3.71% from 1,805,126 metric tons of 28,005 metric tons to 1,805,126 metric tons in 2016. All provinces showed positive growth rates where Ilocos Sur posted the highest increase at 9.78%, followed by La Union at 6.65%, Ilocos Norte at 6.55% and Pangasinan at 1.31%.

As shown in Fig. 3, this year's production is the highest production ever recorded in the region for the past ten (10) years. Likewise, yield this year at 4.55 metric tons per hectare is the highest level ever attained in the Ilocos Region.

Table 2. Palay production, area and yield, Ilocos Region, CY 2016-2017

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Pangasinan	1,110,565	1,125,065	1.31	260,639	258,367	(0.87)	4.26	4.35	2.20
La Union	175,354	187,015	6.65	38,304	38,810	1.32	4.58	4.82	5.26
Ilocos Sur	209,719	230,228	9.78	47,860	48,343	1.01	4.38	4.76	8.68
Ilocos Norte	309,488	329,744	6.55	65,832	66,298	0.71	4.70	4.97	5.80
Region	1,805,126	1,872,052	3.71	412,635	411,818	(0.20)	4.37	4.55	3.91

Source: PSA

The region maintains its rank as the 4th rice producing region in the country contributing 9.71% to the national rice production of more than 19.28 million metric tons.

The growth in production was attributed to the 3.91% increment in yield per hectare from 4.37 metric tons in 2016. All provinces posted increase in yield this year.

These output increments were achieved through the implementation of key production and productivity-enhancing technology interventions such as utilization of high quality and hybrid and inbred palay seeds, construction and rehabilitation of Small-Scale Irrigation Projects (SSIP), distribution of farm machineries, equipment and facilities, and conduct of

capability-building activities for farmers and Agricultural Extension Workers (AEWs). By provincial distribution, Pangasinan is still the major producer of rice in the region with a production of 1,125,065 metric tons contributing 60% to the total output. Ilocos Norte, with a production of 329,744 metric tons with 18% share is the second top rice-producing province. This is followed by Ilocos Sur producing 230,744 metric tons or 12% share. The remaining 10% or 187,015 metric tons is contributed by a Union.

Area harvested of rice, however, showed a slight decrease by 0.20% equivalent to 817 hectares in Pangasinan. All other provinces posted increase in area harvested during the period.

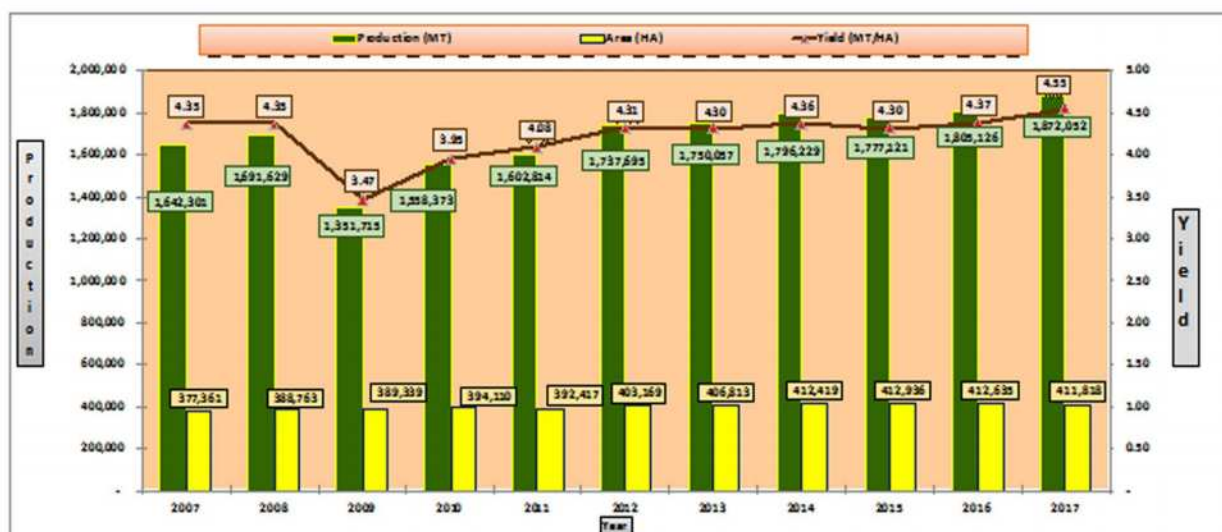


Fig. 3 Historical data on palay production, area, yield, Ilocos Region, CY 2007-2017

Source: PSA

CORN

Corn production, area and yield per hectare in Region 1 continued to expand from 2007 to 2017 as shown in Figure 4. This year's outputs - production of 556,462 metric tons, area harvested of 94,870 hectares and yield of 5.87 metric tons per hectare - are the highest levels ever recorded in the region for the past years.

The region is a consistent major producer of the country's best quality corn grains, sustaining its rank as the 5th corn producing region in the country. The region shared 7.03% to the national aggregate production of 7.92 Million metric tons.

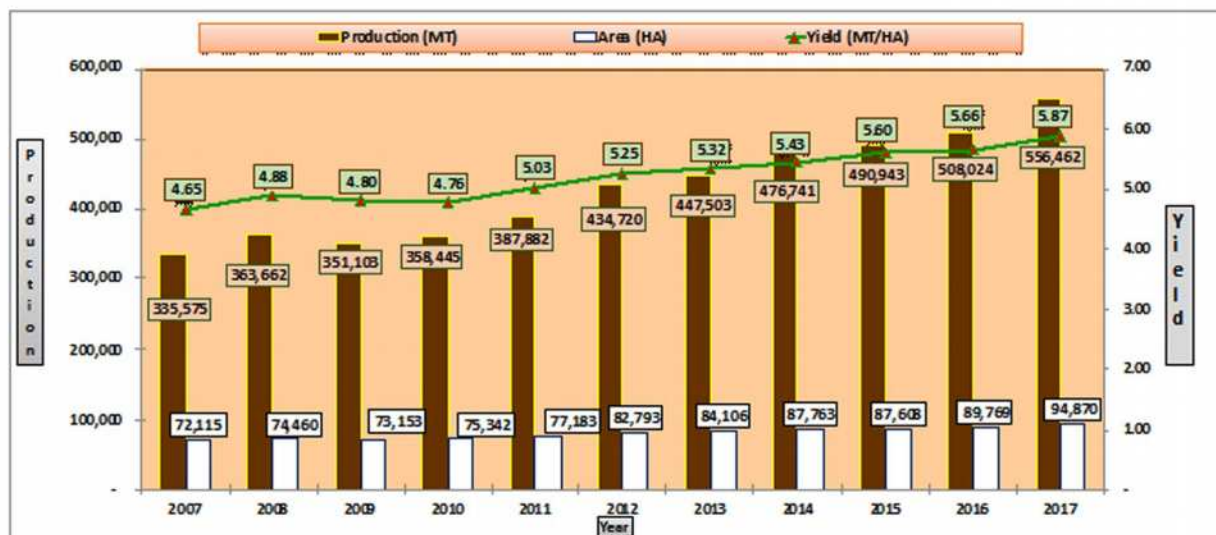


Fig. 4 Historical data on palay production, area, yield, Ilocos Region, CY 2007-2017

Source: PSA

Table 3 shows that this year's production level exhibited 9.53% or additional 48,438 metric tons from 508,024 metric tons in 2016. All provinces posted growth in production. The Province of La Union registered the highest increase at 21.48%, followed by Pangasinan at 10.47%, Ilocos Sur at 6.83% and Ilocos Norte at 2.03%.

Also, area harvested increased by 5.68% from 89,769 hectares in 2016. All provinces posted positive growth in area harvested except Ilocos Norte which

decreased by 1.68% due to crop shifting to other crops.

In terms of yield, the region gained 2.09% from the average of 5.66 metric tons per hectare last year to 5.87 metric tons per hectare this year. Though Ilocos Norte decreased in area harvested, the province still recorded a positive growth in yield at 3.78%. All provinces exhibited gains in yield per hectare.

Table 3. Corn production, area and yield, Ilocos Region, CY 2016-2017

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Pangasinan	331,191	365,865	10.47	56,343	59,867	6.25	5.88	6.11	3.97
La Union	31,644	38,440	21.48	6,261	7,411	18.37	5.05	5.19	2.63
Ilocos Sur	83,765	89,485	6.83	15,233	15,861	4.12	5.50	5.64	2.60
Ilocos Norte	61,424	62,672	2.03	11,932	11,731	(1.68)	5.15	5.34	3.78
Region	508,024	556,462	9.53	89,769	94,870	5.68	5.66	5.87	3.65

Source: PSA



Ilocos Region continued to be the top yielder of corn among the regions and the major supplier of country's best quality corn grain.

CASSAVA

The DA RFO I, in collaboration with the Local Government Units and other stakeholders continued its advocacy for cassava production in the region. The cassava industry becomes an emerging catalyst for national development in the agriculture sector. This commodity is a traditional staple and corn substitute for hog feeds. Likewise, it has great potential in value processing for human consumption.

Table 4 shows that the cassava production in the region exhibited slight growth of 0.30% from 17,619 metric tons in 2016 to 17,671 metric tons in 2017. The provinces of Ilocos Norte and

Ilocos Sur posted growth while Pangasinan and La Union remained their production level.

Yield of cassava also showed slight increase by 0.45% from 9.13 metric tons per hectare last year to 9.17 metric tons per hectare this year.

On the other hand, area harvested decreased by 0.16% from 2016 level of 1,930 hectares. The decrease was recorded in La Union where nine (9) hectares were shifted to other crops. Ilocos Norte and Ilocos Sur, however, increased by six hectares in area harvested.

Table 4. Cassava production, area and yield, Ilocos Region, CY 2016-2017

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Pangasinan	10,337	10,337	-	1,162	1,162	-	8.90	8.90	-
La Union	2,879	2,879	-	240	231	(3.75)	12.00	12.46	3.90
Ilocos Sur	1,373	1,382	0.66	122	124	1.64	11.25	11.15	(0.97)
Ilocos Norte	3,030	3,073	1.42	406	410	0.99	7.46	7.50	0.43
Region	17,619	17,671	0.30	1,930	1,927	(0.16)	9.13	9.17	0.45

Source: PSA

HIGH VALUE CROPS

MANGO

Mango is the top priority high value commodity in the Ilocos Region. This year, the region is still the major producer of mango in the country contributing 26% or 209,375 metric tons to the national aggregate of 814,055 metric tons as shown in Figure 5.

Other major producing regions include Zamboanga Peninsula (14%), Central Luzon (8%), Cagayan Valley (7%) and Davao Region (6%). The remaining 39% was contributed by other regions.

As shown in Figure 6, mango recorded a declining production and yield from 2007-2017. The decline was due to adverse effects of different typhoons that occurred in the region coinciding the fruit formation, and the Cecid Fly infestation to mango fruits. However, there was a significant increase in 2014 due to favorable weather

condition and the provision of flower inducers to mango growers such as Potassium Nitrate (KNO₃) and Calcium Nitrate (CANO₃). In terms of provincial distribution, Pangasinan dominated the mango production in the region with 73% share or 142,143 metric tons. Ilocos Norte shared 17%, while 6% and 4% for La Union and Ilocos Sur, respectively.

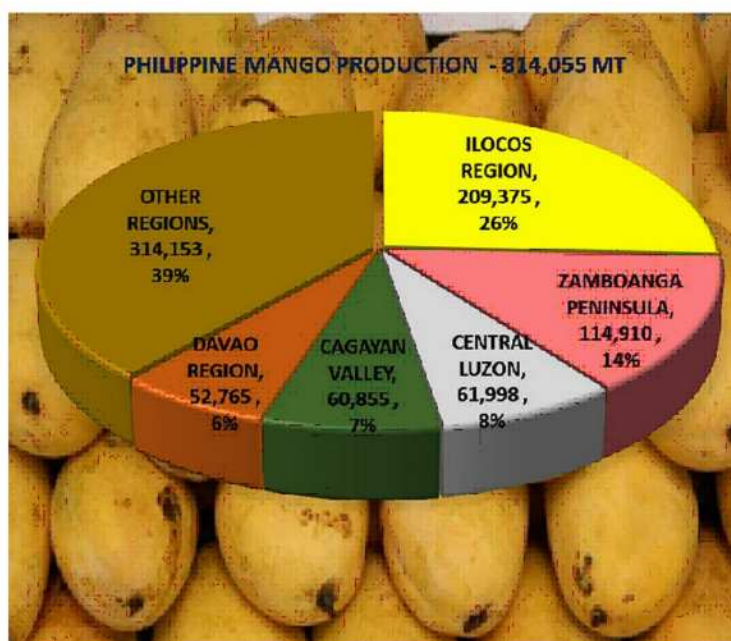


Fig. 5. Mango production share by region, Philippines, CY 2016



Fig. 6. Mango production, area and yield, Ilocos Region, CY 2007-2017

GARLIC

Table 5. Garlic production, area and yield, Ilocos Region, CY 2016-2017

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Pangasinan	7.2	7.0	(3.0)	4.1	4.0	(1.2)	1.78	1.75	(1.8)
La Union	-	-	-	-	-	-	-	-	-
Ilocos Sur	319.9	311.0	(2.8)	130.0	131.0	0.8	2.46	2.37	(3.5)
Ilocos Norte	4,160.7	4,784.0	15.0	1,880.0	1,856.0	(1.3)	2.21	2.58	16.5
Region	4,487.8	5,102.0	13.7	2,014.1	1,991.0	(1.1)	2.23	2.56	15.0

Source: PSA

Garlic production recovered this year gaining 13.7% growth from 4,487.8 metric tons in 2016 to 5,102 metric tons on 2017 as shown in Table 5. Despite of the decrease in area harvested by 1.0%, yield per hectare of garlic went up by 14.9% from 2.1 metric tons last year to 2.4 metric tons this year. There were bigger bulbs of garlic harvested this year due to adoption of appropriate technologies coupled with favorable weather condition.

Despite of the setbacks, Ilocos Region is still the major producer of garlic in the country contributing 60% or 4,488 metric tons to the national production of 7,469 metric tons as shown in Figure 7. The Province of Ilocos Norte maintains its rank as the top producing province in the country contributing 55.7% or 4,161 metric tons to the national aggregates. Garlic is being used as food condiments or seasoning with health benefits.



Fig. 7. Garlic production share by Region, Philippines, CY 2016

Source: PSA

Figure 8 shows that there was major setbacks of production in 2012 and 2016 due to occurrence of drought and pest and disease infestation in garlic. Garlic production continued to decline from 2007 level at 8,267 metric tons but recovered in 2015 attaining the highest level of yield at 3.50 metric tons per hectare with total output of 7,263 metric tons.

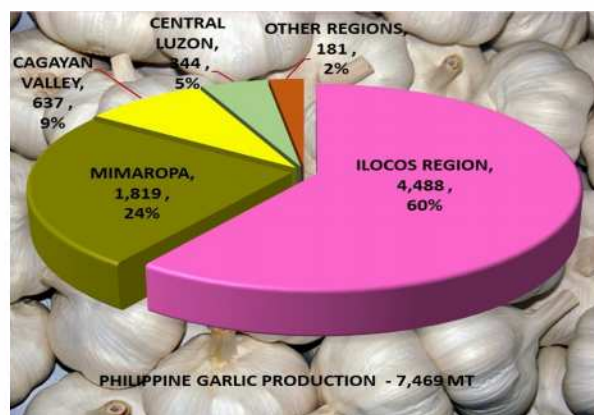


Fig. 8. Garlic production share by Region, Philippines, CY 2016

Source: PSA

ONION

Production of onion exhibited growth by 4.7% from 38,471.56 metric tons in 2016 to 40,291 metric tons in 2017 as shown in **Table 6**. Likewise, area harvested grew by 1.8% or equivalent to 79.09

hectares from last year's level of 4,400.91 hectares. All provinces posted growth in area harvested. Yield per hectare also increased by 2.88% from 2016 level.

Table 6. Onion production, area and yield, Ilocos Region, CY 2016-2017

Province	Production (MT)			Area (Ha)			Yield (MT/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Pangasinan	3,968.34	3,911.00	(1.44)	732.36	752.00	2.68	5.42	5.20	(4.02)
La Union	120.31	126.00	4.73	16.54	18.00	8.83	7.27	7.00	(3.77)
Ilocos Sur	15,156.47	16,939.00	11.76	1,520.26	1,573.00	3.47	9.97	10.77	8.01
Ilocos Norte	19,226.44	19,315.00	0.46	2,131.75	2,137.00	0.25	9.02	9.04	0.21
Region	38,471.56	40,291.00	4.73	4,400.91	4,480.00	1.80	8.74	8.99	2.88

Source: PSA

Figure 9 shows that onion production in the region declined from 2007 level at 46,198 hectares. There were major downtrends in production, yield and area in 2009 and 2011 due to damages brought by devastating typhoons during the period. However, onion outputs recovered in 2010 and 2012 onwards due to adoption of appropriate production

technologies coupled with favorable weather condition. The region is the 2nd top producing region in the country, next to Central Luzon, contributing 31.4% to the national production of 122,594 metric tons. Like garlic, onion is widely used as food condiments and considered as medicinal plant.

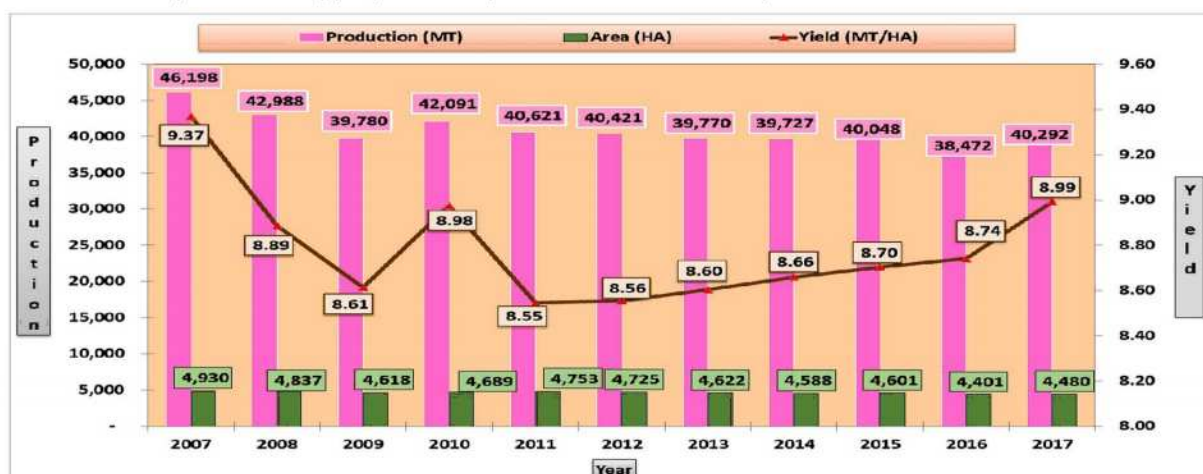


Fig. 9. Onion production share by Region, Philippines, CY 2016

Source: PSA

PINAKBET VEGETABLES

For pinakbet vegetables, tomato, eggplant and ampalaya posted positive gains this year as shown on **Table 7**. Region I is the major supplier of tomato and eggplant in the country contributing 33% and 37%, respectively, to the national aggregates.

Tomato production posted positive growth 5.26% from 68,761 metric tons in 2016 to 71,376 metric tons in 2017. Area harvested also increased by 8.89% or additional 337 hectares. However, yield of tomato decreased by 3.34% due to unfavorable weather

that occurred during vegetative and reproductive stages in tomato.

On the other hand, eggplant showed positive growth for this year attaining 90,078 metric tons production with 3.27% increase from 2016 level. Area harvested and yield also showed slight growth at 0.76% and 2.49%, respectively.

Meanwhile, ampalaya production also grew up by 4.78% from 2016 level.

Table 7. Pinakbet (tomato, eggplant and ampalaya) production, area and yield, Ilocos Region, CY 2016-2017

Commodity/ Province	Production (MT)			Area (Ha)			Yield (Mt/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Tomato	68,761.00	72,376.00	5.26	3,789.00	4,126.00	8.89	18.15	17.54	(3.34)
Ilocos Norte	28,343.00	27,987.00	(1.26)	1,361.00	1,651.00	21.31	20.83	16.95	(18.60)
Ilocos Sur	22,806.00	25,693.00	12.66	1,217.00	1,245.00	2.30	18.74	20.64	10.13
La Union	2,045.00	2,224.00	8.75	166.00	173.00	4.22	12.32	12.86	4.35
Pangasinan	15,567.00	16,472.00	5.81	1,045.00	1,057.00	1.15	14.90	15.58	4.61
Eggplant	87,223.00	90,078.00	3.27	5,112.00	5,151.00	0.76	17.06	17.49	2.49
Ilocos Norte	7,402.00	7,580.00	2.40	652.00	663.00	1.69	11.35	11.43	0.71
Ilocos Sur	5,735.00	5,850.00	2.01	355.00	363.00	2.25	16.15	16.12	(0.24)
La Union	2,076.00	2,249.00	8.33	211.00	213.00	0.95	9.84	10.56	7.32
Pangasinan	72,010.00	74,399.00	3.32	3,894.00	3,912.00	0.46	18.49	19.02	2.84
Ampalaya	9,622.35	10,082.00	4.78	1,213.96	1,280.00	5.44	7.93	7.88	(0.63)
Ilocos Norte	3,182.89	3,265.00	2.58	397.50	398.00	0.13	8.01	8.20	2.45
Ilocos Sur	2,062.01	2,108.00	2.23	149.71	158.00	5.54	13.77	13.34	(3.13)
La Union	2,065.01	2,093.00	1.36	322.75	324.00	0.39	6.40	6.46	0.96
Pangasinan	2,312.44	2,616.00	13.13	344.00	400.00	16.28	6.72	6.54	(2.71)

Source: PSA

LEGUMES - PEANUT AND MUNGBEAN

Figure 10 shows that Ilocos Region dominated the production of peanut and mungbean in the country.

Peanut in the region shared 40% or 11,210 metric tons of the total national production of 27,921 metric tons. Other major peanut producing regions include Cagayan Valley, Central Luzon, Western Visayas and MIMAROPA.

Bulk of the supply of mungbean in the country was contributed by the region with 36% share or 12,369 metric tons of the total aggregates of 34,039 metric tons. Other top producers of mungbean are Cagayan Valley, Central Luzon, ARMM and Western Visayas regions.

This year, the production of peanut and mungbean went up by 7.69% and 2.02%, respectively from 2016 level. The growth was attributed to the increased level of yield per hectare at 9.84% for peanut and 4.74% for mungbean.

However, area harvested of the two legumes declined from last year's level. For peanut, a decline of 1.96% or 147 hectares was recorded from 2016 level. On the other hand, a total of 256 hectares was decreased in area harvested of mungbean.

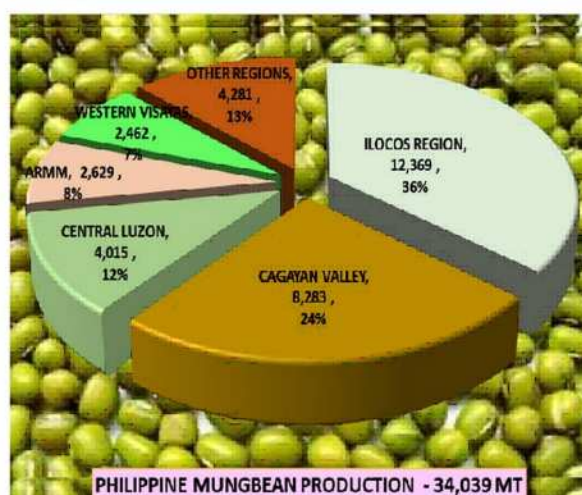
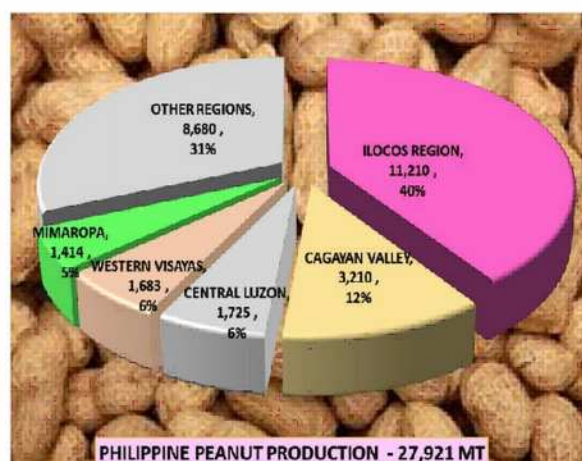


Fig. 10. Peanut and mungbean production share by Region, Philippines, CY 2016

Source: PSA

Table 8. Peanut and Mungbean production, area and yield, Ilocos Region, CY 2016-2017

Commodity/ Province	Production (MT)			Area (Ha)			Yield (Mt/Ha)		
	2016	2017	% GR	2016	2017	% GR	2016	2017	% GR
Peanut	11,211	12,073	7.69	7,508	7,361	(1.96)	1.49	1.64	9.84
Ilocos Norte	1,442	1,462	1.39	1,129.00	1,140.00	0.97	1.28	1.28	0.41
Ilocos Sur	1,669	1,701	1.92	1,209.00	1,215.00	0.50	1.38	1.40	1.41
La Union	2,743	3,137	14.36	2,040.00	1,976.00	(3.14)	1.34	1.59	18.07
Pangasinan	5,357	5,773	7.77	3,130.00	3,030.00	(3.19)	1.71	1.91	11.32
Mungbean	12,369	12,619	2.02	9,859	9,603	(2.60)	1.25	1.31	4.74
Ilocos Norte	5,127	5,308	3.53	4,740.00	4,671.00	(1.46)	1.08	1.14	5.06
Ilocos Sur	942	895	(4.99)	707.00	705.00	(0.28)	1.33	1.27	(4.72)
La Union	203	227	11.82	224.00	219.00	(2.23)	0.91	1.04	14.38
Pangasinan	6,097	6,189	1.51	4,188.00	4,008.00	(4.30)	1.46	1.54	6.07

Source: PSA

LIVESTOCK

The over-all production of all livestock and poultry commodities registered positive growth of 1.69% this year as shown in Table 9.

For livestock alone, which includes carabao, cattle, hog and goat, increased by 1.77% in production from 135,284 metric tons in 2016 to 137,680 metric tons in 2017. Among the commodities, only hogs posted positive growth rate of 4.06%. Carabao showed negative growth rate of 4.70% - the highest reduction in production among livestock commodities.

The decline in carabao, cattle and goat was due to low productivity and number of stocks disposition, some of which are not of marketable age yet.

Nevertheless, inventory of carabao, hog and goat increased as shown in Table 10. The Province of Pangasinan is implementing their ordinance in regulating the slaughtering and selling of female carabao since 2014.

Chicken and duck production went down by 0.87% and 1.16%, respectively. The reduction was mainly due to more deaths and losses of chicks caused by the abnormal change in temperature. Likewise, the inventory of said commodities declined by 19.80% from 12,028,225 heads in 2016 to 9,646,146 heads in 2017.

Chicken and duck eggs recorded gains this year by 15.51% and 2.53% growth rate, respectively.

Table 9. Livestock and poultry production (MT), Ilocos Region, CY 2016-2017

Commodity	Production (MT)		% GR
	2016	2017	
Livestock	135,284	137,680	1.77
Carabao	10,298	9,814	(4.70)
Cattle	27,767	27,376	(1.41)
Hog	86,553	90,065	4.06
Goat	10,666	10,425	(2.26)
Poultry	96,131	97,643	1.57
Chicken	78,761	78,079	(0.87)
Duck	1,983	1,960	(1.16)
Chicken Eggs	14,081	16,265	15.51
Duck Eggs	1,306	1,339	2.53
Total	231,415	235,323	1.69

Source: PSA

Table 10. Livestock and poultry inventory (heads), Ilocos Region, CY 2016-2017

Commodity	Inventory (Heads)		% GR
	2016	2017	
Livestock	1,426,857	1,463,221	2.55
Carabao	163,561	165,850	1.40
Cattle	301,578	300,323	(0.42)
Hog	555,397	577,227	3.93
Goat	406,321	419,821	3.32
Poultry	12,028,225	9,646,146	(19.80)
Chicken	11,631,311	9,263,459	(20.36)
Duck	396,914	382,687	(3.58)
Total	13,455,082	11,109,367	(17.43)

Source: PSA



Despite reduction of cattle production, Ilocos Region still posted positive growth of 1.69% in 2017.

OUTPUT COMMITMENTS

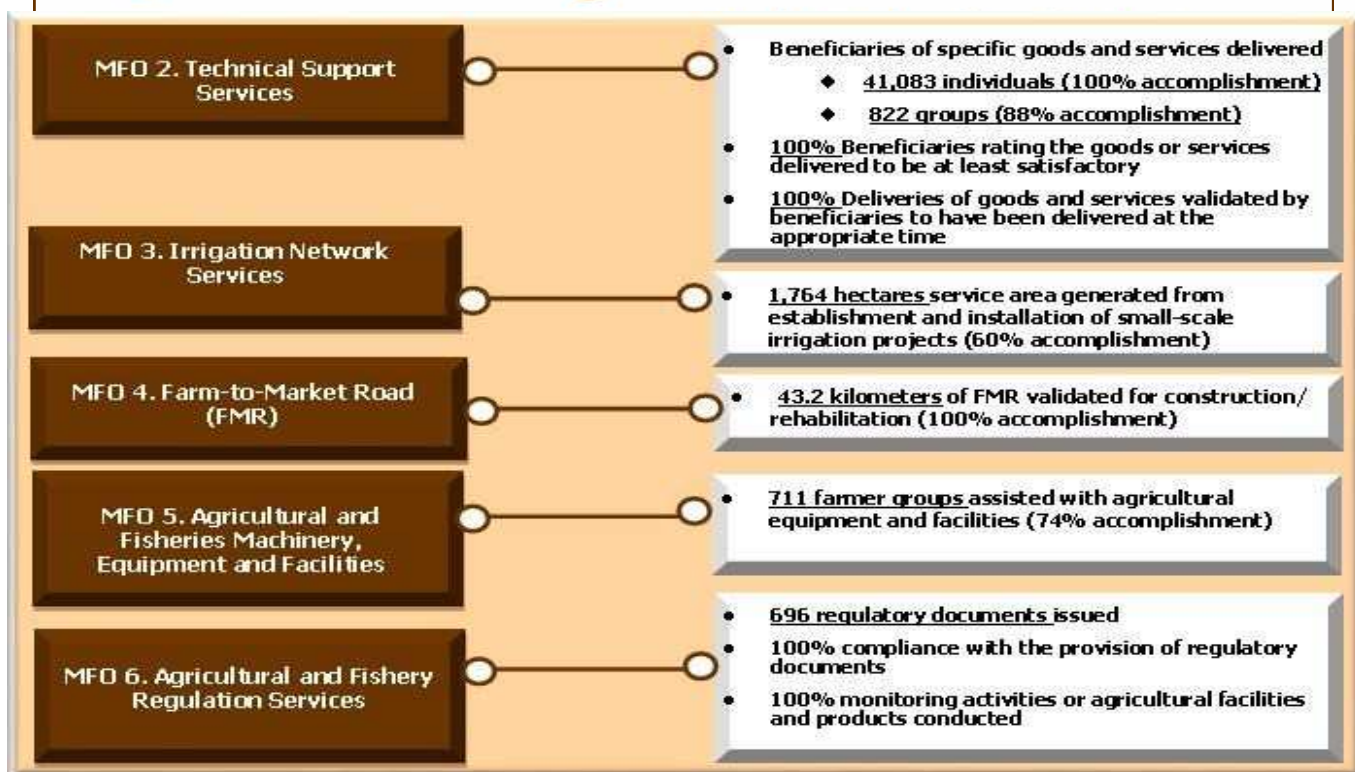


Fig.11. Output Commitments of DA-RFO I, CY 2017

Figure 11 shows the CY 2017 commitments by Major Final Output (MFO) of DA RFO-I as immediate results of the various interventions/projects implemented/provided by the Banner and Regular Programs in the region.

A total of 41,083 individuals and 822 groups were benefited from the various goods and services delivered under the MFO 2 - Technical Support Services. All the 62,763 feedbacks stated that the beneficiaries were satisfied with the goods and services provided by the DA RFO I. Moreover, out of the 31,294 feedbacks, 31,293 stated that the beneficiaries received the goods and services on time.

The MFO 2 includes the Production Support Services, Market Development Services, Extension Support, Education and Training Services and Research and Development.

Under the Irrigation Network Services, 1,764 hectares service area were generated from the establishment and installation of Small Scale Irrigation Projects (SSIPs) such as Small Water

Impounding Projects (SWIP), Diversion Dams (DD), and Small Farm Reservoir (SFR), including pump and engine sets.

A total of 66.16 kilometers of FMR projects were validated for construction. The FMR projects will be implemented by the Department of Works and national Highways (DPWH).

Likewise, a total of 451 farmer-groups were benefited with different agricultural equipment and facilities provided/established by the Banner Programs which include the farm-production and post harvest machineries, equipment and facilities.

Also, 696 regulatory documents were issued with 100% agricultural facilities and products monitored and/or inspected with reports.

Meanwhile, the Registry System for Basic Sectors in Agriculture (RSBSA) recorded a total of 708,327 farmer-beneficiaries in Ilocos Region from 2011 to 2015.

PART II

BANNER AND REGULAR PROGRAMS

Inputs/Interventions

RICE PROGRAM

TECHNICAL SUPPORT SERVICES

Production Support Services

In order to increase farmers' productivity and income, the Department of Agriculture continued to prioritize the distribution of hybrid seeds to farmers. The utilization of high quality hybrid seeds can increase 20-30% in farm production and yield. This year, a total of 144,000 kilograms of hybrid rice seeds equivalent to 9,600 hectares were procured and a total of 143,175 kilograms or equivalent of 9,545 hectares were distributed. The hybrid rice seeds were provided to associations/cooperatives and were distributed to their farmer-members in a plant now, pay later scheme. The cost of seeds paid by the farmers to the associations/cooperatives will be rolled-over for the succeeding cropping seasons.

Moreover, to boost yield and attain the targeted production rice, the Program procured and distributed 10,000 kilograms soil ameliorants to hybrid rice farmers.

Aside from hybrid rice, the Program also provided high quality inbred seeds to increase productivity in rice. A total of 480,000 kilograms high quality certified seeds were procured and distributed to rice farmers during the wet (2017) and dry cropping seasons (2017-2018) in the region.

The Program also procured certified seeds as buffer stocks for the disaster-affected rice farmers. This is to ensure the availability of high quality rice seeds that can be accessed by farmers/growers to recover their farm productivity and recoup their production losses. A total of 1,873,840 kilograms of Certified Seeds were procured and distributed during the period.

Table 11 shows the summary of all varieties of rice seeds distributed by province in the region.

The Department, in partnership with the Food and Agriculture Organization (FAO), provided Green Super Rice (GSSR) seeds as climate-smart line of rice and a drought, saline and submergence-tolerant variety. A total of 4,700 kilograms of GSR were procured and distributed to farmers.

Likewise a total of 1,873,840 kilograms of Registered Seeds were distributed to rice farmers.

Aside from seeds, various chemicals were procured as buffer stock and distributed for the immediate control and/or elimination of pests and diseases during infestation and/or disasters. Procured chemicals are as follows: 650 liters of insecticides, 500 kilograms of fungicide, 500 liters of bactericide and 500 kilograms of rodenticide.

Region I sustained its rank as one of the top rice producing regions in the country contributing 10.48% to the national rice production of more than 17.63 million metric tons.

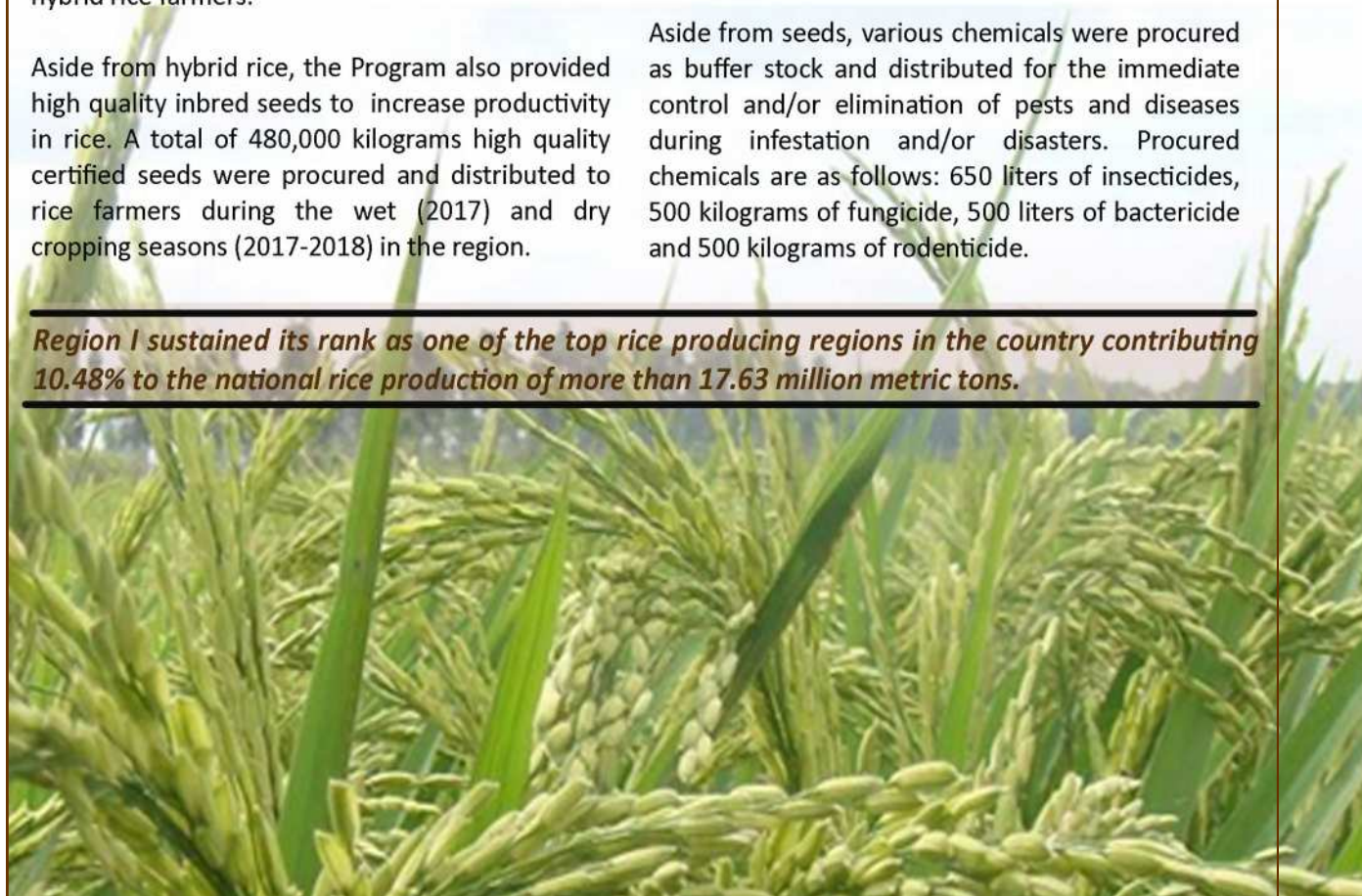


Table 11. Rice seeds distribution, Ilocos Region, 2017 Wet Season and 2017-2018 Dry Season

Province	Seeds distributed (kilograms)				
	Hybrid	Registered	Certified	GSR	Total
Pangasinan	280,000	1,113,960	2,500	1,120	1,397,580
La Union	50,000	200,000	1,000	600	251,600
Ilocos Sur	49,600	176,640	1,000	980	228,220
Ilocos Norte	100,400	383,240	880	2,000	486,520
Region	480,000	1,873,840	5,380	4,700	2,363,920

Source: PSA

For the production and distribution of biological control agents, the Regional Crop Protection Center (RCPC) produced *Metarhizium anisopliae* for the control of rice pests particularly Rice Black Bug (RBB). This year, a total of 209,504 packs or 41,900.8 kilograms of *Metarhizium anisopliae* were distributed to 2,788 farmer beneficiaries covering 4,190 hectares. Bulk of the produced (93%) was given to Pangasinan for the control of RBB.

A total of 12 Observation Stations (OS) at one per district were established in major rice-growing areas for the early detection of pests and to serve as warning to the adjacent and radiation areas in order to minimize high pest infestation.

Major rice pests observed were Bacterial Leaf Blight, Bacterial Leaf Streak, Rice Blast, Brown Planthopper, Rice Bug, Rice Black Bug (RBB) and Rice Tungro Virus (RTV).

Table 12 shows the pest incidences in rice for the period January – December 2017.

Actions undertaken were provision of technical assistance, pesticides and biological control agents through the concerted effort of Local Government Unit partners and DA RFO I, specifically the RCPC, Field Operations Division, and the provincial research and experiments centers.



(Upper photo) Monitoring and data gathering of the Rice Observation Station (OS) in Urdaneta City, Pangasinan; (Lower photo) Pest validation in Sta. Barbara, Pangasinan.

Table 12. Pest and disease incidence in rice, Ilocos Region, CY 2017

Pest	Total Area Affected (Ha.)	Action taken
Bacterial Leaf Blight (BLB)	2,626	> provided 535 kilogram and 310.5 liters of copper-based fungicide to affected areas
Rice Blast	528	
Bacterial Leaf Streak	119	> provided 377.6 liters and 17.5 kilograms of insecticides to affected areas
Brown Planthoppers (BPH)	441	
BLB + BPH	207	
Rice Bug	3120	> distributed 18,600 packs <i>Metarhizium anisopliae</i>
Rice Black Bug (RBB)	1,671.10	> distributed 26,138 packs <i>Metarhizium Anisopliae</i>
Rice Tungro Virus (RTV)	24.6	> conducted technical briefings to affected farmers

Source: Regional Crop Protection Center (RCPC)

For the production and distribution of biological control agents, the Regional Crop Protection Center (RCPC) produced *Metarhizium anisopliae* for the control of rice pests particularly Rice Black Bug (RBB). This year, a total of 209,504 packs or 41,900.8 kilograms of *Metarhizium anisopliae* were distributed to 2,788 farmer beneficiaries covering 4,190 hectares. Bulk of the produced (93%) was given to Pangasinan for the control of RBB.

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On the other hand, the Regional Soils Laboratory analyzed a total of 4,381 soil samples. These were collected in rice (3,225 samples) and corn cluster (728 samples) areas of Pangasinan and Ilocos Sur. This is in support to the conduct of Soil Fertility Assessment and Mapping Project (Phase II) for Irrigated and Rainfed Areas in Pangasinan and Ilocos Sur.

Result of analysis show that organic matter is generally low in both provinces with total area of 253,260 hectares affected as shown in Figure 12. Available phosphorus in Ilocos Sur and Pangasinan ranged from moderately high to very high covering 36,602.02 ha and 65,990 ha, respectively.

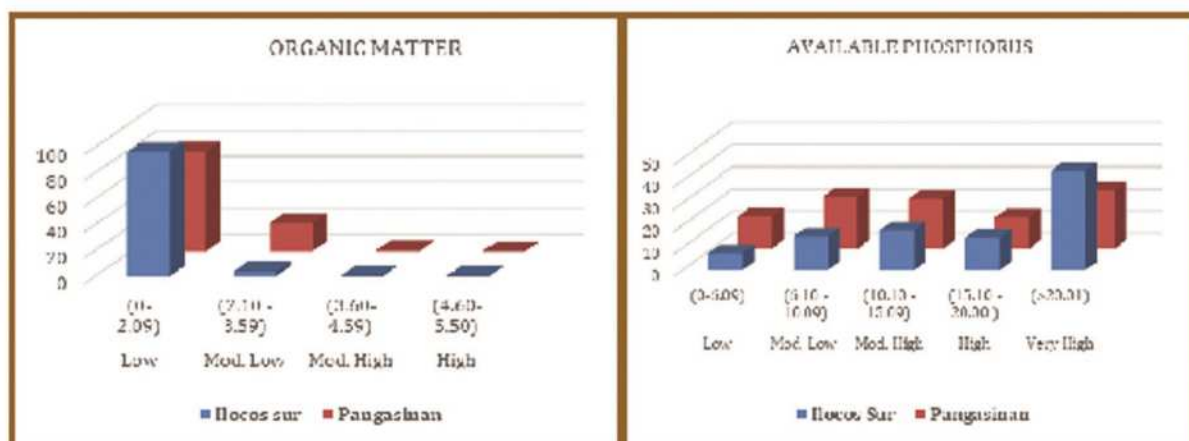


Fig. 12. Summary of results of soil analysis on organic matter in Pangasinan and Ilocos Sur

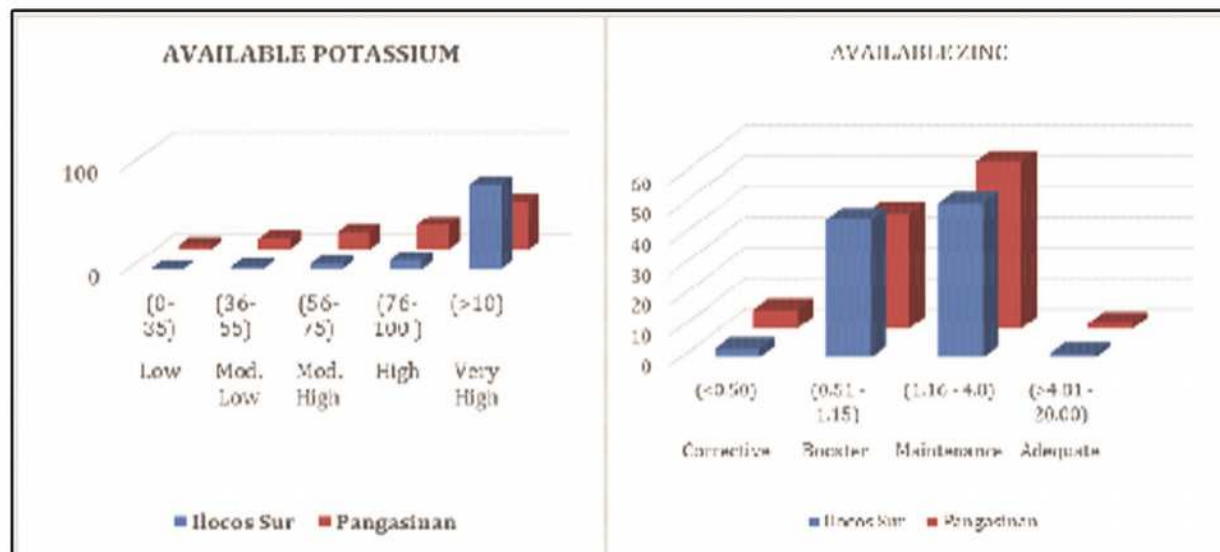


Fig. 13. Summary of results of soil analysis on potassium and zinc

As shown in Figure 13, Potassium level in Ilocos Sur and Pangasinan ranged from high to very high levels. On the other hand, the general level of Zinc in Ilocos Sur is at maintenance level at 60.30% of the total area while level of zinc in Pangasinan ranges from booster to maintenance level.

On soil pH, Ilocos Sur and Pangasinan annual crop areas is near neutral to slightly alkaline with a pH range of 6.70-7.89 pH range. Suspected description of strongly acid area has been analyzed with a pH value <5.59 with an estimated area of 34.965 hectare of the total annual crop area. Liming is required to neutralize the pH level at 1ton/ha distributed at two phases (1/3 broadcast 1 to 3 months before planting; 2/3 broadcast and plowed under).

Acidic areas of 35.524 hectares of the total annual crop area has been diagnosed with a pH range of 5.60 to 6.69 and it is also advised for liming application.

Based from the results, the following recommendations are given:

- applications of Calcium carbonate, CaCO_3 (agricultural lime) for soils with pH below 5.5;
- flooding for 3-4 weeks to soak the field may be done by farmers as a simple and relatively economical way to amend soil pH;
- regular soil testing should be conducted to monitor the soil fertility level primarily for macro and micro nutrient elements including pH level;
- fertilizer should be applied following the locality-specific recommendations for optimum yield; and
- Nutrient Management and Nutrient Fertilizer management should also be disseminated to ensure proper technical know-how to serving clientele.

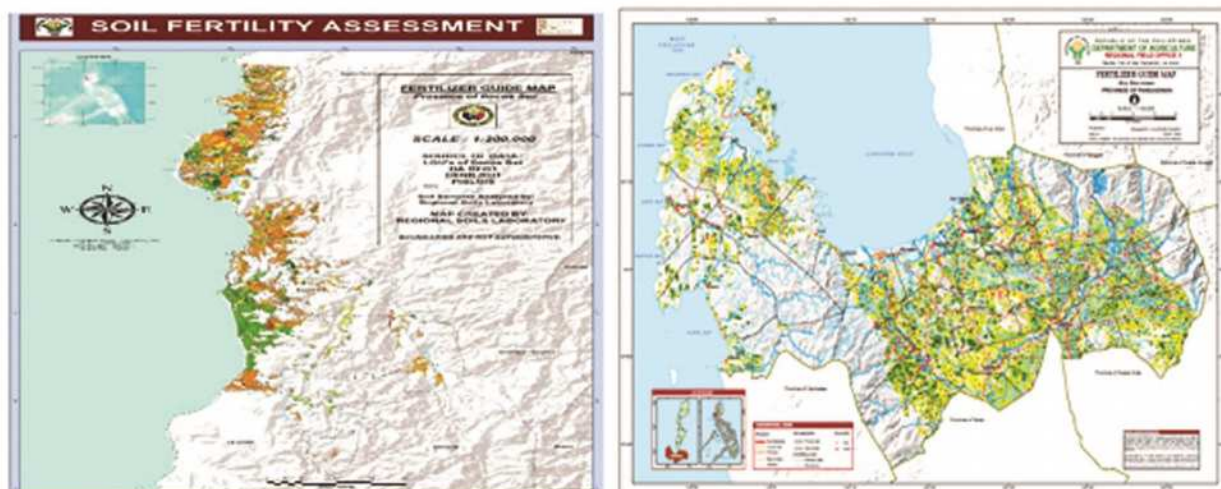


Fig. 14. Photos of fertilizer guide map in Ilocos Sur (left) and Pangasinan (right)

Market Development Service

The Program through the Agribusiness and Marketing Assistance Division (AMAD) conducted two batches of packaging and labeling for Rice Processing Center (RPC) recipients in Region 1 on May 18, 2017 at ATI, Sta. Barbara, Pangasinan and May 25, 2017 at INREC, Batac City, Ilocos Norte. The packaging and labeling of Rice Processing Center (RPC) products were improved based on the Philippine Grains Standardization Program (PGSP).



Mr. Ponciano Onia, Chairman of Balite MPC in Umingan, Pangasinan presents the existing packaging of the coop's RPC-milled rice during the training.

Extension Support, Education and Training Services

The Rice Banner Program implemented various Extension Support, Education, and Training Services (ESETS) in support to the Food Staple Sufficiency Program (FSSP) of the Department of Agriculture such as the establishment of Hybrid Rice model farms, and conduct of Local Farmer Technicians Program, Rice Crop Manager (RCM) and other training-related activities to accelerate the adoption of new technologies and best farming practices in rice production.

Hybrid Rice Model Farm

This year, the Program established Hybrid Rice Model Farms to showcase the relative yield advantage of using hybrid rice seeds as compared to certified inbred, good seeds and farmer's home saved seeds. These model farms also aims to showcase the technology of producing 8 metric tons for wet season and 10 metric tons for dry season using hybrid varieties.

A total of 20 model farms were established regionwide — 10 sites during the wet season 2017 and 10 sites during the dry season 2017-2018. Each site covers 10 contiguous irrigated area.



Various sites of Hybrid Rice Model Farm in Ilocos Region showcasing different technologies to increase production and productivity in rice.

Local Farmer Technician Program

The Program in coordination with the Municipal Agriculture Office implements the Local Farmer Technician (LFT) Program which aims to hasten technology transfer in the different barangays through the deployment of farmer leaders as change agents. Their activities include facilitating Farmer Field Schools (FFS) and establishment of Participatory Techno Demo (PTD) and Participatory Action Research Technoklinik (PARTK) wherein it

involves discovery based experiential and hands-on learning during the growing period of the crop anchored on the most recent technologies.

A total of 57 FFS facilitated with 114 LFTs were conducted regionwide in different ecosystem, both on wet season 2017 and dry season 2017-2018 as shown in Table 13.

Table 13. Local Farmer Technician Program in Ilocos Region, CY 2017

Type/Provinces	Wet Season 2017		DS 2017-2018	
	No. of FFS conducted	No. of LFTs conducted	No. of FFS conducted	No. of LFTs conducted
Regional Total	58	116	58	116
Rainfed Lowland	45	90	45	90
Pangasinan	18	36	18	36
La Union	8	16	8	16
Ilocos Sur	8	16	8	16
Ilocos Norte	11	22	11	22
Upland	3	6	3	6
Ilocos Norte	3	6	3	6
Irrigated	9	18	-	-
Pangasinan	5	10	-	-
La Union	1	2	-	-
Ilocos Norte	3	6	-	-
PARTK	-	-	9	18
Pangasinan	-	-	5	10
La Union	-	-	1	2
Ilocos Norte	-	-	3	6

Rice Crop Manager

The DA through the Rice Banner Program continued to implement the intensive field deployment of the Rice Crop Manager (RCM), an application to help farmers manage their rice crops better. The RCM aims to reduce production costs, increase farm yield and income, and facilitate a professional extension service deploying appropriate information at correct times to farmers through information and communications technology (ICT). Through the conduct of interview to the farmers, a personalized crop and nutrient management recommendation for their rice fields will be generated in a one-page printout and text message in their phones.

This year, a total of 43,400 recommendations were generated and provided to farmers as their guide on their crop and fertilizer management for wet season 2017 and dry season 2017-2018.



Ilocano farmers obtain higher yield and income through the help of the RCM application.

Dissemination of IEC Materials

The Regional Agricultural and Fisheries Information Section (RAFIS) continuously contracted with four (4) local radio stations in the region at a certain time slot in

order to allocate time for the dissemination of various DA programs. Likewise, distributed 4,000 copies of IEC materials on Rice Production Technologies Guide and related reading materials



1,400 farmers get project updates in agriculture in a series of Information caravan conducted by AFID all over the regions. According to AFID, Ilocos Region had the highest number of participants recorded.

Information Caravan cum Rice Awareness Month Celebration

The Department of Agriculture-RFO I through the RAFIS in tandem with the Agriculture & Fisheries Information Division conducted an Information Caravan on November 29, 2017 at the Sison Auditorium, Lingayen, Pangasinan. Farmers, fisherfolk and other agri-stakeholders from all over Region 1 were provided with first-hand information on the latest programs, projects, services and other updates in the agriculture sector.

A team of experts from DA were tapped as resource speakers who discussed topics focusing on DA's key

point of interventions for the agri sector such as Technology, Credit, Marketing, and Farm Mechanization, among others.

Other source of information on agriculture were also provided through the exhibit area at the venue where booths containing various Information, Education and Communication (IEC) materials were distributed for free to the participants and a focal person was stationed at each booth to answer queries of walk-in clients seeking further information on particular services and projects under DA.

Research and Development

Philippine Rice Information System (PRISM)

The PRISM project aims to develop a monitoring and information system for rice production in the Philippines. PRISM uses data from remote sensing, crop modeling, smartphone-based surveys, and web platforms to deliver actionable information on rice crop seasonality, area, and yield, damages, due to flood and drought, and crop health.

PRISM has been operating in Region 1 since the second semester of 2015. The field monitoring activities led by the Department of Agriculture Regional Field Office have been successfully implemented.

PRISM Highlights in 2017

a. Monitoring

A total of 138 or 99 percent fields monitored out of 140 fields were accomplished. There were 20 fields monitored across each province both wet and dry season. Regional partners gather data using smartphones during field observations and crop health assessment. A total of 20 fields monitored at dough and booting stage for crop health assessment. Monitoring sites include Bantay Ilocos Sur with an average crop cut yield of 6.45 mt/ha, Batac Ilocos Norte with an average yield of 5.89 mt/ha, Bangar La Union and San Manuel Pangasinan.

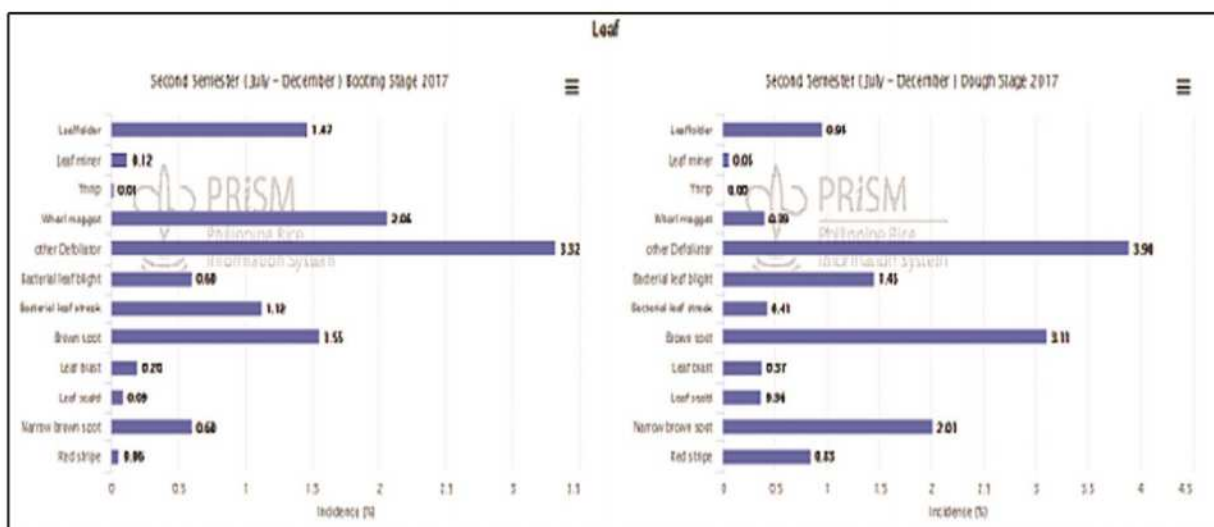


Fig. 15. Incidence of pest occurrence on rice leaf, Second Semester, CY 2017



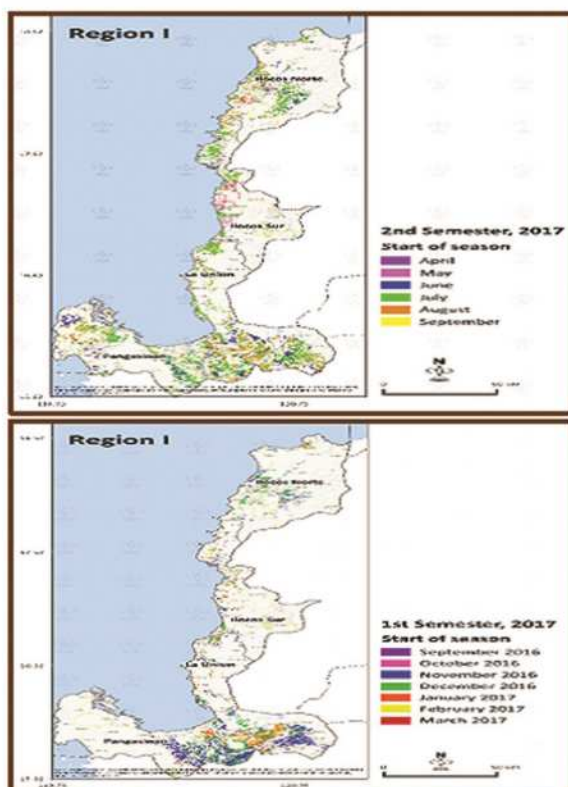
Fig. 16. Incidence of pest injuries on rice panicle

b. Mapping

There were 38 Synthetic Aperture Radar (SAR) images acquired across the region. A total of 112,126 ha of rice area were mapped. It recorded 88% overall accuracy based on 120 validations points.

c. Start of Season (Planting Dates)

Start of season map generated over Region 1, 2017 first and second season. Different colors indicate different planting dates.



d. Yield Estimates

Estimate of rice yields in Region 1, for 2017 is shown below. Among the provinces, Pangasinan attained the highest yield of 5.02 metric tons per hectare in rice. This is followed by Ilocos Sur at 4.98, Ilocos Norte at 4.89 and La Union at 4.67 metric ton per hectare. For the 2nd semester, Ilocos Norte took the lead at 3.79 metric tons per hectare, followed by Ilocos Sur at 3.77 metric tons, Pangasinan at 3.59 metric tons and La Union at 3.35 metric tons per hectare.

Region I - 2017 1st Semester			Region I - 2017 2nd Semester		
Planting dates	Rice area	Yield estimates	Planting dates	Rice area	Yield estimates
		Pest injuries			Pest injuries
		Weeds			Weeds
Province	Estimated yield (t/ha)		Province	Estimated yield (t/ha)	
Ilocos Norte	4.89		Ilocos Norte	3.79	
Ilocos Sur	4.98		Ilocos Sur	3.77	
La Union	4.67		La Union	3.35	
Pangasinan	5.02		Pangasinan	3.59	

Fig. 18. Yield estimates of rice in Ilocos Region.

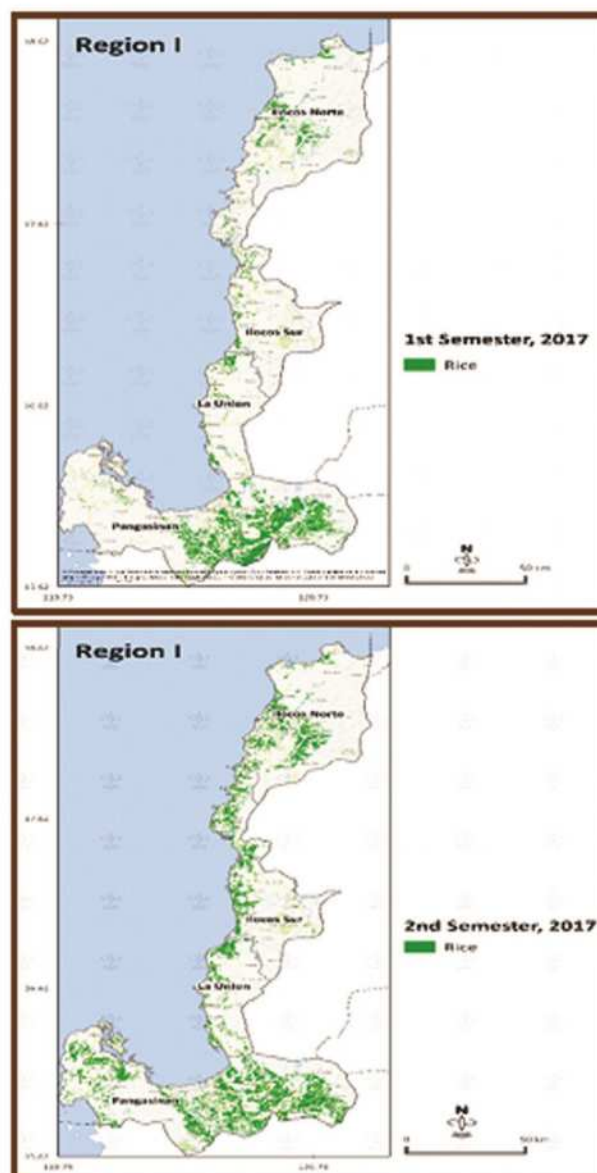


Fig. 17. Synthetic Aperture Radar (SAR) images of rice areas, Ilocos Region

Accelerating the Development and Adoption of Next Generation Rice Varieties for the major Ecosystems in the Philippines (Next-Gen)

To ensure quick delivery of improved genetics in the farmer's field and eventually fast-track rapid adoption of released varieties, two-tier PVS trials are being established in the country through the enhanced partnership with the DA-RFOs and other participating institutions. Results of trials done by DA-RFO Research Division will be given to the Field Operations Division through the Rice Program's Seed Production Coordinator.

A. Participatory Varietal Selection

Researcher-Managed

The study on Participatory Varietal Selection (PVS) aims to identify and select the best rice varieties

taking into considerations the agro-climatic conditions of the locality; promote newly developed and released inbred and hybrid rice varieties that are adoptable in varied agro ecosystem in different locations of Region 1; and map out strategies for dissemination of newly released rice varieties that would join in the mainstream of farming system.

To test the performance and adoption of newly released rice varieties, the PVS was conducted in different agro-ecological zones like irrigated and rainfed, drought and submergence prone areas in the four provinces using inbred and hybrid varieties. Seed kits of 17 new varieties and elite lines from PhilRice were used. During wet season,

Table 14. Top 3 yield performing varieties of rice in different agro-ecological

PROVINCES	IRRIGATED ECOSYSTEM			
	INBRED		HYBRID	
	Variety	Yield (kg/ha)	Variety	Yield (kg/ha)
Pangasinan	NSIC Rc390	3,960.00	NSIC Rc314H	3,810.00
	NSIC Rc222	3,950.00	NSIC Rc410H	3,020.00
	NSIC Rc402	3,790.00	NSIC Rc262H	2,760.00
La Union	NSIC Rc398	5,085.31	NSIC Rc314H	6,518.06
	NSIC Rc402	4,934.87	NSIC Rc262H	6,027.18
	NSIC Rc222	4,549.41	NSIC Rc368H	5,867.03
Ilocos Sur	NSIC Rc396	7,470.70	NSIC Rc262H	7,247.88
	NSIC Rc398	7,261.48	NSIC Rc322H	7,067.67
	NSIC Rc394	7,071.00	NSIC Rc410H	6,846.53
Ilocos Norte	NSIC Rc398	6,391.06	NSIC Rc322H	5,632.31
	NSIC Rc222	5,781.11	NSIC Rc314H	5,615.03
	NSIC Rc400	5,698.30	NSIC Rc262H	5,550.74

PROVINCES	RAINFED/DROUGHT		SUBMERGENCE		SALINE	
	Variety	Yield (kg/ha)	Variety	Yield (kg/ha)	Variety	Yield (kg/ha)
Pangasinan	Not established due to consecutive downpour		NSIC Rc68	3,830.00		
			NSIC Rc222	3,680.00		
			IR10F364	3,500.00		
La Union	NSIC Rc420	6,524.29				
	NSIC Rc418	6,165.62	-	-		
	NSIC Rc424	6,138.85				
Ilocos Sur	NSIC Rc418	5,500.00	NSIC Rc222	6,982.78	NSIC Rc222	4,645.52
	NSIC Rc192	4,820.78	NSIC Rc68	6,428.84	NSIC Rc334	4,592.37
	NSIC Rc27	4,558.71	PSB Rc Sub1	6,292.68	NSIC Rc392	4,428.02
Ilocos Norte	NSIC Rc416	5,582.10				
	NSIC Rc424	5,441.05	-	-		
	NSIC Rc420	5,393.32				

a total of 11 trials were established in Ilocos Norte (5), Ilocos Sur (2), Pangasinan (4) and La Union (2). Table 14 shows the yield performance of rice varieties in different agro-ecological ecosystems. For yield and yield components, the top three (3) high yielding hybrid varieties under irrigated ecosystem in Ilocos Sur were NSIC Rc262H (7247.88kgs/ha), NSIC Rc322H (7076.67kgs/ha) and NSIC Rc410H (6846.53kgs/ha). On the other hand, top three (3) high yielding varieties for inbred rice varieties in Ilocos Norte were NSIC Rc398 (6391.06kgs/ha), NSIC Rc222 or check variety (5781.11kgs/ha) and NSIC Rc400 (5698.30kgs/ha) while top three (3) high yielding varieties for inbred rice varieties in Ilocos Sur were NSIC Rc396 (7340.70kgs/ha), NSIC Rc398 (7261.48kgs/ha) and NSIC Rc394 (7071kgs/ha).

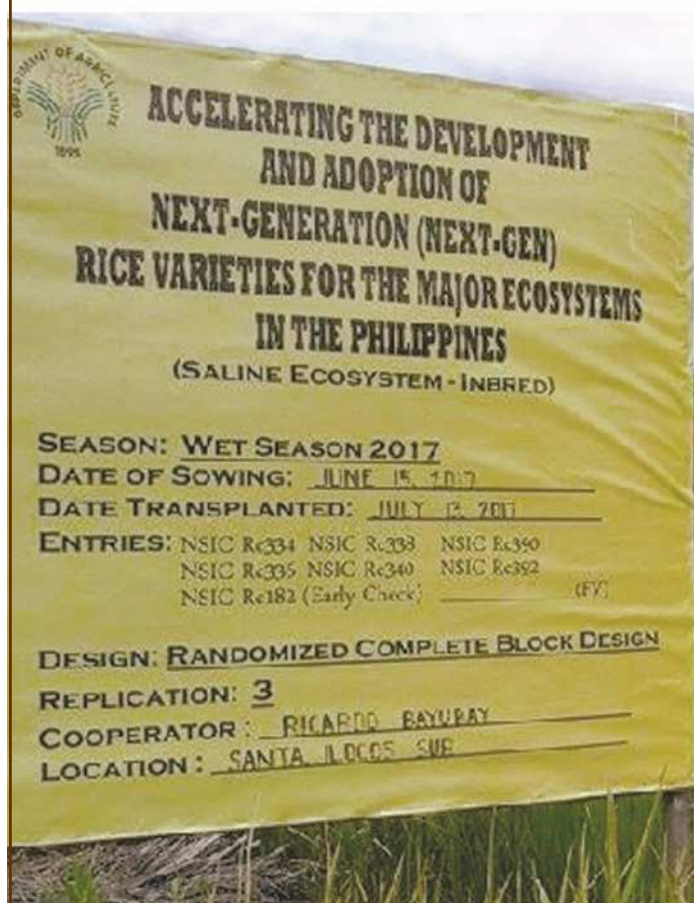
Similarly, under rainfed/drought ecosystem, top performing varieties for inbred rice varieties were NSIC Rc420, NSIC Rc242 and NSIC Rc416 in La Union, Ilocos Sur and Pangasinan, respectively.

Under submergence ecosystem top performing inbred varieties were NSIC RC68 in Pangasinan and NSIC RC 222 in Ilocos Sur.

In La Union, under irrigated ecosystem, promising inbred varieties in Bangar used were NSIC Rc398 (5085.31 kg/ha), followed NSIC Rc402 (4934.87 kg/ha) and local farmer variety with (4549.41kg/ha). However, promising hybrid varieties in Luna were NSIC Rc314H registered 6518.06 kg/ha followed by NSIC Rc262H and NSIC Rc368H (6027.18 kg/ha & 5867.03 kg/ha), respectively. Meanwhile, promising varieties for rainfed/ drought-prone areas in Bacnotan were NSIC Rc420, NSIC Rc418 and NSIC Rc424 with average yield of 6254.29 6165.62 6138.85 kg/ha, respectively.

B. Techno Demo Cum Seed Production

A total of twenty (21) hectares of technology demonstrations were established in Pangasinan (9), Ilocos Sur (6), and Ilocos Norte (6) for inbred rice. The technology demonstrations aimed to introduce and demonstrate the performance of newly released rice varieties for the specific ecosystem in the locality. It also aims to produce and disseminate new inbred rice varieties through quality seed production to have available quality seeds within the province. Seed growers are the beneficiaries of the techno-demo cum seed production. New inbred varieties used include: NSIC Rc390, NSIC Rc308, NSIC Rc212, NSIC Rc352, NSIC Rc358, NSIC Rc360, NSIC Rc390 and NSIC Rc300. Among the varieties, NSIC Rc352 obtained the highest yield with 7.61 metric tons per hectare followed by NSIC Rc308 with 7.46 metric tons per hectare and NSIC Rc360 with 7.30 metric tons per hectare. Lowest yield was registered by NSIC Rc212.



On-station Seed Production

To cater the seed requirement of seed growers and other rice farmers, a total of 6.5 hectares (4.0 has.in Dingras Station and 2.5 hectares in Batac Station) were planted with the Next-Gen varieties like NSIC Rc300, NSIC Rc222, NSIC Rc356, NSIC Rc216, NSIC Rc160 & PSB Rc82 including two(2) Green Super Rice (GSR) lines – 1 and 8. Total seed production for the dry season was 845bags @ 20 kilos/bag registered seeds to be sold to farmers for the wet season. For wet season, total production was 2,086 bags @ 20 kilograms/bag.

On-Station Mushroom Modules

In module 1, a total of 569 mother culture was produced from the stations—520 in Ilocos Norte Research and Experiment Center (INREC) in Batac City, Ilocos Norte and 49 in Pangasinan Research and Experiment Center (PREC) in Sta. Barbara, Pangasinan. Of this, 525 mother cultures are white

oyster, 19 gray oyster, 13 pink oyster and 12 milky mushroom. These were used to produce 10,253 mushroom spawn. Out of the total production of mushroom spawn, 6,550 packs were distributed to the community-based mushroom growers and farmer-mushroom growers in Bacarra, Dingras, Solsona, Paoay, San Nicolas and Batac City, Ilocos Norte and in Sto. Domingo and University of Northern Philippines, Vigan City, Ilocos Sur, and some areas in Pangasinan.

For Module 2, the production of fruiting bags, a total of 10,020 fruiting bags was produced of which 5,454 fruiting bags were distributed to farmer-participants of mushroom production training and walk-in clients from Dingras, Solsona, Sarrat, Batac City, Laoag City, Ilocos Norte and Sto. Domingo, Cabugao, and Vigan City, Ilocos Sur. A total production of 876.2 kilograms mushroom fruits was harvested from 4,174 fruiting bags.



Strategic Research for Mushroom Production

To enhance mushroom production technology, six (6) strategic researches are conducted—2 new, 2 continuing and 2 completed.

The two on-going new researches area as follows: 1) Potential of Spent Mushroom Substrates (SMS) in vermicomposting under Ilocos Region Condition;

2) the Evaluation of different drying methods and value-added products of oyster mushroom where drying of additional mushroom fruits is still ongoing.

Details of two continuing and two completed researches are shown in **Table 15**.

Table 15. Continuing and completed researches for mushroom, Ilocos Region, CY2017

Title of Research Study	Highlights
Continuing	
1. Utilization of Spent Mushroom Substrates (SMS) on High Value Crop Production	The study aims to determine the effect of spent mushroom substrate on the growth of high value crops. Results showed that tomato seedlings grown with 50% SMS were the tallest at 21.2 cm while the shortest seedlings were observed at 12.3 cm from those plant with no SMS. For pepper and eggplant at the seedling stage, tallest plants were observed from those applied with 50% SMS at 17.8 cm and 16.8 cm, respectively. The shortest seedlings were observed from those plant with no SMS at 10.4 cm for pepper and 10 cm for eggplant.
2. Evaluation of Different Method of Prolonging the shelf life of oyster Mushroom Spawns	Mushroom spawn's viability can be maintained when stored in the refrigerator at negative 4°C for almost 94 days for inoculation fruiting bags. It can produce an average of 252.17 grams of mushroom fruit.
Completed	
1. Evaluation Of Different Spawn Media On The Production Of White Oyster Mushroom (Pleurotus Sp.)	The treatments were laid out in Complete Randomized Design (CRD) and replicated three times. The treatments comprised of yellow cracked com, palay grains, and sweet sorghum. The different spawn media affects the mycelial growth of <i>Pleurotus sp.</i> Sorghum has the shortest incubation while rice grain has the longest incubation period. But when planted in the bag, it showed no differences on the weight of fruit harvested. Based on results, all the three grains are suitable for spawn production purpose. However, sweet sorghum is best spawn medium for production of oyster mushrooms. The treatments used were 1 cm, 2 cm, 3cm and 4 cm depth. Results showed that casing layer thickness of 1-3 cm can be used but the ideal depth is at 2 cm. The latter depth will provides sufficient ventilation and necessary substrate for growth.
2. Effect of different thickness of casing on the growth and yield o milky mushroom	



Production-Related Studies on Rice

There were three (3) production-related studies conducted under the Banner Program. These include (1) Assessment of the Performance and Farmers Adoption of New Inbred and Hybrid Varieties in Region 1; (2) Validation of RCM-Based Fertilizer Application in Improving Production and Income from Rice Farming in Region 1; and (3) Evaluation of Growth and Yield Performance of Hybrid Rice under Direct Seeding.



Assessment of the Performance and Farmers Adoption of New Inbred and Hybrid Varieties in Region 1

The study aims to assess the performance (profitability and productivity) and farmer's adoption of the new inbred and hybrid varieties during wet and dry seasons 2017-2018. This was established in 11 sites Pangasinan (Manaoag-6 and Balungao-5) and three (3) sites in Ilocos Norte. The average yield of promising variety for inbred was NSIC Rc358 with 6.3 metric tons/ha while the hybrid variety used was NSIC Rc322H at 5.95 metric tons/ha for the 2 sites and the other site was NSIC Rc314H at 8.2 metric tons/ha.



Validation of RCM-Based Fertilizer Application in Improving Production and Income from Rice Farming in Region 1

This aims to validate RCM-based fertilizer application in improving productivity and income from rice farming in farmer's field in the region. Specifically, it aimed to determine grain yield and marginal rate in farmer's fields under RCM-based fertilizer application.

For wet season, the top yielder for hybrid variety using RCM was NSIC Rc234H at 10.56 metric tons/ha. For inbred variety, NSIC Rc300 registered the highest yielder at 10.17 metric tons/ha. On the other hand, the non-RCM-based for hybrid was RH900 at 10.26 metric tons/ha and NSIC Rc146 for inbred variety posting a yield of 4.98 metric tons/ha.

During dry season, result showed that RCM-based recorded the highest yield of 8.39 metric tons/ha with a MRR of 0.68 over the non-RCM within the same village. RCM was recommended in attaining the optimum application of fertilizer to reduce the production cost of inputs and attained a target optimum yield as the economic profitability

Evaluation of Growth and Yield Performance of Hybrid Rice under Direct Seeding

The project was established in Barangay Cayambanan, Urdaneta City, Pangasinan. The method of establishment was wet direct seeding. Seeding rates established were at 15 kg-1, 20 kg-1, 25 kg-1 and 30 kg-1 using different varieties of hybrid rice namely: Bigante Plus, NK5017, PHB79, SL-8 and TH82. Among the hybrid varieties, PHB79 registered the highest yield at 5.24 metric tons per hectare, followed by Bigante Plus at 4.22 metric tons per hectare and SL8 at 4.16 metric tons per hectare.



The two (2) newly constructed SWIPs in Balungao-Pangasinan—(left photo) the Angayam Sur SWIP with total cost of PhP16 Million serves 48 farmer-beneficiaries covering 80 hectares, and (right photo) the PhP20 Million worth San Aurelio II SWIP with a service area of 120 hectares benefiting 180 farmers.



Irrigation Network Service

In order to increase productivity and cropping intensity in rice, and to cope with the effects of drought in some areas specifically in rainfed and tail-end irrigated areas in the region, the DA through the Rice Banner Program distributed

310 units pump and engine sets generating a service area of 930 hectares. Likewise, two units each of Small Water Impounding Project (SWIP) were constructed generating a total of 200 hectares service area. Also, one SWIP was rehabilitated.

Agri-Fishery Machineries, Equipment and Facilities Support Services

The Farm Mechanization Program helps the farmers maximize land and labor productivity and provide easier and timely production and postharvest operations. Various production and postharvest facilities and equipment were

provided to farmer associations, as follows: 176 units of 4-WD tractor, 238 units of hand tractor, 47 units of combine harvester, nine (9) units of rice thresher, 14 units of seed cleaner combine harvester and 5 units of transplanter.



CORN PROGRAM

TECHNICAL SUPPORT SERVICES

Production Support Services

For CY 2017, the Corn Banner Program distributed a total of 512 bags of Certified Open Pollinated Variety (OPV) glutinous white corn seeds at 18 kg/bag, 2,375 bags of Hybrid yellow corn seeds at 18kg/bag and 950 bags GM Hybrid yellow corn seeds at 9kg/bag.

Likewise, a total of 524,700 cassava seed pieces was distributed covering 53 hectares with 145 cassava grower-beneficiaries region wide.

For the provision of biological control agents, the Banner Program through the RPCC distributed to 8,600,000 pieces of earwigs for 860 hectares benefiting 868 farmers. Moreover, a total of 262,000 tricho cards was produced and distributed to 2,683 corn farmers in the region.

The RPCC also implements the “Bantay Peste” Volunteer Brigade (BPVB) which was conceptualized as village-based pest monitoring and surveillance system undertaken by Farmers Pest Scouts. This pest management extension effort is a continuing activity of the Season-Long Integrated Pest Management (IPM) for the Farmers Pest Scouts to decide on how to manage pest in their own fields using the Agro-ecosystem Analysis (AESA) technique.

Thirty-six (36) Observation Stations were established region wide and are strategically distributed in: Pangasinan-15 OS, La Union-7 OS, Ilocos Sur-7 OS and Ilocos Norte- 6 OS.

As shown in Figure 11, dominant insect pest species observed during the corn cropping season, dry season 2017 were Asian Corn Borer (ACB), Corn Semi-looper (CSL), Armyworm (AW), Corn Earworm/Cutworm (CEW), Corn Planthopper (CPH), and Aphids. Incidence of ACB was only monitored in areas planted with conventional yellow hybrid and OPV white varieties, however, its damage was minimal to affect the yield.



The DA-RFO I through the Regional Crop Protection Center produces tricho-cards which were distributed to corn farmers for use in managing corn pests and diseases.

Average population (adult, larva, nymphs count)was taken at different growth stages among 36 O.S planted with all corn types.

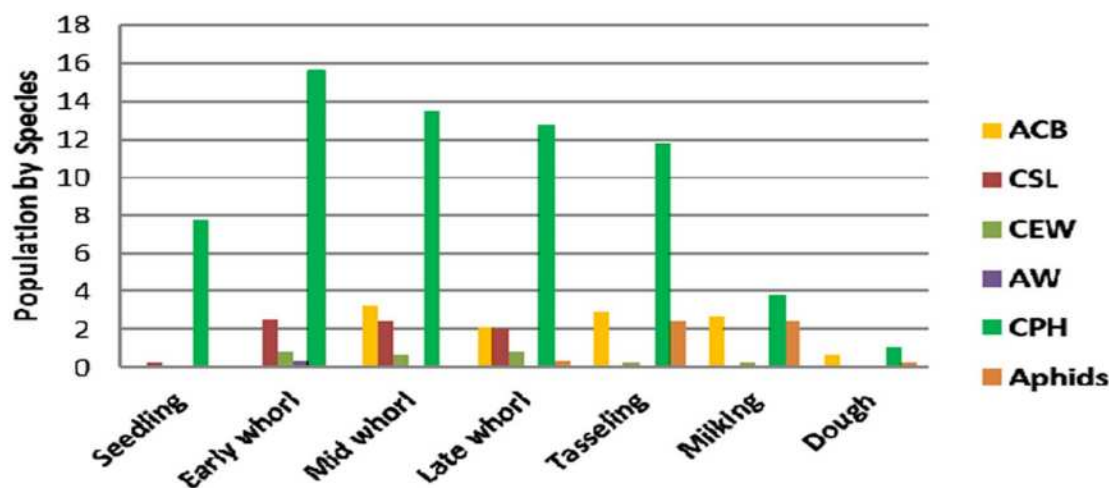


Fig. 19. Dominant insect pest population and its occurrence at different crop growth stages, Region I, CY 2016-2017 Corn Cropping

Source: Corn Banner Program

Market Development Services

In support to the marketing aspect, AMAD assisted a total of 4 farmer organizations in marketing their produce. The groups were as follows: (1) Alcala Onion Growers Association, (2) Caoayan Federated Farmers Association, (3) Centro Toma/Colayo Multi-Purpose Cooperative, Inc., and (4) Sarrat Corn Producers Association. A total of 2,213 metric tons was linked to institutional buyers, of which, 2,200 metric tons is hybrid yellow corn grains and 13 metric tons is OPV white corn seeds with a total value of Php 29,640,000.00

Two batches of training were also conducted by the AMAD on Entrepreneurial Capability Enhancement Training of the Proponents of Corn Postharvest Facilities and Equipment in Region I benefiting 64 participants. This activity aims to enhance the entrepreneurial capability of the recipients of postharvest facilities/equipment and to prepare business and action plans as bases for their day-to-day activity ensuring smooth operation of the project.



AMAD conducts Entrepreneurial Capability Enhancement Training for the Proponents of Corn Postharvest Facilities and Equipment to help them prepare on their business ventures.

Extension Support, Education and Training Services

For the Extension support, Education and Training Services, a total of 620 farmers were trained for six (6) batches of entrepreneurial training conducted region wide. This training is focused on the utilization of corn as major raw material in feeds and corn by products which are processed into silage/feedstuff. After the conduct of the said training, 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, thereby adding value to the corn grains to increase their income.

For the Cassava Livelihood Training, six (6) batches were conducted region wide. In this training, groups of rural women were trained on the utilization of cassava (fresh and flour) into different food products. This training aims to create a livelihood to these groups trained, thus, after the training, a set of baking kitchen and baking utensils, cassava grater with presser, vacuum pack

sealer and cassava pulverizer are awarded to them as grant.

On the other hand, for the cassava production technology training, six (6) batches were conducted region wide. This training is designed for the promotion of cassava production, cultural management practices and cassava pests and diseases and its management are the main topics discussed during the conduct of this training. After the training, the participants are given cassava seeds pieces of different varieties: Lakan II, Rayong 5 and Golden Yellow which are produced in the DA provincial stations.

Ten batches of Farmer Field School on Corn Production were also launched for the main cropping season for corn region wide. A training for OPV white corn seed growers and seed inspectors were also conducted thru the Bureau of Plant Industry- NSQCS 1.



The Corn Banner Program through the Institutional Development Section trains rural women on the utilization of cassava by-products to provide them with livelihood opportunities.

Research and Development

Verification of nutrient expert-based fertilizer recommendation for hybrid corn through on-farm participatory evaluation in Ilocos Norte

The Site-Specific Nutrient Management (SSNM) provides an approach for 'feeding' crops with nutrients as and when needed. This project was initiated to increase the productivity and profitability of maize farming through improved crop and nutrient management. Initial results from a series of researcher-managed on-farm and on-station experiments revealed that with good crop management, site-specific nutrient management (SSNM) significantly increased yield by an average of 2 metric tons per hectare compared with the farmers' fertilizer practice (FFP). It follows protocol of SSNM for Hybrid Yellow Maize.

The objectives of the study is to compare grain yield and profit attained by farmers with SSNM versus their current practice; validate and fine-tune Nutrient Expert software-based recommendations with farmers and to get farmers' feedback on the acceptability and

profitability of the new practice. This was conducted in 25 sites in Ilocos Norte, specifically three sites in Laoag City, and 5 sites each in Baccara, Badoc, Dingras and Vintar.

In the first season of the verification trial, results showed that the average attainable yield was 9.1 t/ha for Nutrient expert plot and 8.7 t/ha for farmer's fertilizer plot with the yield difference of 0.4 t/ha.

In Ilocos Norte, the most limiting nutrient is Nitrogen while Phosphorus and Potassium are still sufficient based on the result of soil analysis and further confirmed by the indigenous nutrient supply and yield responses to fertilizer N, P, and K during the conduct of the on-farm trial. All SSNM fertilizer recommendation rates for Hybrid corn have attained/surpassed the target yield. A Quick Guide will be developed to provide farmers with location-specific fertilizer recommendation based on the principles of SSNM.



Ensuring the effectiveness of the Site-Specific Nutrient Management (SSNM) approach in managing corn, the Corn Banner Program conducted on-farm and on-station experiments in tandem with the Research Group.

Irrigation Network Services

The Program has already distributed a total of 206 units shallow tube wells (STWs) -116 units diesel-fed and 90 units electric water pump, with a service area of 618 hectares benefiting 157 farmer groups or associations region wide.



Agri-Fishery Machineries, Equipment and Facilities Support Services

The Corn Program distributed 34 units (ranging from 36 Hp, 45 Hp and 90 Hp) and 3 units of 4-WD tractor (90 Hp) with implements for corn and cassava areas, respectively. Likewise, two (2) units of pneumatic four-row corn planter, two (2) units of cassava digger and two (2) units combine harvester with corn kit were distributed.

For the postharvest equipment, six (6) units hammer mill, two (2) units mobile dryer, two (2) units moisture meter, ten (10) units of mechanical corn sheller and six (6) units each of vacuum pack sealer, cassava grate with presser and cassava pulverizer were distributed.

HIGH VALUE CROPS PROGRAM

TECHNICAL SUPPORT SERVICES

Production Support Services

The High Value Crops Development Program (HVCDP) provides quality seeds and planting materials including inputs to growers to increase vegetable and fruit production and productivity.

As shown in **Table 16**, a total of 572 individuals and 424 groups were benefited of various production support services this year. There were 1,269 kilograms of various vegetable seeds, such as eggplant, tomato, upo, squash, ampalaya, pole sitao, watermelon, cucumber, patola, pechay, okra, kangkong, papaya, and sweet pepper were procured and distributed in the region.

For bulb crops, a total of 60,000 kilograms of garlic bulb and 349 kilograms of Red Onion were procured and distributed benefiting 33 farmer groups. Likewise, there were 46,000 kilograms of mungbean, and 37,33 kilograms of peanut were procured and distributed with 32 farmer group-beneficiaries.

In support to the mango industry, a total of 2,800 bags of flower inducers - 1,200 bags Calcium Nitrate and 1,600 bags of Potassium Nitrate were provided to 25 mango growers associations in the region. Moreover, 3,130 bags of Muriate of Potash (0-0-60) and 1,303 packs of foliar fertilizers were provided to mango growers. Also, 3,550 pieces of plastic crates were provided to them.



The HVCD Program gives foliar fertilizer, garlic bulb and cacao seedlings to high value crops farmers.



Table 16. Seeds, planting materials and inputs distributed under the HVCDP, Ilocos Region, CY 2017

Interventions	Unit	Quantity	Coverage Area (Ha)	No. of beneficiaries	
				Individuals	Groups
Seeds					
Lowland vegetables	kg	1,269	423	572	401
Mungbean	kg	46,000	1,840		18
Peanut	kg	37,333	267		14
Garlic	kg	60,000	150		23
Red Onion	kg	349	52		10
Planting Materials					
Cacao	pc	51,899	103		8
Inputs					
Flower inducer	bags	2,800			25
Muriate of Potash	bags	3,130			
Foliar Fertilizer	packs	1,303			
Plastic crates	pc	3550			5
Total			2,835	572	474

Market Development Services



Ms. Wilhelmina Castañeda, Chief of Agribusiness and Marketing Assistance Division (AMAD), giving lecture on agribusiness and entrepreneurial ventures for high value crops farmers in all provinces in the region.

Conducted four (4) batches of On-Site Capability Building for Entrepreneurial Skills Training for Recipients (FAs) of High Value Crops Development (HVCD) Interventions on April 19-21, 2017 at the SB Session Hall, Alcala, Pangasinan, April 26-28, 2017 at Batac City, Ilocos Norte April 26-28, 2017, Gregoria, May 31-June 2, 2017 at Rivera Memorial Library and Museum Vigan City, Ilocos Sur and on June 7-9, 2017 at the DA-RFO1 Conference Room, Sevilla, San Fernando City, La Union.

These trainings are 3- day live out training on and are attended/participated in by almost 200 participants from different HVCDP farmers' associations in Region 1. Said training aims to transform the mindset and attitude of these farmers association (FAs) towards traditional farming activity as successful agribusiness venture.

Extension Support, Education and Training Services

Conducted the 1st Batch of Training on Basic Coffee Production Technology cum Good Agricultural Practices at San Nicolas, Pangasinan on May 24, 2017. The activity was attended by the target beneficiaries of coffee seedlings for CY 2017. The training is a requirement for the target beneficiaries of seedlings prior to distribution as per directive of the National HVCDP Program Directorate. Farmer-beneficiaries were equipped on coffee production technologies and Good Agricultural Practices (GAP).

The Program conducted also the 2017 Regional Mango Symposium held on June 30, 2017 in Brgy. Duntal, Laoag City, Ilocos Norte. The activity aims to discuss the current scenario and strategies/solutions to the problems/constraints besetting the development of the mango industry in the region. The mango symposium benefited a total

of 200 stakeholders such as mango growers and contractors, Local Government Units (LGUs) and private entities. On the other hand, 12 technology demonstration sites were established in lowland vegetable off-season production in the region. This aimed to showcase the production of different vegetables during rainy season. The use of hybrid vegetables, plastic mulch, carbonized rice hull and organic fertilizers were showcased in the techno demo.

Meanwhile, the Regional Agriculture and Fisheries Information Section (RAFIS) prepared, and distributed IEC materials in local (Ilokano) dialect to farmers and LHUs thru the PAOs. A total of 20,000 copies of coffee, peanut, mungbean and cacao production technologies were distributed.

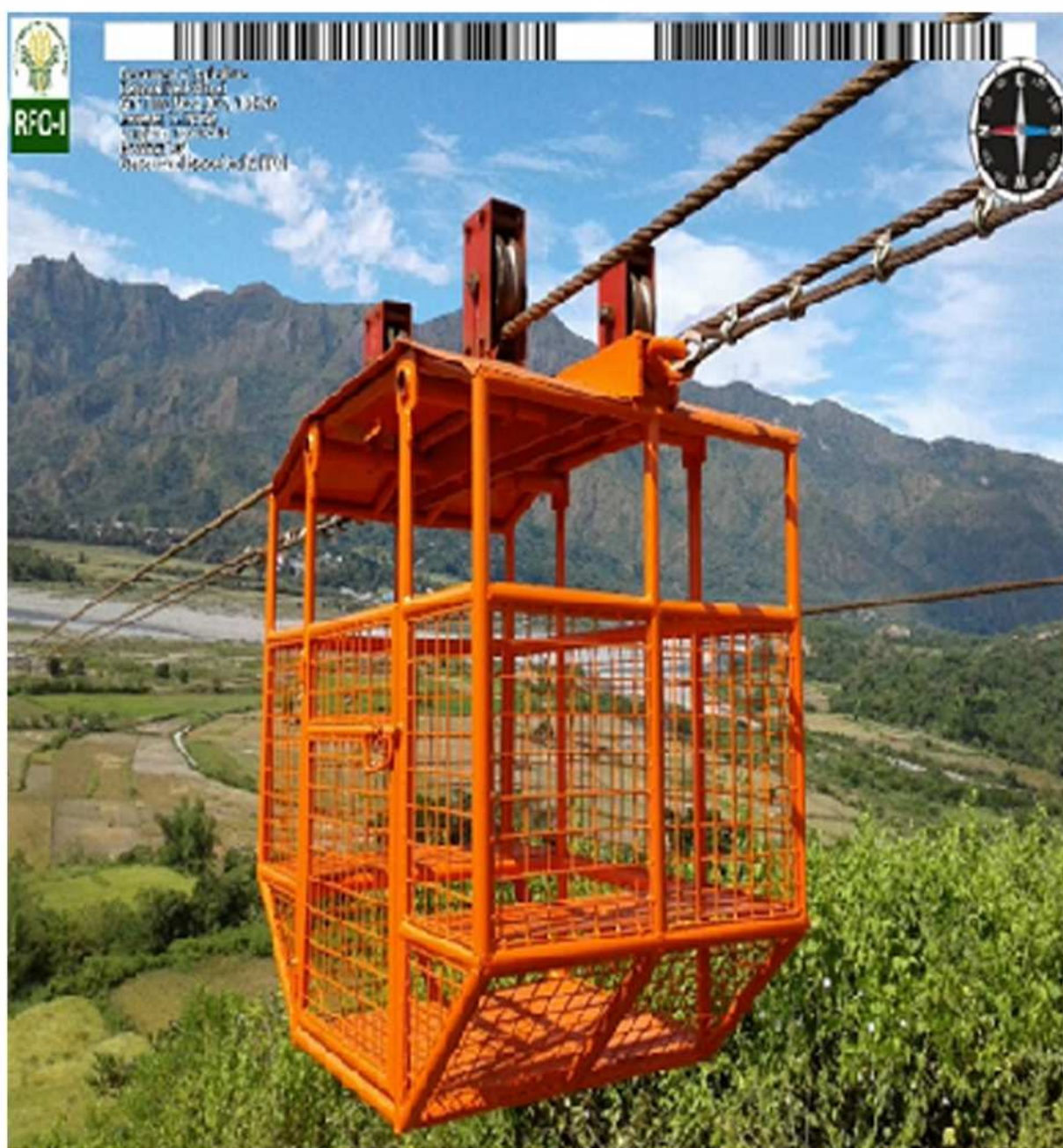


Irrigation Network Services

The HVCDP provides quality seeds and planting materials In order to increase productivity in vegetables and other high value crops, nine (9) units of pump and engine sets and 900 water drums were distributed benefiting 89 farmers.

Agri-Fishery Machineries, Equipment and Facilities Support Services

The Farm Mechanization Program of the Rice Banner helps the farmers maximize land and labor productivity and provide easier and timely production and postharvest operations. Various production and postharvest facilities and equipment were provided to farmer associations, as follows: 176 units of 4-WD tractor, 238 units of hand tractor, 47 units of combine harvester, nine (9) units of rice thresher, 14 units of seed cleaner combine harvester and five (5) units of transplanter.



LIVESTOCK PROGRAM

TECHNICAL SUPPORT SERVICES

Production Support Services

Distribution of animal stocks, forage seeds and planting materials

For this year, the Livestock Banner Program distributed a total of 263 heads of sheep and goat, 53 heads of cattle, 264 heads of native swine, 4,515 heads of duck, 778 heads of free range chicken, and 10 bee colonies to 388 individuals and 27 group beneficiaries.

On the other hand, a total of 104,753 forage cuttings and seedlings were distributed to 255 and 17 individuals and group beneficiaries, respectively. Moreover, a total of 154 kilograms of forage seeds were distributed to 49 individual livestock raisers and 27 group-beneficiaries.

These interventions were distributed in support to the establishment of Local Government Unit multiplier farms, Genetic Improvement Program, establishment/maintenance of technology demonstration projects, strengthening of rural-based organizations and the conduct of Farmer Livestock School on Goat Enterprise Management.



As a graduate of the FLS-GEM, farmers get animal stock like goat for them to apply their acquired skills and knowledge in goat production.

Aside from goats, DA through the Livestock Program also distributed cattle to deserving beneficiaries



Genetic Improvement Program

In support to the Genetic Improvement Program, which primarily aims to improve the production and reproduction of the local herd through the introduction of superior quality genetics, a total of 11,458 semen straws of cattle, goat and swine were distributed and benefited the 8,158 individual beneficiaries in the region. The insemination of these semen straws were rendered by trained and accredited Village-based Artificial Insemination Technicians (VBAITs) in their respective municipalities and area of coverage.

Philippine Native Animal Development Program (PNAD)

Under this Program, a total of 22 and 32 heads of native swine were distributed to the farmers associations of Sta. Lucia, Ilocos Sur and Nueva Era, Ilocos Norte, respectively. This program aims to purify and conserve the phenotypic characteristic of Ilocos breed native pig such as white snout, white spot at the tip of tail, white socks, and white belly.

Animal Health Program

Under the Animal Health Program, a total of 176,558 doses of drugs, biologics and vaccines were distributed to different municipalities in the region benefiting four Provincial Veterinary Offices in the region. The program aims to eradicate and control diseases such as Foot and Mouth Disease, Hog Cholera, New Castle Disease, Hog Cholera, Blackleg, Hemorrhagic Septicemia, and internal and external parasites.

Relative to the Bird Flu outbreak in San Luis, Pampanga last August 2017, the region conducted series of consultations, meetings, and information campaigns to public and private stakeholders. Rigid surveillance and monitoring were implemented in the entire region to prevent the entrance of the said disease. Provision of Personal Protective Equipment (PPE) and other supplies were provided to quarantine personnel thru the Provincial Veterinary Offices. To date, Region 1 is still Avian Influenza free region.



Dr. Joey Warren Bragado, Provincial Veterinarian of Ilocos Sur receives from DA some drugs and biologics in support to the province's Animal Health Program.



Information and dissemination campaigns, meetings and consultations with the public and private stakeholders were conducted to strengthen the advocacy relative to bird flu.

Laboratory Services

The Program, through the Regional Animal Disease Diagnostic Laboratory (RADDL), conducted a total of 2,258 confirmatory tests for rabies examination, parasitology (fecalysis, blood parasite exam), and serological test for Brucellosis, Caprine Arthritis Encephalitis Test and Hog Cholera, serving a total of 387 individual clienteles.

Likewise, the Regional Feed Testing and Laboratory analyzed a total of 1,149 feed samples for proximate analysis with 175 clienteles served.

These tests help and guide the stakeholders to prevent, control and eradicate occurrence of animal diseases and ensure the quality and safety of feeds available in the market .



EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

For this year, 17 batches of season-long training on Farmer Livestock School on Goat Enterprise Management (FLS-GEM) were conducted with 502 farmer-graduates. FLS-GEM focused mainly on the production of goats as enterprise project of farmers. After the training, each batch were provided with one (1) head buck and two (2) heads doe as start-up stocks for upgrading the goat animals.

Likewise, a Trainers Training on FLS-GEM was conducted benefiting 16 Livestock Technicians of selected municipalities. They are tasked to

facilitate the conduct FLS-GEM training on their respective areas.

Moreover, 16 batches of production and post-production training were conducted capacitating 31 LGU technicians and personnel, farmers, farmer groups and cooperatives. The training covers livestock and poultry production, and post production and management such as Animal Production and Management Practices , 5-day Basic Beekeeping Training, Training on Goat Slaughtering, Cutting and Processing, and Training on Meat Processing.



DA in partnership with the APDC conducts a weeklong training on Goat Slaughtering, cutting and meat processing participated in by the selected goat raisers in the region.

On the other hand, 14 technology demonstrations or livestock model farms were established and maintained to showcase different technologies on livestock which are economical, effective and practical in a given agro-economic setting. Breeder stocks of goat and native swine were provided to the recipients of model farms/technology demonstration areas.

Of this, 11 and 3 technology demonstrations were established for goat and native swine production, respectively. There were six goat production techno demo sites established in Pangasinan, two each in Ilocos Sur and Ilocos Norte, and one in La Union. Two techno demo sites were established in Ilocos Norte and one in one farm in Ilocos Sur.



Native swine are provided to interested livestock raisers to showcase the various technologies in swine production.



Beekeeping is also a lucrative business to venture on. The Livestock program provides assistance to interested clients by giving bee colonies to them.

RESEARCH & DEVELOPMENT

***Growth Performance of Cattle fed with Ensiled Corn Stover***

A research entitled “Growth Performance of cattle fed with ensiled corn stover” has been conducted in INREC Dingras to evaluate the effect of feeding silage corn stover to cattle, and to assess the profitability of silage on cattle.

This study revealed that ensiled corn stover can be an alternative feedstuff for the cattle raisers. Since corn is one of our major commodity here in the region and corn stover is often wasted, ensiling can be done to utilize it. This technology can be disseminated to the farmers to help them improve their feeding management during the dry season where grasses are not much abundant.

Performance of Upgraded Goats Fed with Silage plus Effective Microorganism

The study was conducted at DA-ILIARC Sapilang, Bacnotan, La Union from October to December 2017. The study aimed to evaluate the growth performance of upgraded goats supplemented with silage plus formulated IMO. A total of eighteen (18) heads of upgraded goats of 4-6 months old was used in the study.

The goats were randomly distributed into 3 treatments groups following the Randomized Complete Block Design, replicated three (3) times with 2 heads goat per replicate. The treatments used are: T1 –Fresh Forage; T2-20% Silage + IMO; T3- 30% Silage + IMO. There was no significant difference in terms of Average Daily Gain (ADG) and Total Gain in Weight (TGW), Feed Consumption, and Feed Conversion Efficiency (FCE). However, goats in T2 (20% Silage + IMO) obtained higher TGW, ADG and better FCR. In addition, T2 also obtained the least cost to produce a kilo of meat.

Enhancing Innovative Family Enterprise Development (IFED) Project

The project is located at Mangaldan, Labrador, and Sta. Barbara Pangasinan; Bacnotan, San Juan, La Union; and Sta. Catalina, Ilocos Sur. The goal of the project is to provide innovative production and feeding management systems as an avenue for business opportunities to rural farm households by transforming native or improved free range chicken raised from a subsistence type of farm activity to viable poultry-based family enterprise.

Project activities conducted include characterization of project sites, farm households and farmer-partners through Focused Group Discussion (FGD), capability building activities such as technology training, technology exchange program and farmer's seminar on entrepreneurial skills.

There were 30 selected cooperators from each of the project site and each cooperator was awarded with 20 heads ready to lay pullets and 2 roosters. Production technologies which were practiced by the cooperators are improved housing, feeds and feeding using formulated/mixed concentrate plus forages, and use of concoctions to boost production and immune system of the chickens. The project also awarded incubators to the cooperators to facilitate repayment and expansion of the project to other barangays.

Formation of chicken raisers association that was registered to the Security Exchange Commission was accomplished that shall manage the pricing of products, arrangement with prospective buyers and promotion of the products. As of today, there are 33 spill over adopters in the 3 project sites in La Union. Monitoring and data gathering in the project sites is on-going.



AGRI-FISHERY MACHINERIES, EQUIPMENT AND FACILITIES SUPPORT SERVICES

The Program established ten (10) multiplier farms for the Local Government Units in the following municipalities:

1. Natividad Pangasinan
2. Umingan Pangasinan
3. Bani, Pangasinan
4. Pugo, La Union
5. Sta. Catalina, Ilocos Sur
6. Lidlidda, Ilocos Sur
7. Bacarra, Ilocos Norte
8. Sollsona, Ilocos Norte
9. Dingras, Ilocos Norte
10. Pinili, Ilocos Norte

The project will serve as alternative economic agricultural activity of the LGUs through provision of quality of animal and bee stocks for distribution to farmers in the locality. Components of the project include provision of goat (10-head module),

native chicken (50-hen module), native pig (10-sow module) and honeybees (10 colonies).

Aside from these stocks, the DA RFO I establishes housing units for goat, swine and pig inclusive of forage planting materials were provided including the construction of fence to secure the animals and the pasture area. Likewise, drugs and biologics, 300-egg capacity incubator with candler, and other tools and equipment such as feeding and water troughs, plastic drum, water storage tank, digging spade, spade fork, wheel barrow, forage shredder and weighing scale were provided to proponents. A trainer's training was conducted for LGU technicians, progressive farmers and farm personnel.

Meanwhile, 20 existing multiplier farms were upgraded through provision of feeds and the abovementioned tools and equipment.



ORGANIC AGRICULTURE PROGRAM

TECHNICAL SUPPORT SERVICES

Production Support Services

In support to organic livestock production, 20,000 liters of molasses were distributed with 1,500 individual beneficiaries. Molasses is a dark brown, viscous liquid produced as a co-product of the production of sugar. This is suitable for inclusion in the diets of all ruminant livestock and can offer a very cost effective way to increase the palatability of feeds whilst contributing good levels of energy and protein.

On the other hand, the Program maintained two (2) production facilities for organic crops and livestock located at Ilocos Norte Research and Experiment Center (INREC), Dingras, Ilocos Norte, and Pangasinan Research Experiment Center (PREC) in Sual and Sta. Barbara, Pangasinan.

In INREC Batac City, crops produced are Red/Black Rice, OPV glutinous corn, mungbean and pinakbet vegetables. Out of the total seed produced, 1,482 kilograms of assorted seeds were distributed benefiting 85 farmers in Ilocos Norte and Ilocos Sur, as shown in **Table 17**.

Table 17. Organic Crop Production, INREC, Batac City, Ilocos Norte, CY 2017

Particulars/Indicator	Accomplishment
Seed production (kg)	2,542
Red/Black Rice	1,645
OPV glutinous corn	729
Mungbean	156
Pinakbet	12.1
(to ma to, eggplant, pepper, okra)	
Seeds distributed (kg)	1,482
Red/Black Rice	1,401
OPV glutinous corn	77
Pinakbet	4.3
(to ma to, eggplant, pepper, okra)	
Beneficiaries (no)	85



As shown in **Table 18**, the station is also producing goat maintain 21 goat breeders and 18 offspring. A total of 20,701 kg of vermicompost and 3,285 kg of vermicast were produced.

Likewise, the station in Sual, Pangasinan maintained a total of 130 breeders were maintained—57 heads of Parawakan and 30 heads of Native chicken, 30 heads of Muscovy ducks and 13 heads of native pigs. A total of 914 offspring were distributed to 113 farmer-beneficiaries as shown in **Table 19**.

There were a total of 344.2 kilograms of assorted organic vegetables were produced for distribution to farmers.



Table 18. Organic Goat and Vermicompost/ Vermicast Production, INREC, Batac City, Ilocos Norte, CY 2017

Particulars/Indicator	Accomplishment
Goat production (heads)	39
Breeders	21
Offspring	18
Vermicompost/vermicast production (kg)	
Vermicast	3,285
Vermicompost	20,701
Distributed	8
Beneficiaries (no)	7

Table 19. Organic Crop and Livestock Production, PREC, Sual, Pangasinan CY 2017

Particulars/Indicator	Accomplishment
Parawakan chicken production (heads)	
Breeders	57
Distributed pullets	402
Beneficiaries (no)	43
Native chicken production (heads)	
Breeders	30
Distributed pullets	199
Beneficiaries (no)	25
Muscovy ducks production (heads)	
Breeders	30
Distributed ducklings	259
Beneficiaries (no)	23
Native pigs production (heads)	
Breeders	13
Distributed piglets	54
Beneficiaries (no)	22
Total	
Breeders (heads)	130
Offspring distributed (heads)	914
Beneficiaries (no)	113
Organic Vegetables production (kg)	
Tomato	85.6
Eggplant	83.2
Hot Pepper	85.5
Okra	89.9
Total	344.2

Market Development Service

The Program, through the AMAD, organized and facilitated the Slow Food Exhibit and Trade Fair component of the Regional Organic Agriculture Congress in Ilocos Region held at Sison Auditorium, Lingayen, Pangasinan on September 19-22, 2017.

The trade fair highlighted two activities, namely: retailing of organic and naturally grown products and the exhibit of Slow Food products. The Slow Food aim to defend regional traditions, good food, gastronomic pleasure and slow pace of life. The three tenets of Slow Food's philosophy are:

GOOD – a fresh and flavoursome seasonal diet that satisfies the senses and is part of our local culture;

CLEAN – food production and consumption that does not harm the environment, animal welfare or our health; and

FAIR – accessible prices for consumers and fair conditions.

A total of 17 organic farmers and practitioners participated the and they exhibited their own organic and naturally grown agricultural products. A total Php101, 622.00 was accumulated as cash sales during the event. The congress was participated by 202 participants composing of different stakeholders in the Organic Agriculture sub-sector.

Mr. Jeffrey Garido of the Bureau of Agriculture & Fisheries Standards, representative of National Organic Agriculture Board (NOAB) Chairman and Undersecretary for Marketing Service Bernadette Romulo-Puyat, conveyed the message of the latter expressing her continued support in the implementation of priority interventions through the provision of additional funds for the certification process for organic farms. USEC Puyat also vowed to strengthen the production support services, provision of post harvest facilities and equipment, irrigation and other interventions provided by the DA to develop further the organic agriculture in the country.

In addition to these plans and programs, the NOAB will continue to pour investments on Research and Development component of the Program as a vital strategy to improve the technologies on organic farming. Likewise, the extension-related services shall be intensified through the conduct of technology demonstrations, capability trainings, establishment of technology centers to improve the extension strategies of the program.

Meanwhile, the region was able to convert 19% of its total regional agricultural areas and noted the efficiency of the program since it had surpassed its target as to how the organic areas were converted assuming that P50,000 was used to develop every hectare of the farm.



For the stall subsidy, four (4) stalls were rented for the display and selling of organic products of the Association of La Union Organic Farmer Producers, Inc. (ALUOFI) and the Association of Advocates and Practitioners of Pangasinan in Organic Agriculture (AsAPP-OA) in CSI San Fernando City, La Union and CSI Dagupan City, Pangasinan, respectively.

EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES

The Program conducted 27 consultation activities with various stakeholders including meetings in preparation to the Regional Organic Agriculture Congress and 5 seminars/meetings cum creation/installation of Internal Control System (ICS) for smallholder groups. Likewise, 11 technical briefings cum hands-on training on organic agriculture technologies were conducted at the established organic demonstration and training farms. All these extension-related activities benefited a total of 1,600 participants. Further, a total of 1,664 copies of IEC materials were distributed such as Likas Saka Manwal and Recommended Organic Vegetable Production Practices.

The Ilocos Region OA group, composed of 62 stakeholders, participated in the 14th National

Organic Agriculture Congress (NOAC) held at Atrium, Limketkai Center, Cagayan De Oro City last October 24-25, 2017 with the theme: Organic Agriculture: A.S.M.A.R.T. Culture (Science-based, Market-Oriented, Adaptive, Responsive, Transformative). The event aims to give updates and useful knowledge on organic food production as well as business opportunities among farmer-producers, processors and other stakeholders in the organic agriculture industry.

During the event, Dr. Marvin G. Quilates, OAP Focal Person, was given a Certificate of Recognition for his tireless implementation of RA 10068: Organic Agriculture Act as Regional Organic Agriculture Focal Person during the National Organic Agriculture Congress.



Dr. Marvin G. Quilates, OAP Focal Person, was given a Certificate of Recognition for his tireless implementation of RA 10068: Organic Agriculture Act as Regional Organic Agriculture Focal Person during the National Organic Agriculture Congress held at Atrium, Limketkai Center, Cagayan De Oro City last October 24-25, 2017.

AGRI-FISHERY MACHINERIES, EQUIPMENT AND FACILITIES SUPPORT SERVICES



Table 20. List of distributed agri-machineries and equipment and beneficiaries, OAP, Region I, CY 2017

Distributed machinery/ equipment	Quantity	Beneficiaries
Vacuum Sealer		
	1	San Fabian Organic Agriculture and Fisherfolk Association Inc.
	1	Association of Organic Farmers Practitioners of Sudipen
	1	Sunshine City Organic Farmers Association of Laoag City
	1	Rural Improvement Club (RIC) of Sugpon
Cacao Fermentation Box		
	1	Mangaldan Cacao Growers Association, Inc.
	1	Cacao Growers and Marketing Cooperative of Pozorubio
	1	Don Mariano Marcos Memorial State University
	1	Inabaan Norte Multipurpose Cooperative of Rosario
	4	LGU-Adams, Ilocos Norte
Hand Tractor		
	1	LGU-Mangaldan, Pangasinan
	1	Sta. Luda, Urdaneta City Farmers Association
	1	Ilocos Sur Provincial Organic Producers Association, Inc.
	1	Timpuog Dagiti Mannalon ti Casilagan Inc. of Naguilian
Egg Incubator		
	1	Marcos Organic Crop and Livestock Producers Association Inc.
	1	Organiko nga Mannalon ti San Nicolas, Ilocos Norte Inc.
	1	Ilocos Sur Provincial Organic Producers Association Inc.

As shown in **Table 20**, a total of 16 groups were benefited with various agricultural machineries and equipment under the Organic Agriculture Program. There were five (5) units of hand tractor, three (3) units of egg incubator, eight (8) units of cacao fermentation box and four (4) units of vacuum sealer distributed during the year.

The beneficiaries were Local Government Units, State Universities and Colleges, various commodity farmers groups, organic farmer associations, farmer cooperatives and Rural Improvement Club (RIC).

VARIOUS ACTIVITIES

TECHNICAL SUPPORT SERVICES

Production Support Services

Under Various Activities, a total of 12,960 planting materials were distributed benefiting 397 farmers and livestock raisers. Of this, 10,075 forage cuttings/rootstocks and seedlings were distributed benefiting CPAR project cooperators on goat, IFED project on free-range chicken (trichantera seedlings) and interested individual farmer/raisers. Forages such as renzonii, trichantera, indigofera, desmanthus were produced in INREC, Dingras Ilocos Norte, PREC, Sual and Sual, Pangasinan, and in Ilocos Integrated Agricultural Research Center (ILIARC), Bacnotan, La Union.

Likewise, 1,885 pieces of fruit tree seedlings were distributed to farmers. These seedlings, which were produced at the stations, include atis, avocado, chico, citrus, guava, guyabano, coffee, jackfruit, rambutan and others.

In addition, a total of 123 hills of dragon fruit was maintained in INREC, Batac City, Ilocos Norte as technology demonstration showcasing the dragon fruit production. A total of 397 kilograms of fruits were harvested during the fruiting season.

Market Development Service

The Agribusiness and Marketing Assistance Division (AMAD) conducted various agribusiness and market development interventions.

For 2017, a total of 21 marketing agreements were consummated with 2,417 metric tons of various commodities sold valued at Php8.70 Million. Likewise, a total of Php14.6 Million was generated as sales from various market-related events such as trade fairs and 723 individuals and 152 groups were benefited from various market-related activities.

On the other hand, the AMAD conducted two (2) batches of Seminar on Export Procedures and Protocols conducted participated by 30 top producers of mango, onion, garlic, and dragon fruit from Ilocos Norte and Pangasinan. The seminar aimed to create an export consciousness of the producers by understanding the incentives, opportunities and requirements in entering into export market. Topics discussed were the Philippine Export Performance, Global Trends and Updates, Free Trade Agreements, General Procedures in Establishing New Export



Business, Export Procedures and Requirements, and Export Certification Procedure & Phytosanitary Certification System.

The AMAD also conducted three (3) batches of Kapatid Agri-Mentor Me Program (KAMMP) in Region I with a total of 295 participants composed of agri-based enterprises, farmer groups/associations, LGUs and mentees of the program. The event covered lecture- presentation on entrepreneurial mind setting and marketing with one-on-one mentoring and coaching from a successful entrepreneur from the group of Philippine Center for Entrepreneurship (PCE) - Go Negosyo, Mr Enrique Rey Villaroman. This activity covered eight (8) modules: Module 1 - Entrepreneurial Mind Setting & Values Formation; Module 2 - Marketing; Module 3 - Basic Accounting; Module 4 - Farm Operations & Management; Module 5 - Agri Supply & Value Chain; Module 6 - Financial Management; Module 7 - Basic Contracts & Obligations, and Module 8 - Simple Business Plan Preparation. The project was a tripartite activity of the DA, Agricultural Training Institute (ATI) and the PCE Go Negosyo which aimed to help micro, small and medium farmer-entrepreneurs to scale up their farm businesses thru coaching and mentoring by proven business owners and practitioners on different functional areas of entrepreneurship.

The Division also conducted a Seminar on Implementing Product Standards for the Production of Safe and Quality Chevron Cum Awarding of Starterkit for Chevron Stall Retailing on December 12-13, 2017 at ATI, Tebag, Sta. Barbara, Pangasinan. The activity aims to orient all targeted recipients for the distribution of chevon retailing equipments for proper handling of chevon in compliance to Food Safety Standards. This was participated by the members/officers of selected goat raisers associations in the region, namely: Calasiao Goat Raisers Association, Dasol Livestock Raisers Association, La Union Goat Raisers Assoc., Inc.-Rosario Chapter, San Esteban Goat Raisers Assoc.,

Magsingal Livestock Association, Brgy. 20 San Pablo Farmers Association of San Nicolas Ilocos Norte, Oaig Daya Goat Raisers Assoc., Inc. of Candon City, Ilocos Sur, and Sta. Cruz Ilocos Sur Farmers' Goat Raisers Assoc. Inc. in Sta. Cruz, Ilocos Sur. The participants also undergone training on goat slaughtering, chevon meat cutting and processing at BAI-APDC Marulas Valenzuela City. After the training, chevon retailing equipment, such butcher knife, sharpening steel, chopping board, weighing scale, meat cutting table, meat display tray, evisceration platform, chest freezers, ice cooler box and others were awarded.

Moreover, the AMAD conducted regular monitoring of the established 36 Food Terminal Projects (FTP) in the region. An Annual Assessment cum Operators and Implementers Forum was conducted on July 5-6, 2017 at the Agricultural Training Institute (ATI), Tabug, Batac City, Ilocos Norte with 40 participants. Said forum served as avenue for the operators to present the status of their operation and trading activities, benefits derived and strategies which contributed to the smooth operation of the FTP. For the CY 2017, two (2) FTPs were revived particularly the Sinait Municipal Food Terminal in Sinait, Ilocos Sur, and the Caba Municipal Food Terminal in Caba, La Union.

Likewise, four (4) batches of On-site Entrepreneurial Skill Development Training for Goat Raisers were conducted involving members/representatives of the association-beneficiaries of awarded chevon retailing equipment. The activity enhanced the participant's capability in managing efficiently their business. Values Formation, Entrepreneurial Mind Setting, Business Registration and Cost, Tax Incentives for Micro Enterprises (BMBE Act), Financial Literacy and Business Management, and Simple Bookkeeping and Accounting are among the topics discussed during the training.



Research and Development

The DA RFO I Research and Development Division maintained five (5) research facilities to exude competence in the field of research and development, and in showcasing services, programs, projects and activities that the DA spearheads. These facilities include:

1. INREC, Dingras, Ilocos Norte;
2. INREC, Batac City, Ilocos Norte;
3. ILIARC, Bacnotan, La Union;
4. PREC, Sta. Barbara, Pangasinan including the Sta. Barbara Breeding Station; and
5. PREC, Sual, Pangasinan

The Ilocos Norte Research and Experiment Center (INREC) in Dingras, Ilocos Norte served as area for lowland irrigated research, development, and production of rice and livestock.

The station maintained a multiplier farm of cattle, goat and sheep. The stocks produced quality offspring of American Brahman and American Red Brahman cattle, Anglo Nubian goats, and Dorper sheeps. To cater the green feed requirement of the stocks and to showcase production technology, a total of 15 hectares of forage and pasture areas were maintained and planted with different improved forage grasses and legumes species.

In 2017, the Organic Agriculture R & D Center was established in the station that will house the soils laboratory and conference hall for training and demonstration activities for OA practitioners and farmers.



(Above photo) Aerial view of the Ilocos Norte Research and Experiment Center (INREC), Dingras, Ilocos Norte. Lower left photo is the Organic Center and the cattle breeders maintained by the station (right)



Aerial view of the Ilocos Norte Research and Experiment Center (INREC), Batac City, Ilocos Norte.

The INREC in Batac City, Ilocos Norte is responsible for the promotion of agricultural growth and development for rainfed and upland zones in the region. The Center has a total area of 6.357 hectares covering technology adaptation and verification on major commodities such as rice, corn, mango, vegetables and dragon fruit.

The station had established various facilities such as Administrative building, Annex building (seed laboratory), R & D and Operations buildings, two units seed bodega/ warehouse and garlic processing laboratory.

IINREC-Batac City also established their herbs and spices garden located at the right side fronting the administrative building of the INREC. The newly-renovated seed laboratory is being managed by the Bureau of Plant Industry-National Seed Quality Control Services Center-Batac City, Ilocos Norte.

The station, known as area for lowland irrigated research, focused on re research and development, and production of rice and livestock.



Aerial view of the Pangasinan Research and Experiment Center (INREC), Sta. Barbara, Pangasinan.

The Pangasinan Research and Experiment Center (PREC) in Sta. Barbara, Pangasinan is the research and development arm for lowland rainfed zones in the region covering a total area of five (5) hectares.

The Center focuses on major commodities such as rice, corn, mango and vegetables. The Sta. Barbara Breeding Station or the Semen Processing and Artificial Insemination Center was built in Sta. Barbara, Pangasinan to produce fresh swine semen and frozen goat semen straws for artificial insemination. Pure breed of Largewhite, Landrace

Adjacent to the breeding station is the completed Phase Integrated Laboratories Building. Its Phase III

and Pietrain swine boars, and Anglo-Nubian and Boer pure breed of goat were maintained as source of quality semen benefiting livestock growers.

Adjacent to the breeding station is the completed Phase Integrated Laboratories Building. Its Phase III component will be established in 2018. The establishment of the new ILD building together with the acquisition of new laboratory equipment will enhance efficiency of laboratory services.

Other major facilities established in the station are the farm machinery and equipment shed (covered court) and the 2-storey building edifice for Administrative and Operations.



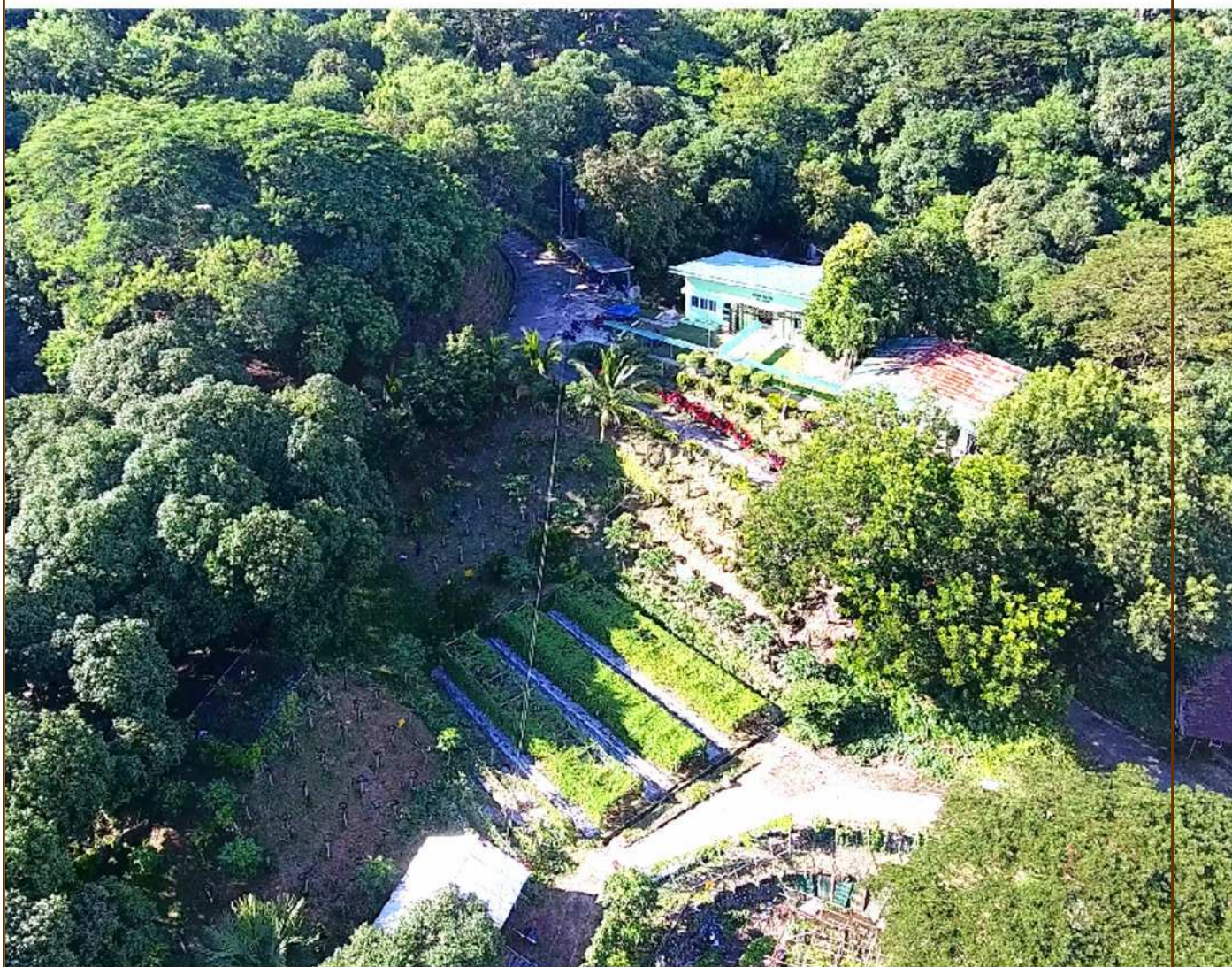
Aerial view of the Pangasinan Research and Experiment Center (INREC), Sual, Pangasinan.

The PREC arm in Sual, Pangasinan has a total area of 380.87 hectares. This station, which is the research and development arm for hillyland, served as the duck production center in the region where it maintained Mallard and Pekin duck breeders. It also caters production of various crops such as organic rice, corn, vegetables and fruit tree seedlings.

Major facilities established in the station are the Organic Demonstration Center cum Multi-Purpose Building and the rice seed storage. The vicinity of the rice storage served as the drop-off point of machineries and equipment for the farmer-beneficiaries in Western Pangasinan.



Organic Demo Center cum Multi-purpose Building



Aerial view of the Ilocos Integrated Agriculture Research Center in Sapilang, Bacnotan, La Union.

The Ilocos Integrated Agricultural Research Center (ILIARC) in Bacnotan, La Union is the main research and development arm in Ilocos Region. It also served as the drop-off point of machineries and equipments for the farmer-beneficiaries of the Province of La Union.

The station, which covers a total area of seven (7) hectares, served as the multiplier farm of goat maintaining breeder stocks of goat. The farm aims to demonstrate and promote integrated goat production technology, evaluate the growth and reproductive performance of goats raised in semi-intensive management system, and to produce quality offspring to be loaned out to farmer-partners.



ILIARC maintains breeder stocks of goats for the DA's multiplier-farm project.

Meanwhile, there were five (5) research studies conducted during the year. Details or highlights of the researches are as follows:

Verification trial on the POT of Dragon Fruit Production (Nutrient mgt. & fruit bagging)

Study 1. Nutrient Management

The study was conducted from January 2016 to November 2017. The statistical design used was Randomized Complete Block Design. A total of thirty six (36) posts of dragon cactus were laid-out in nine rows with four (4) post in each row. Three (3) treatments was used; T1- control or no fertilization at all, T2- fertilization of 96 bags of organic fertilizer per hectare and T3- fertilization of 500-200-500NPK and 96 bags of organic fertilizer per hectare.

Statistical analysis showed no significant differences on the number of fruits, yield per posts and yield per treatment. However dragon cactus applied with 500-200-500NPK + 96 bags of vermicompost (T3) had higher number of fruits (18.08pcs.), yield per posts (5.96kg), and yield per treatment (71.52 kg) than those applied with 96 bags of vermicompost (T2) and no fertilizer or control (T1). In terms of net income, 96 bags vermicompost (T2) obtained the highest of Php 3,379.20 followed by no fertilizer (T1) with Php 2,465.60 and the least was from 500-200-500NPK + 96 bags (T3) vermicompost with Php 1,529.80.

As to cost and return of the different treatments, Treatment 2 obtained the highest net income of 2,779.20, followed by Treatment 3 with a net income of 1,529.80 and Treatment 1 obtained the lowest net income of 1,265.60 (Cost and return of 12 posts per treatment in a six month-period).

Study 2. Fruit bagging

A total of twenty four (24) posts of dragon cactus were laid out in six (6) rows with four (4) posts in each row. Two (2) treatments were used. Treatment 1- control or no bagging at all and T2- bagging of fruits 10 to 15 days after flowering with the use of net bags. Result of study showed significant result both on the marketable and non-marketable fruits. Treatment 2 (w/ bagging) obtained significantly higher number of marketable (18.42pcs) and non-marketable fruits (3.43pcs) than Treatment 1 (w/o bagging) of 12.33pcs and 2.02pcs marketable and non-marketable, respectively.

In terms of net income, treatment 2 obtained higher net income of Php 1,696.00, compared to treatment 1 with Php 504.00 (12 posts per treatment in a six month-period).



Effect of Organic Foliar Fertilizer on the Growth and Yield of Rice

Growth and yield performance of rice (red rice, inbred and hybrid) were evaluated by spraying different organic foliar fertilizers, namely: vermi tea, seaweed tea, hagonoy leaf tea, kakawate leaf tea, animal manure tea, vermi tea +fermented plant juice+ fermented fruit juice, seaweed tea +fermented plant juice+ fermented fruit juice, , hagonoy leaf tea +fermented plant juice+ fermented fruit juice, kakawate leaf tea+fermented plant juice+ fermented fruit juice, animal manure tea fermented plant juice+ fermented fruit juice, no organic foliar fertilizer. These were conducted in experimental field of DA-INREC Batac and Dingras stations in Ilocos Norte. The treatments were arranged using RCBD with 3 replications. Plot size was 4m x 6m or 24m² following the straight row transplanting at 20cm x 20cm distance at 2-3 seedlings per hill for red rice while inbred and hybrid rice at 1-2 seedling per hill.

The objectives of the study were; to evaluate the nutrient content of the different organic fertilizer sources and their combinations under laboratory analysis, to determine effects of organic foliar fertilizer on the agronomic and yield performance of rice, to determine the insect and disease incidence on rice applied with organic foliar fertilizer and to determine economic performance of rice applied with organic foliar fertilizer.

Results of the study:

RED RICE

Computed grain yield for Red rice revealed significant result between treatments wherein plants sprayed with Vermitea+FPJ+FFJ (4.94t/ha) recorded the highest grain yield while plants sprayed with vermitea obtained the lowest yield with (3.42 t/ha).

INBRED RICE

For NSIC Rc222 under Organic Management System (in-conversion), significant results revealed that rice plants sprayed with kakawate leaf tea+FPJ+FFJ obtained highest the yield at 6.46 t/ha while plants sprayed with hagonoy leaf tea obtained the lowest yield at 4.26 t/ha.

HYBRID RICE

For NK5017 under Organic Management System (in-conversion), insignificant results on the computed grain yield (t/ha) were obtained with a mean ranging from 4.51t/ha to 6.42 t/ha.



Establishment of Good Agricultural Practices (GAP) for Rice

INBRED RICE

NSIC Rc222 (Dingras Station), insignificant results on the computed grain yield (t/ha) was obtained with a mean ranging from 6.43 to 7.29 t/ha.

HYBRID RICE

NK5017, based on the result of yield and other yield components shows insignificant among the treatments. Produced which ranges from 4.20 to 6.50 t/ha.

Based on the result of the study Verm Tea, Seaweed tea, animal manure tea, kakawate leaf tea and hagonoy leaf tea plus fermented plant juice and fermented fruit juice were recommended to use as organic foliar fertilizer especially under Organic Management System were recommended.



Yield Performance of Mango (*Mangifera indica* L.) as Affected by Combined Effect of Different Organic Solutions

The study was conducted in San Carlos City and Mangatarem, Pangasinan. The project aims to enhance yield performance of carabao mango in Pangasinan using different organic solutions to evaluate the efficacy of different organic solutions as alternative inputs on mango production, promote appropriate production technologies using organic solutions on mango production and determine the economic benefits of producing mangoes using different organic solutions on mango production.

Significant Result:

There were no significant differences on the average percentage of panicle developed and panicle length in both treatment 1 sprayed with chemical pesticides and treatment 2 sprayed with organic solutions.

The average number of insect pests and natural enemies in both treatments showed no significant difference. Mango Leaf Hoppers and Seed borer were mostly observed.

The developing fruits in both treatments were greatly affected by anthracnose observed at 40 DAFI. Hence, no significant difference in both treatments.

Incidence of kurikong was observed during fruit setting stage when the size of fruits reached corn size.

The number of fallen fruits with insect pests' damage (mostly kurikong) was significantly higher in treatment sprayed with organic solutions than treatment with chemical pesticides during fruit development to fruit enlargement stage.

FARM TO MARKET ROAD NETWORK SERVICES

For CY 2017, the Ilocos Region has a total of 168 Farm-to-Market Road (FMR) projects with 43.6 kilometers length valued at PhP432 Million as shown in **Table 21**. These FMR projects were constructed through the Department of Public Works and Highways.

Bulk of the FMR were constructed in the Pangasinan with 81 projects with total length of 20.8 kilometers amounting to PhP208 Million. This is followed by Ilocos Norte with 30 FMR projects with total cost of PhP86 Million. La Union constructed 28 FMR worth PhP70 Million while Ilocos Sur has 29 projects amounting to PhP68 Million.

Table 21. Number, Length and Value of Constructed FMR, Region I, CY 2017

Province/District	No. of FMR Projects	Length (KM)	Project Cost (Ph P'000)
Pangasinan	81	20.80	208,000
District 1	13	3.90	39,000
District 2	15	3.20	32,000
District 3	15	3.00	30,000
District 4	15	3.00	30,000
District 5	5	3.70	37,000
District 6	18	4.00	40,000
La Union	28	7.00	70,000
District 1	15	4.00	40,000
District 2	13	3.00	30,000
Ilocos Sur	29	6.80	68,000
District 1	14	3.00	30,000
District 2	15	3.80	38,000
Ilocos Norte	30	9.00	86,000
District 1	12	4.00	41,000
District 2	18	5.00	45,000
Region 1	168	43.60	432,000



AGRICULTURAL AND FISHERY REGULATION SERVICES

Registration and Licensing

For 2017, the Regulatory Division issued a total of 696 regulatory documents serving 683 individuals and 12 groups.

For the registration/accreditation and licensing of livestock transport carriers, 226 applications were evaluated, inspected and endorsed to Bureau of Animal Industry (BAI) for their approval. Likewise, 11 applicants for animal research permit were endorsed to BAI for the issuance of animal research permits.

A total of 136 Veterinary Drugs and Products (VDAP) outlets/establishments were evaluated, inspected and endorsed to BAI for the approval of their License to Operate (LTO). On the other hand, renewal of LTO of the existing 358 VDAP outlets were approved and issued by the Regional Executive Director of DA RFO I.

For the registration of feed establishments, 261 new feed establishments were evaluated, inspected and endorsed to the BAI. Likewise, 813

existing feed establishments were renewed for this year's operation as approved by the DA-RFO I RED. Renewed feed establishments are as follows:

- 2 toll feed manufacturers,
- 6 commercial feed manufacturers,
- 2 non-commercial feed manufacturers,
- 3 feed ingredient manufacturers,
- 5 feed ingredient suppliers,
- 60 feed distributors, and
- 735 feed retailers.

Other evaluated, inspected and endorsed registrations/accreditations to the BAI for approval are the following:

- 253 Livestock, Poultry & By-Products Handler's (LPH)
- 25 pet shops,
- 26 veterinary clinics,
- 32 farms,
- 5 animal research facilities, and
- 2 mini zoos





Quality Control and Inspection

The Regulatory Division is also tasked to conduct monitoring & inspection of agriculture facilities and products in the region.

Feed establishments such as manufacturing plants, warehouses including its facilities and premises, distributors and retailers were routinely inspected and monitored. For 2017, a total of 974 establishments was inspected and monitored - 387 in Pangasinan, 194 in La Union, 187 in Ilocos Sur, and 206 in Ilocos Norte.

Monitoring and inspection were also done for veterinary drugs, biologics and products. These activities include the inspection and evaluation of establishments, labels of products, FDA/BAI registration numbers, and expiration dates. The veterinary drugs and products should be placed in a cabinet away from pesticides and other hazardous materials, rodents and litters. A total of 519 outlets was inspected during the year.

The Division also conducted monitoring & inspection of animal welfare facilities/establishments such as livestock and poultry farms.

To ensure quality of products, feed and corn samples were routinely taken from the feed establishments for laboratory analyses. This year, 1,260 feed samples and 285 corn samples were also collected and submitted to the Feed Laboratory for quality and aflatoxin analyses, respectively.

For the monitoring and inspection of shipped-in and shipped-out commodities, one multi-commodity quarantine checkpoint was maintained at Carmen, Rosales, Pangasinan. A total of 2, 250 vehicles were flagged down and/or inspected in 2017.

Moreover, five (5) plant nurseries were inspected for accreditation and were endorsed to the Bureau of Plant Industry (BPI) for approval. The plant nursery operators are propagating cacao, coffee and mango trees.

PART III

SPECIAL/OTHER *Programs/Projects*

PHILIPPINE RURAL DEVELOPMENT PROJECT

The Regional Project Coordination Office (RPCO) I constantly showed full support to the implementation of the Philippine Rural Development Project (PRDP) with strong partnership with Local Government Units (LGUS) in the region. This year, the Regional Project Coordination Office (RPCO) I hosted the last leg of the 4th World Bank Implementation Support Mission for Luzon Cluster A last May 22-26, 2017.

A team of experts from the World Bank headed by Frauke Jungbluth, the lead agricultural economist and task team leader of the mission, visited three subprojects, namely: (1) the P115 million Rehabilitation of Balebec-Basca FMR and Balebec Bridge in La Union; (2) the P67.3 million Rehabilitation of the Nalasin-Sungadan-Langiden

Paoay, Ilocos Norte; and (3) the P13.1 million Production and Marketing of Fresh Carabao Mangoes Enterprise in Cabugao, Ilocos Sur.

The team gave positive evaluations for the subprojects, aside from minor comments and suggestions (e.g. guaranteeing the non-usage of inorganic chemicals in the production of mangoes, assuring the climate-resiliency of the infrastructures, etc.). They also commented that the Project must emphasize not only the benefits identified in the proposals, but also the benefits which arise as implementation progresses. The team likewise highlighted the mainstreaming of the PCIP, which is the listing of interventions by priority commodities. The World Bank stressed that interventions identified in the PCIP cannot all be funded under PRDP.



STATUS REPORT BY COMPONENT

Investments in Agriculture and Fisheries Modernization Program Planning at the Local and National Levels (I-PLAN) Component

There are ten priority commodities of Region I that are being supported by the PRDP, namely: mango, peanut, goat, onion, garlic, bangus, tomato, mungbean, dragon fruit and coffee.

To date, VCAs of mango, goat, onion, peanut, mungbean, tomato and bangus, which are cluster-wide priority commodities, were already issued with No Objection Letter (NOL). Formulation of the VCA of dragon fruit and coffee is still on-going.

The result of VCAs will be integrated in the preparation of Provincial Commodity Investment Plans (PCIPs) of all provinces in the region. PCIP is a rolling plan of the Provincial Local Government Units (PLGUs) containing specific infrastructure and enterprise sub-projects in support to development of the commodities.

As shown in **Table 22**, all PCIPs of the four (4) provinces in Region I are already approved, and currently undergoing updating to integrate VCA results of other commodities.

This year, the I-PLAN Component conducted successive PCICP mainstreaming activities, in partnership with the Provincial Project Management and Implementing Unit (PPMIUs) of

all provinces in the region. Various government agencies participated in the mainstreaming activities which aimed to synchronize government assistance and services to the farmers.

For 2017, more than PhP630 Million projects listed in the PCIPs of the Ilocos Region provinces are funded outside PRDP.

Meanwhile, the I-PLAN Component and the Planning, Monitoring and Evaluation Division (PMED) of DA RFO I conducted briefing-workshops for the preparatory activities for the updating of the successor Agriculture and Fisheries Modernization Plan (AFMP) for 2018-2023 in all provinces in the region.



The I-PLAN Component Team

Table 22. Status Provincial Commodity Investment Plans (PCIP) , Ilocos Region, CY 2017

PROVINCE	COMMODITY	STATUS
Ilocos Norte	Mango, Onion, Tomato, Mungbean	Approved by the PDC (mango and onion); on-going updating of the enhanced PCIP to include tomato and mungbean
Ilocos Sur	Mango, Peanut, Goat, Onion, Tomato, Mungbean	Approved by the PDC (mango, peanut, goat & onion); on-going updating of the enhanced PCIP to include tomato and mungbean
La Union	Mango, Peanut, Goat, Tomato, Mungbean	Updated and Approved by the PDC (mango, goat, peanut, tomato, and mungbean)
Pangasinan	Mango, Goat, Onion, Peanut, Tomato, Mungbean, Bangus	Updated and Approved by the PDC (mango, goat, onion, peanut, tomato, mungbean, and bangus)

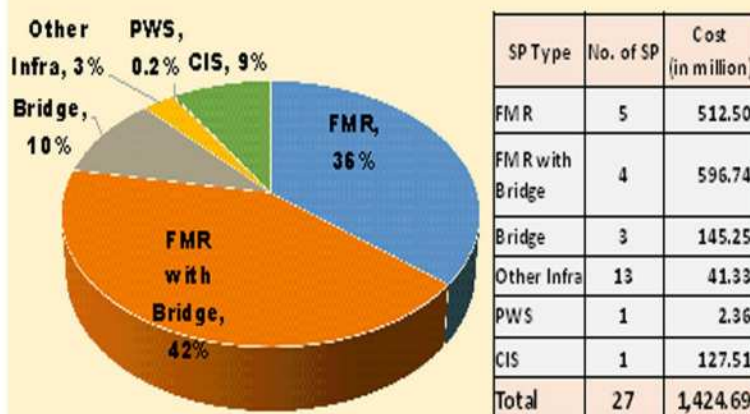
Intensified Building-Up of Infrastructure and Logistics for Development (I-BUILD) Component

Figure 20 shows that Region I has a total portfolio of 27 rural infrastructure sub-projects (SP) amounting to PhP 1.42 Billion. Bulk of the SPs are allocated for FMR with bridge contributing 42% or PhP 596.7 Million equivalent to four (4) SPs, followed by five (5) FMR SPs amounting to PhP512.50 Million or 36% share to the total portfolio. Other SPs are 3 bridges, 13 other infrastructures (i.e. solar dyers, warehouse, tramline), one Potable Water System (PWS) and one Communal Irrigation System (CIS).

Of the total portfolio, 22 sub-projects were already approved amounting PhP887.29 Million as shown in **Table 23**. Of this, three (3) SPs are already completed, 15 SPs are under on-going construction and 5 SPs are still under procurement.

The region's approved 22 SPs contributed 18%% to the 127 SPs in Luzon A Cluster and 6% to the 393 SPs in the country. In terms of value, the region contributes 18% and 4% to the cluster and national outputs, respectively.

RPCO I I-BUILD Portfolio % share per SP Type



RPCO I I-BUILD PORTFOLIO Amount per SP Status (in Million Pesos)

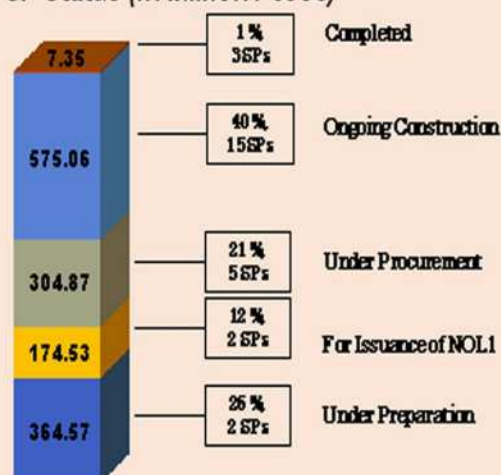


Fig. 20. I-BUILD Portfolio Percentage Share and Amount per SP, RPCO I, CY 2017

Source: PRDP Management Information System (MIS)

Table 23. Number, Cost and share of Approved I-BUILD Sub-Projects, Ilocos Region, CY 2017

Province	No. of SPs	Cost (million PhP)	Share to the Cluster (%)		Share to the National (%)	
			In Number	In Cost	In Number	In Cost
Ilocos Norte	13	286.08	10	6	3	1
Ilocos Sur	5	301.73	4	6	1	2
La Union	2	156.63	2	3	1	1
Pangasinan	3	142.84	2	3	1	1
Region I	22	887.29	18	18	6	4
Luzon A	127	4,984.84			32	25
National	393	20,033.33				

Among the provinces of Ilocos Region, Ilocos Norte has the highest number of approved SPs—13 SPs amounting to Php286.08 Million. This is followed by Ilocos Sur with 5 SPs but the province has the biggest amount of SPs among the provinces. Pangasinan has two approved SPs worth PhP142.84 Million while La Union has three approved SPs amounting to PhP156.63 Millilon.

The three completed SPs are: 1)Construction of Cabugao Mango Packaging Center in Cabugao, Ilocos Sur; 2) Construction of Salsalamagui Solar Dyer, Vintar, Ilocos Norte; and 3) Construction of Mabanbanag Solar, Vintar, Ilocos Norte, as shown in **Table 24**.

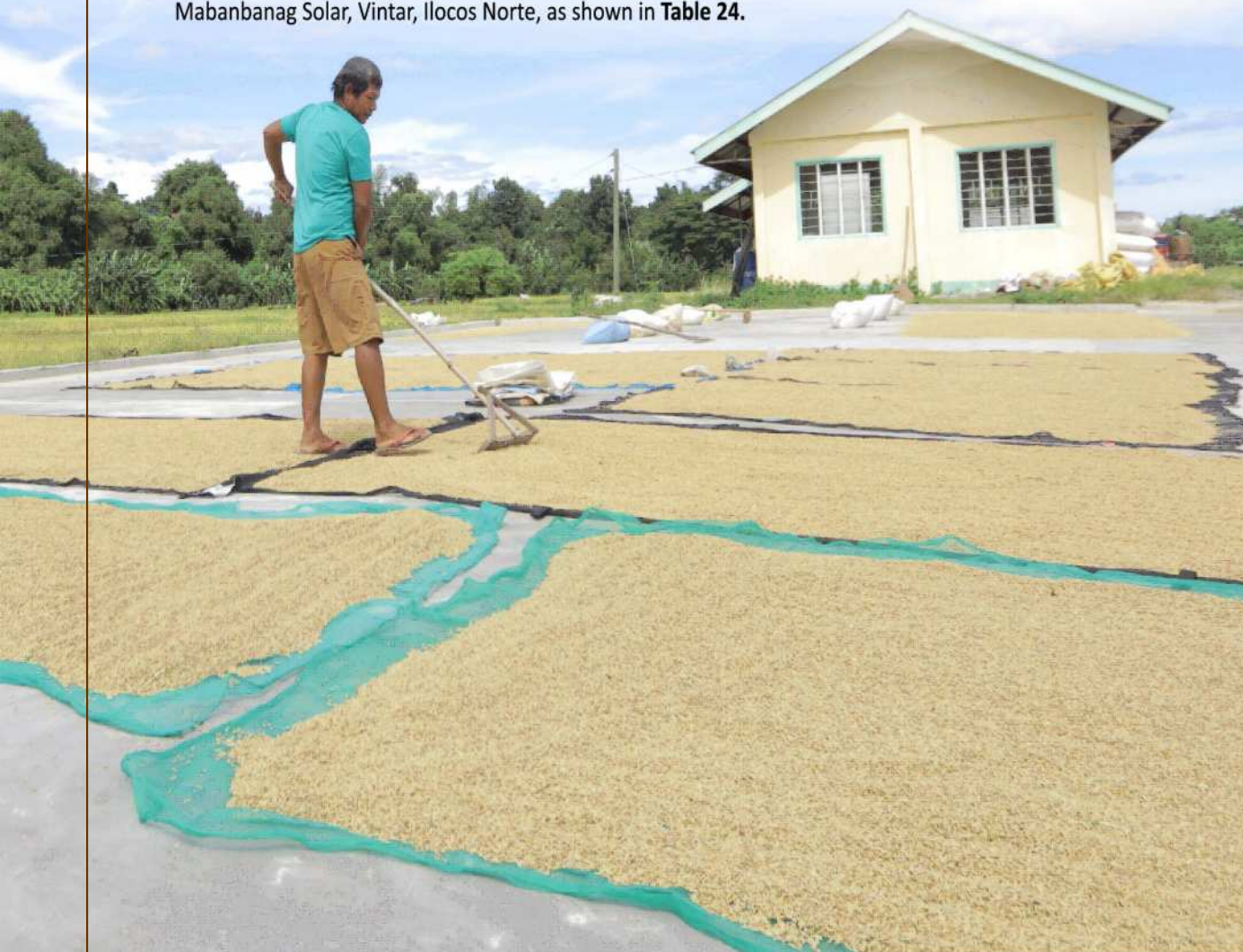


Table 24. Completed I-BUILD Sub-Projects in Region I , Ilocos Region, CY 2017

Subproject Name	Location	Date started	Date completed	Amount (Php)	Area (sq.m)	Number of Beneficiaries	Commodity/ies served
Construction of Cabugao Mango Packaging Center	Cabugao, Ilocos Sur	June 16, 2017	Nov. 23, 2017	4,828,231	200	681	Mango
Construction of Salsalamagui Solar Dyer	Vintar, Ilocos Norte	April 27, 2017	June 1, 2017	1,152,159	420	1,198	Rice, peanut, corn, mango
Construction of Mabanbanag Solar Dyer	Vintar, Ilocos Norte	April 27, 2017	July 7, 2017	1,373,019	420	686	Rice, peanut, corn, mango
Total				7,353,409		2,565	

Source: PRPD Management Information System (MIS)

Details of the 15 SPs under on-going construction, 5 SPs under procurement and 2 SPs for issuance of No Object Letter 1 are shown in Table 25.

Table 25. Other I-BUILD Subprojects (On-going, under procurement and for issuance of NOL 1, Ilocos Region, CY 2017

SP Name	Location	Amount	Physical Target
ON-GOING CONSTRUCTION			
1. Rehabilitation of Nalasin-Sungadan-Langiden FMR	Paoay, Ilocos Norte	67,330,338.99	4.934 km
2. Rehabilitation of Billoca-San Juan Farm to Market Road and Bridges	Batac City, Ilocos Norte	152,183,994.79	12 km (FMR) & 79 lm (bridge)
3. Construction of Uguis Solar Dryer	Nueva Era, Ilocos Norte	2,293,351.60	1,020 sqm
4. Construction of Gamaden Solar Dryer		1,105,720.39	480 sqm
5. Construction of Naguilian Solar Dryer		1,315,011.93	594 sqm
6. Construction of Anam Solar Dryer		1,068,559.26	350 sqm
7. Construction of Sinidangan Solar Dryer	Adams, Ilocos Norte	1,012,903.79	420 sqm
8. Construction of Maligligay Solar Dryer		1,397,979.69	420 sqm
9. Construction of Malaggao Solar Dryer		1,339,273.01	420 sqm
10. Construction of Namita Agricultural Tramline Sytem	Cervantes, Ilocos Sur	4,687,049.46	530 m
11. Rehabilitation of Tubigay-Barabac-Nagculluoban FMR	Sinait, Ilocos Sur	76,529,718.89	6.48 km
12. Rehabilitation of Balebec-Basca FMR and Balebec Bridge	Naguilian-Aringay, La Union	121,956,793.22	7.92 km (FMR) and 30 lm (bridge)
13. Construction of Oraan Bridge with Approaches	Manaoag, Pangasinan	20,575,040.05	21 lm
14. Construction of Municipal Warehouse with MPDP		10,419,627.86	477.50 sqm (warehouse) 600 sqm (MPDP)
15. Rehabilitation of Gonzales-San Juan FMR	Umingan, Pangasinan	111,846,972.70	10.63 km
UNDER PROCUREMENT			
16. Rehabilitation of Tapao-Tigue-Poblacion 2-Sta. Cruz-Lang-ayan FMR	Cumimao, Ilocos Norte	50,442,000.00	6.59 km
17. Rehabilitation of Pug-Os-Nagculluoban FMR	Cabugao, Ilocos Sur	206,348,000.00	15.48 km
18. Construction of Sto. Domingo Municipal Warehouse with MPDP	Sto. Domingo, Ilocos Sur	9,342,000.00	63 km
19. Construction of Malinao Bridge	Rosario, La Union	34,677,000.00	63 km
20. Rehabilitation of San Jose Potable Water System	Vintar, Ilocos Norte	4,061,000.00	124 Households
ENDORSED FOR NOL 1 ISSUANCE			
21. Rehabilitation of Parasapas FMR with Bridge	Rosario, La Union	48,020,345.44	2.985 km (FMR) & 15 lm (bridge)
22. Rehabilitation of Paoay CIS	Paoay, Ilocos Norte	126,510,518.22	728.58 ha
UNDER SP PREPARATION			
23. Rehabilitation of Visaya-Tamdagan FMR & Bridge	Vintar, Ilocos Norte	274,574,570.00	32.30 km (FMR) & 180 lm (bridge)
24. Construction of Jardin-Sawat Bridge	Tagudin, Ilocos Sur	90,000,000.00	90 lm
TOTAL		1,275,177,711.41	



Investments in Rural Enterprises and Agriculture & Fisheries Productivity (I-REAP) Component

The total approved portfolio of I-REAP in Ilocos Region reached PhP114.48 Million with 63 rural enterprise sub-projects as shown in **Table 26**. Of this, 52 SPs are restoration/rehabilitation or Small Livelihood Projects (SLPs) amounting to PhP49.99 Million equivalent to 44% to the total portfolio. The SLP interventions provided to help farmers recover their production losses from the damage brought by Typhoon Lando.

On the other hand, there are nine (9) start-up SPs contributing 41% or PhP47.36 Million as shown in Figure 13. The remaining 15% are 2 upgrading/expansion SPs with total cost of PhP17.13 Million.

Of the total number of approved SPs, 49 SPs were already completed worth PhP47.20 Million during the period. These SPs are all SLPs where farm implements such as a brand new 4-WD tractor, cage roller, rotary tiller and trailer were provided as Farm Mechanization Service Facility enterprise. Other SLPs completed are provision of production inputs.

On the other hand, there are 9 SPs under procurement activities and one SP for issuance of NOL 1.

Meanwhile, the total number of SPs of Region I contributed 21% and 19% shares to the cluster and national aggregates, respectively. In terms

RPCO 1 I-REAP PORTFOLIO

% Share per SP Type



RPCO 1 IREAP PORTFOLIO

Amount per SP Status

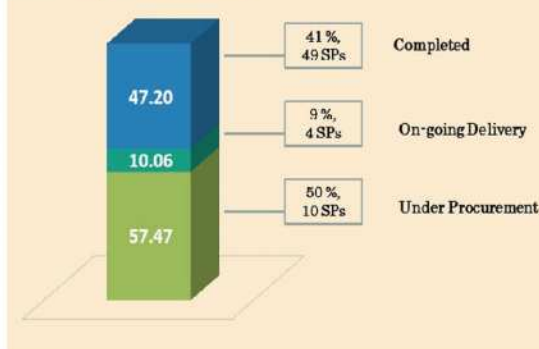


Fig. 21. I-REAP Pprtfolio Percentage Share and Amount per SP, RPCO I, CY 2017

Source: PRDP Management Information System (MIS)

of cost of SPs, the region shared 11% to the cluster's total cost of PhP 607.39 Million and 7% to the PhP1.56 Billion worth of rural enterprises.

Among the provinces of Ilocos Region, Pangasinan recorded the highest number of SPs at 34 amounting to PhP48.21 Million. This is followed by La Union with 12 SPs worth Ph13.83 Million. Ilocos Sur, however, is higher than La Union in terms of value with 9 SPs amounting PhP33.49 Million.

Table 26. Number, Cost and share of Approved I-REAP Sub-Projects, Ilocos Region, CY 2017

Province	No. of SP	Cost (million PhP)	Share to the Cluster (%)		Share to the National (%)	
			In Number	In Cost	In Number	In Cost
Ilocos Norte	8	9.20	3	1	1	0.5
Ilocos Sur	9	33.29	3	4	2	2
La Union	12	23.83	4	3	2	1
Pangasinan	34	48.16	11	6	6	3
Region I	63	114.48	20	14	11	6
Luzon A	316	819.69			53	43
National	600	1,903.28				



Table 27. List of Approved I-REAP Sub-Projects, Ilocos Region, CY 2017

Subproject Name	Lead Proponent Group	Location	Amount
COMPLETED			
Corn and Livestock Integration and Trading Enterprise	Bacarra Zanjera Irrigators Multi-Purpose Cooperative	Bacarra, Ilocos Norte	1,000,000.00
Farm Mechanization Service Facility	Bagnos Multi-Purpose Cooperative	Banna, Ilocos Norte	1,000,000.00
Farm Mechanization Service Facility	Piddig Basi Multi-Purpose Cooperative	Piddig, Ilocos Norte	935,000.00
Farm Mechanization Service Facility	Aqunit Multi-Purpose Cooperative	Marcos, Ilocos Norte	995,000.00
Farm Mechanization Service Facility	Dupitac ARB's Multi-Purpose Cooperative	Piddig, Ilocos Norte	935,000.00
Farm Mechanization Service Facility	Tanap Avis Teiruvian Dam-Nagsurot-Budian and Poblacion Irrigators Association, Inc.	Burgos, Ilocos Norte	1,000,000.00
Farm Mechanization Service Facility	Namnama ARB's Multi-Purpose Cooperative	Piddig, Ilocos Norte	935,000.00
Farm Mechanization Service Facility	Lumaban Agrarian Reform Cooperative	Burgos, Ilocos Sur	950,000.00
Farm Mechanization Service Facility	New Maradodon Agrarian Reform Cooperative	Cabugao, Ilocos Sur	999,900.00
Farm Mechanization Service Facility	Santa Maria South Multi-Purpose Cooperative	Sta. Maria, Ilocos Sur	948,000.00
Farm Mechanization Service Facility	San Pablo Multi-Purpose Cooperative	Balaoan, La Union	950,000.00
Farm Mechanization Service Facility	Calliat Multi-Purpose Cooperative	Balaoan, La Union	963,000.00
Farm Mechanization Service Facility	Habag West Producers Cooperative	Tubao, La Union	963,000.00
Farm Mechanization Service Facility	Lacang Multi-Purpose Cooperative	San Gabriel, La Union	963,000.00
Farm Mechanization Service Facility	Namaltugan Multi-Purpose Cooperative	Sudipen, La Union	963,000.00
Farm Mechanization Service Facility	Cabaraoan Agricultural Multi-Purpose Cooperative	Bacnotan, La Union	963,000.00
Farm Mechanization Service Facility	Pusanangtatay ARB Organization MPC	Rosario, La Union	963,000.00
Farm Mechanization Service Facility	San Jose Multi-Purpose Cooperative	Caba, La Union	963,000.00
Farm Mechanization Service Facility	Sinapangan Multi-Purpose Cooperative	Balaoan, La Union	963,000.00
Farm Mechanization Service Facility	Talogtog Multi-Purpose Cooperative	San Juan, La Union	963,000.00
Farm Mechanization Service Facility	Anonang Baracas Irrigators Association Incorporated	San Fabian, Pangasinan	998,000.00
Farm Mechanization Service Facility	Makabagong Magsasaka Irrigators Association Inc.	San Fabian, Pangasinan	998,000.00
Farm Mechanization Service Facility	Mamarlao Multi-Purpose Cooperative	San Carlos City, Pangasinan	980,000.00
Farm Mechanization Service Facility	Palapad Farmers Irrigators Association	San Fabian, Pangasinan	998,000.00
Farm Mechanization Service Facility	Samaka Magbayanihan Farmers Association Incorporated	San Fabian, Pangasinan	998,000.00
Farm Mechanization Service Facility	Womens Unity for Progress and Farmers MPC	Mapandan, Pangasinan	998,000.00
Farm Mechanization Service Facility	Angio Taquil MPC	San Fabian, Pangasinan	888,000.00
Farm Mechanization Service Facility	Samahang Magsasaka ng Longos Proper Farmers AI	San Fabian, Pangasinan	888,000.00
Farm Mechanization Service Facility	Latral AF Irrigators Association Incorporated	San Fabian, Pangasinan	888,000.00
Farm Mechanization Service Facility	Binday Palapad Tomeeng Irrigators Association	San Fabian, Pangasinan	888,000.00
Farm Mechanization Service Facility	Imbalbalatong MPC	Pozzorbio, Pangasinan	998,000.00
Farm Mechanization Service Facility	Aramal Tocok FFF Multi-Purpose Cooperative	San Fabian, Pangasinan	962,800.00
Farm Mechanization Service Facility	Atlas Mabuna Multi-Purpose Cooperative	Malasiqui, Pangasinan	962,800.00
Farm Mechanization Service Facility	Capulaan Multi-Purpose Cooperative	Villasis, Pangasinan	962,800.00
Farm Mechanization Service Facility	Catablan Agrarian Reform Cooperative Credit Cooperative	Urdaneta, Pangasinan	962,800.00
Farm Mechanization Service Facility	Caunday Agrarian Reform Cooperative	Bolinao, Pangasinan	962,800.00
Farm Mechanization Service Facility	Centro Toma Colayo Farmers Multi-Purpose Cooperative	Bani, Pangasinan	962,800.00
Farm Mechanization Service Facility	Bayanihan Hundred Islands Agrarian Reform Cooperative	Alaminos City, Pangasinan	962,800.00
Farm Mechanization Service Facility	Laguit Padilla Multi-Purpose Cooperative	Bugallon, Pangasinan	962,800.00
Farm Mechanization Service Facility	Lambayan Multi-Purpose Cooperative	Mapandan, Pangasinan	962,800.00
Farm Mechanization Service Facility	Progressive Cooperative of Oraan East MPC	Manaoag, Pangasinan	998,000.00
Farm Mechanization Service Facility	Maresma Multi-Purpose Cooperative	Balungao, Pangasinan	962,800.00
Farm Mechanization Service Facility	Nayon Credit Cooperative	Umingan, Pangasinan	962,800.00
Farm Mechanization Service Facility	Saint Paschal Baylon Multi-Purpose Cooperative	San Quintin, Pangasinan	962,800.00
Farm Mechanization Service Facility	Saranay Agrarian Reform Cooperative	Natividad, Pangasinan	962,800.00
Farm Mechanization Service Facility	Southern Binmaley Multi-Purpose Cooperative	Binmaley, Pangasinan	962,800.00
Farm Mechanization Service Facility	Tay-Ak Marketing Cooperative	Umingan, Pangasinan	962,800.00
Farm Mechanization Service Facility	Mapolopolo Agrarian Reform Cooperative	Basista, Pangasinan	962,800.00
Farm Mechanization Service Facility	Raniag Mantadang Multi-Purpose Cooperative	San Quintin, Pangasinan	962,800.00
ON-GOING DELIVERY			
Production and Marketing of Fresh Carabao Mangoes	Cabugao Mango Farmers Multi-Purpose Association	Cabugao, Ilocos Sur	6,224,732.20
Integrated Quality Peanut Seed Production and Farm	Conconig East Farmers Multi-Purpose Cooperative	Sta. Lucia, Ilocos Sur	1,941,000.00
Production of Seed Planting Materials for Peanut and Farm Equipment's/Implements Services	Municipal Federation of Rural Improvement Club of Sto. Domingo	Sto. Domingo, Ilocos Sur	897,080.00
Corn and Squash Production and Trading Enterprise	Metro Nambaran Agrarian Reform Cooperative	Sto. Domingo, Ilocos Sur	998,050.00
UNDER PROCUREMENT PROCESS			
Green Carabao Mango Production, Consolidation and Marketing Enterprise	Palhim Multi-Purpose Cooperative	Bauang, Pangasinan	10,903,031.81
Yellow Granex Production, Consolidation and Trading Enterprise	Alcala Onion Growers Multi-Purpose Cooperative (AOGMPC)	Alcala, Pangasinan	4,795,128.00
Onion Production, Consolidation and Marketing Enterprise	Pasquin Farmers Garlic-Onion Growers Association	Pasquin, Ilocos Norte	2,400,000.00
Multiplier Onion Seed Production and Trading Enterprise	Nansugao Agrarian Reform Cooperative	Caoyan, Ilocos Sur	5,532,531.00
Production and Marketing of Mungbean Enterprise	San Fermin ARB Multipurpose Cooperative	Caba, La Union	3,313,585.46
Tomato Production, Consolidation and Trading Enterprise	Urdaneta City Organic Farming Rice Corn Vegetable Growers Association, Inc.	Urdaneta City, Pangasinan	3,752,650.00
Goat Multiplier Farm and Trading Post in Ilocos Sur	Kailan Multipurpose Cooperative	Banayoyo, Ilocos Sur	14,799,330.00
Production of Seed Planting Materials for Peanut and	BLP Farmers and Irrigators Association	Lingayen, Pangasinan	897,580.00
Salad Tomato Contract Farming and Support Service	Tugui Grande Farm Produce Farmers' Association	Bani, Pangasinan	5,702,800
Salad Tomato Production and Marketing Enterprise	Hundred Islands Farmpreneurs Association	Alaminos City, Pangasinan	5,124,000
			TOTAL 114,481,998.47

I-SUPPORT Component

Geomapping and Governance Unit

The Geomapping and Governance Unit (GGU) of Ilocos Region developed a Geodata Organizer that stores geotagged photos, sorts them by month, year and segment and views images of the sub-projects.

Aside from storage and viewing features, the system also generates a billing certification stating that the physical progress of the sub-project has been properly geotagged. This certification is required for the contractors to collect payment from the PRDP.

The geotagging technology is an established monitoring tool under the PRDP. Each infrastructure

and enterprise sub-project is required to be geotagged every now and then to assure the adherence to the standards set by the Project. As there are hundreds of geotagged photos per sub-project, the data organizer will make managing geotagged pictures easier.

Below shows the geotagged photos which were sorted and viewed using the Geodata Organizer.

This year, the GGU conducted trainings for partner Local Government Units and Contractors in the utilization of the system in managing, monitoring and presenting geotagged photos.

The screenshot displays the Geodata Organizer web application interface. The top navigation bar includes the Department of Agriculture logo and the text: "Republic of the Philippines, Department of Agriculture, Philippine Rural Development Project (PRDP), Regional Project Coordination Office I". The "PROJECT" dropdown menu is set to "Rehabilitation of Baletebo-Basca FMR".

The main content area shows two views:

- COMPARE IMAGES BY STATION PER MONTH:** This view displays a grid of images for "STATION '0+050'" and "STATION '0+100'". The "Month" is set to "May" and the "Year" is set to "2016". The images are labeled with filenames like "PRDP_IMG_05132016_032216 PM.jpg".
- COMPARE IMAGE BY ITEM PER MONTH:** This view displays a grid of images for "STATION '1+000'" and "STATION '1+050'". The "Month" is set to "July", the "Year" is set to "2016", the "Category" is set to "EARTHWORK", and the "Item" is set to "102". The images are labeled with filenames like "PRDP_IMG_07282016_094521 AM.jpg".

The bottom navigation bar includes the same Department of Agriculture logo and text as the top bar, along with the "PROJECT" dropdown menu set to "Rehabilitation of Baletebo-Basca FMR".

Monitoring and Evaluation Unit

The Monitoring and Evaluation Unit, in partnership with the Economist, the Information, Advocacy, Education and Communication (InfoACE) Unit, the I-REAP Component and other personnel of RPCO I, Luzon A Project Support Office (PSO), and the National Project Coordination Office (NPCO) conducted a pilot Rapid Appraisal of Emerging Benefits (RAEB) of the completed rural enterprise sub-project on SLP—the Farm Mechanization Service Facility of the Women's Unity for Progress and Farmers Multi-Purpose Cooperative. The RAEB was conducted in Brgy. Primicias, Mapandan, Pangasinan on October 10-13, 2017.

The RAEB is an evaluation tool in measuring the immediate results of PRDP completed sub-projects. Methodologies of the tool includes Focus Group Discussion (FGD), Key Informant Interview (KII) Household Survey (HHS), and Spot Interview.

The Cooperative is the first recipient of SLP under the PRDP in Region I. They were given a 4-WD tractor, cage roller, rotary tiller/leveler, and heavy duty trailer to help reduce farmer beneficiaries' expenses on hauling and land preparation.



Tractor rental in 1998 was around P2,500 pesos for one hectare. Now, given that everything has become expensive, tractor rental is pegged at P3,000 for one hectare. And the new tractor from PRDP gives Cooperative's members a discount of P300 per hectare.

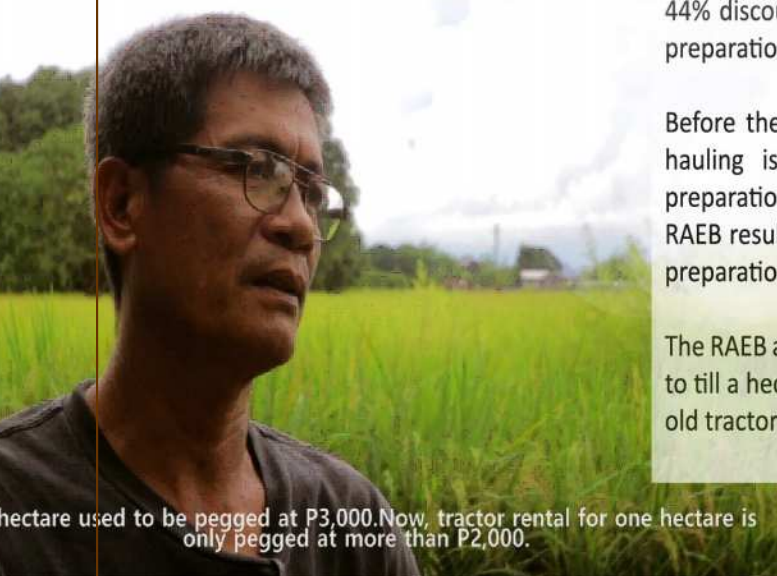
The Cooperative is the first recipient of SLP under the PRDP in Region I. They were given a 4-WD tractor, cage roller, rotary tiller/leveler, and heavy duty trailer to help reduce farmer beneficiaries' expenses on hauling and land preparation.

The SLP is the PRDP's initiative in response to the adverse effects of Typhoon Lando which struck the Luzon Island in October 2015. There are 53 farmer organizations which successfully availed SLP from the PRDP in the region.

After a Focus Group Discussion (FGD), a Household Survey (HHS), and Spot Interviews, the RAEB revealed that the members of the Women's Unity for Progress and Farmers Multi-Purpose Cooperative has availed of 44% discount in hauling cost and 11% discount in land preparation.

Before the award of the Project on January 26, 2017, hauling is pegged at P1,725 per sack while land preparation costs P3,000-P3,500 per hectare. Today, RAEB results show that hauling costs P1,087.5 and land preparation costs P2,700 per hectare.

The RAEB also revealed that farmers only take four hours to till a hectare of land. This is two hours faster than the old tractor which tills one hectare of land in six hours.



hectare used to be pegged at P3,000. Now, tractor rental for one hectare is only pegged at more than P2,000.

InfoACE Unit

Tasked to put a human face to the PRDP, the Information, Advocacy, Communication and Education (InfoACE) Unit of the regional, cluster and national offices conducted two (2) Regional Subproject Sites Documentations in Ilocos Region in 2017.

The documentations aim to capture the circumstances of the project beneficiaries before and after the construction or award of the subprojects. This will provide the contrast to highlight the impacts of the subproject.

The videos and pictures gathered during the sub-project sites documentations were showcased during meetings and World

Bank Review Missions. Likewise, the documentations provided baseline information for the drafting of press releases published in the PRDP website and in the RPCO 1 quarterly newsletters.

The PPMIU InfoACE Unit Heads attended the national convention for InfoACE PPMIU Focal Persons held on April 19-21, 2017 at Hotel Rembrandt, Quezon City.



Social and Environmental Safeguards Unit

The Social and Environmental Safeguards (SES) Unit of the Regional Project Coordination Office 1 (RPCO1) conducted a Safeguards Construction Supervision Training on October 2-6, 2017 at Staylite Hotel, Candon City, Ilocos Sur. The activity equipped local government units (LGUs) which are implementing PRDP subprojects on social and environmental mitigation/management and on occupational health and safety. The PRDP wants to ensure through the activity that all subprojects implemented are socially sound and environmentally sustainable.



REGIONAL CONVERGENCE INITIATIVE FOR SUSTAINABLE RURAL DEVELOPMENT

The Regional Convergence Initiative for Sustainable Rural Development (RCI-SRD) I hosted the 2017 National Convergence Initiative for Sustainable Rural Development (NCI-SRD) Summit cum Launching of the Institutionalization of District-wide Agro-industrialization, Innovation and Tourism (IDAIT) Convergence Project of Ilocos Sur held last June 20, 2017 at Vigan City Convention Center, Vigan City, Ilocos Sur. Highlights of the one-day activity are as follows:

- Opening Preliminaries
- Signing of the NCI-SRD Joint Resolutions and NCI-DOT Partnership MOA
- Recognition Activity and Launching of the Search for Best Convergence Site
- Launching of the Institutionalization of District-Wide Agro-industrialization, Innovation, and Tourism (IDAIT) as a Convergence Area
- Opening of the Exhibit
- Press Conference
- Presentation of Overview and Updates of the NCI-SRD
- Presentation of key successes of the local convergence strategy

Gracing the event as Guest of Honor and Speaker during the opening program is no less than the Senate Committee Chair on Agriculture, Senator Cynthia A. Villar who happens to also

now hold chairmanship of the other three rural development agencies, DAR, DENR and DILG. Other honored guests during the summit include DAR Secretary Rafael V. Mariano, DA Undersecretaries (USEC) Ranibai D. Dilangalen and Evelyn G. Laviña, DAR USEC Rosalina Bistoyong, DENR USEC Atty. Jonas R. Leones, DILG USEC Austere A. Panadero, DOT USEC Silvino Q. Tejada, NCI-SRD National Focal person Dir. Angel C. Enriquez, Ilocos Sur Governor Ryan Luis V. Singson, 1st District Congressman Deogracias Victor B. Savellano, Vigan City Mayor Juan Carlo Medina and DA-RFO I Regional Executive Director Narciso A. Edillo, among others. The event was attended by about 500 participants, namely:

- National Component Working Group Heads and Members
- NCI-SRD Master in Public Management major in Rural Development (MPM-RD) Graduates
- Regional Directors of DA, DAR, DENR, and DILG
- All Focal Persons of the DA-DAR-DENR-DILG Regional Convergence Initiative (RCI)
- RCI-SRD I expanded member-agencies
- Selected members of the House of Representatives and Local Chief Executives
- NCI-SRD Beneficiaries and Stakeholders
- Media/Press





After the Summit, the NCI Secretariat facilitated the conduct of the 2017 Midyear Assessment and Operational Planning Workshop on June 21-23, 2017 at One Vittoria Hotel, Bantay, Ilocos Sur. The activity aimed to track the progress of NCI-SRD interventions at all levels as to determine the ways forward for 2018 and 2019.

The activity was attended by about 200 participants composed of the Focal Persons of the DA-DAR-DENR-DILG Regional Convergence Initiative (RCI) of all regions and the NCI-SRD Master in Public Management major in Rural Development (MPM-RD) Graduates. N/RCIs' accomplishments and plans were presented during the activity.



PART IV.

AGRICULTURAL
Achievers

GAWAD SAKA SEARCH

With their outstanding performance in the field of agriculture and fishery, eight individuals and three groups of agricultural achievers were awarded by the DA RFO I during the Regional Gawad Saka Awarding Ceremonies held at the Nueva Segovia Consortium of Cooperatives on November 29, 2017 (Table 28).

The Gawad Saka is an annual search of the DA for outstanding individuals and groups in the farming and fishing sectors who displayed exemplary performance and contributions in the development and promotion of agriculture in their community.



Winners of the 2017 Regional Gawad Saka Search pose with the DA RFO I key officials (sitting from left) OIC-RTD Erlinda F. Manipon, RED Lucrecio R. Alviar Jr., CESO III and Guest of Honor and Speaker Asec. Waldo Carpio., representing Atty. Francisco M. Villano, Vintar Mayor Larisa Foronda and Paoay Mayor Jessie Galano.

Table 28. Regional Winners of Gawad Saka Search, Ilocos Region, CY 2017

Categories	Awardees	Address
Outstanding Rice Farmer	Mr. Amante Agcaoili	Alejo-Malasig, Vintar, Ilocos Norte
Outstanding Corn Farmer	Mr. Edmar Plano	San Isidro, Bantay, Ilocos Sur
Outstanding High Value Crops Farmer	Mr. Ferdinand Navarro	Damortis, Sto. Tomas, La Union
Outstanding Large Animal Raiser	Mr. Gilbert Pasion	Catangraran, Solsona, Ilocos Norte
Outstanding Young Farmer/Fisherfolk	Mr. Joysen Bumanglag	Naguilian, Nueva Era, Ilocos Norte
Outstanding Agricultural Entrepreneur	Ms. Editha Dacuycuy	Paayas, Burgos, Ilocos Norte
Outstanding Farm Family	Mr. Dominador Ignacio	Navotas, Laoag City, Ilocos Norte
Outstanding Small Farmer/Fisherfolk Organization	Bagnos Multi-Purpose Cooperative	Binacag, Banna, Ilocos Norte
Outstanding Municipal Agricultural and Fishery Council (MAFC)	San Nicolas MAFC	San Nicolas, Ilocos Norte
Outstanding Municipal/City Agriculturist	Ms. Rizalina Quiros	San Gabriel, La Union
Outstanding Agricultural Extension Worker	Ms. Justina Sacro	Laoag City, Ilocos Norte

NATIONAL QUALITY CORN ACHIEVERS AWARD

To give recognition to top performing Local Government Units (LGUs) and Department of Agriculture - Regional Field Offices (DA-RFOs) on quality corn produced, the Corn Program conducted its 2017 National Quality Corn Achievers' Award on November 23, 2017 at the Philippine International Convention Center (PICC), Roxas Boulevard, Manila. The said award aims to distinguish the achievements of top performing LGUs and DA-RFOs in support to the development of the corn industry, enhance the corn cluster participation and strengthen the DA-LGU partnership in the production of the quality corn.

As Ilocos Region maintained its rank as the 5th major producer of quality corn and the top yielder this year, dedicated individuals and institutions were given tribute for their exemplary accomplishments in different categories. A total of Php7.43 million worth of grants and cash prizes were granted to Region I achievers as shown in Table 29.

The Provinces of Pangasinan and Ilocos Sur were hailed as Outstanding Provinces along with their Provincial Agriculturists and Provincial Corn Coordinators. Ilocos Sur winners were given the Hal of Famer Award.

The municipalities of Burgos, Ilocos Sur, and Sto. Tomas and Alcala in Pangasinan with their Municipal Agriculturist and Corn Coordinators were also provided with Outstanding awards.

Also, there were nine (9) individual winners in the category of Outstanding Agricultural Extension Workers, three of them were adjudged as Hall of Famer.



Pangasinan Governor Amado Espino III (7th from right) together with his constituents in the province flank with the DA-RFO I officials led by RED Lucrecio Alviar (10th from left) during the National Corn Achievers awarding ceremonies held at the PICC.

RICE ACHIEVERS AWARD



La Union Governor Francisco Emmanuel Ortega and Pangasinan Vice Governor Jose Calimlim, Jr. join the other Local Chief Executives of the top performing provinces in a photo opportunity with Senator Cynthia Villar.

Consistent to its name as the country's premiere Region, the Ilocos Region has continuously soared high after topping once more the number of provincial awardees during the Annual Awarding rites of the 2016 National Rice Achievers held at the Philippine International Convention Center, Manila on May 24, 2017.

The provinces of Pangasinan and La Union, two of the best performing provinces when it comes to the implementation of rice programs and projects in the region were among the top seven provinces awarded in the awarding ceremonies out of the top 12 shortlisted provinces who were evaluated by the National Evaluation Team. The province of Ilocos Norte is likewise included in the top 12 lists that was validated and evaluated during the Field Evaluation made by the National Search Committee last March, 2017 but due to the uncontrolled effect of typhoon Lawin in the production during the evaluation period covered, the province who consistently makes it to the top failed this time.

As winners of said competition, the Provinces of Pangasinan and La Union, were awarded with P4.0M each in the form of projects to support the implementation of the rice programs in their areas. Said amount were received by each of the provinces representatives through the Vice-Governor of Pangasinan, Hon. Jose Calimlim,

Jr., and La Union Governor, Francisco Emmanuel "Pacoy" Ortega III. The officials also received the plaque of recognition that symbolizes the LGUs full participation in the DA's goal of food sufficiency and food security in the country.

Aside from the top two provinces from Region I, the LGU of Solsona represented by its Mayor Alexander Calucag was recognized as among the top 17 performing municipalities when it comes to rice production. The municipality of Solsona, through Mayor Calucag received a dummy check worth P1.0M in the form of project to support the implementation of rice program in Solsona.

To recognize also the painstaking support and commitment of the agricultural extension workers who are directly involved in the implementation of programs and projects under the Rice Program and have outstanding performance in the implementation of the food staple sufficiency program of DA, 20 AEWs from Pangasinan, and 10 AEWs in La Union were recognized in an awarding ceremonies held on June 9, 2017 at the Oasis Country Resort, San Fernando City, La Union.

The provinces of Ilocos Sur and Ilocos Norte, despite its failure to be part of the top-seven performing provinces have also produced 3 and 11 AEWs, respectively who were given cash incentives in the amount of P20,000.00 each.

2017 TEAMBUILDING ACTIVITIES IN ACTION....





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