

DEPARTMENT OF AGRICULTURE
Regional Field Office No. 02
Tuguegarao City, Cagayan



Annual Report

CY-2011



From "Maroon" to Green
Towards Transforming Agriculture in Region 02



PROPOSED DA-RFO2 RENOVATION
OF ADMINISTRATION BUILDING

About DEPARTMENT OF AGRICULTURE (DA)

The DA is the principal agency of the Philippine Government responsible for the promotion of agricultural development growth. In pursuit of this, it provides the policy framework, helps direct public investments; and in partnership with Local government units (LGUs) provides the support services necessary to make agriculture and agri-based enterprises profitable and to help spread the benefits of development to the poor, particularly those in rural areas.

The DA's primary mission is to increase the real incomes of farmers and fisherfolk, thereby contributing to the achievement of the national goals of alleviating poverty, generating productive opportunities, fostering social justice and equity, and promoting sustainable economic growth:

- To help ensure food security and support the national effort toward self-sufficiency in rice and corn;
- To help attain a favorable balance of trade by enhancing the competitiveness of the agricultural and fishery sectors in both domestic and foreign markets;
- To support the development of farmer and fisherfolk organizations; and
- To promote the development of labor-intensive and employment-generating agro-industrial enterprises.

In the pursuit of its mission and objectives, the Department adopts the following principles:

- Private sector enterprise shall be encouraged to promote the efficient allocation and effective utilization of resources, consistent with objectives of equity and social justice;
- The maximum participation of the people in the development process shall be encouraged since development proceeds only through the favorable interaction of all sectors;
- Development shall be promoted compatible with the preservation of the ecosystem in areas where agriculture and fisheries activities are carried out, exerting care and judicious use of natural resources in order to attain long-term sustainability; and
- Sound agricultural growth shall be pursued as the foundation for industrial development.

Functions:

In fulfilling its mandate and mission, The Department performs the following functions:

The creation of a policy environment conducive to increased incomes in agriculture. The DA actively advocates for the adoption of policies supportive of long-term sustainable growth in the sector as well as for the repeal or amendment of policies, which impede such growth.

The provision of agriculture and fishery infrastructure support (i.e., irrigation facilities, farm-to-market roads, fish ports, etc.) to encourage private sector investments in agriculture and fisheries.

The generation, verification, and dissemination of information relevant to productivity and development. The Department undertakes research and development programs, which (i) strengthen the linkage between research and extension; (ii) develop and broaden the adoption of low-cost productivity-enhancing production and processing technologies; (iii) identify and promote the sustainable use of resource capabilities; and (iv) assess commodity markets and conditions and prospects.

The production, testing, and dissemination of superior plant and animal germplasm. In support of private sector initiatives, the DA develops, produces and distributes superior crop varieties and breeds of livestock and fish suited to Philippine conditions, focusing on the extension, demonstration, and provision of parent stock and fish juveniles.

The facilitation of market access and the promotion of agro-based enterprises. The Department assists agricultural producers and agribusiness men, particularly low-income farmers, in processing and marketing their produce, linking them with processors and farmers, in processing and marketing agreements, and facilitating access to the international market. Moreover, it assists agricultural entrepreneurs in availing of financing by directing them to possible sources and by expanding credit guarantee and insurance facilities.

Regulation. The Department is mandate to exercise regulatory control over particular agriculture-related areas and concerns. The exercise of this control is conducted for the following objectives:

- To prevent the over-exploitation of resources to ensure their long-term productivity;
- To protect the health and safety of the populace;
- To prevent and/or contain the spread of plant, fish, and animal pests and diseases;
- To prevent manipulations in the markets of staple agriculture commodities and inputs;
- To protect domestic agricultural producers from unfair competition of imports made cheap through subsidies by exporting countries;
- To implement international commodity agreements which the Philippines has acceded to; and
- To ensure the quality of Philippine agricultural exports and increase their share in the world market.

**Mailing Address: DEPARTMENT OF AGRICULTURE
REGIONAL FIELD OFFICE NO. 02**

Nursery, San Gabriel, Tuguegarao City, Cagayan, 3500

Telephones: (078) 844-1324/1312

TeleFax: (078) 846-9131/844-1031 /



DEPARTMENT OF AGRICULTURE

Regional Field Office No. 02
Tuguegarao City, Cagayan

2011 Annual Report



Copyright 2011 by Department of Agriculture-Regional Field Office No. 02

All rights reserved

For more information please visit <http://www.rfu02.da.gov.ph>



DEPARTMENT OF AGRICULTURE

Regional Field Office No. 02
Tuguegarao City, Cagayan

2011 Annual Report



Message

From the Regional Executive Director

Looking Ahead



**LUCRECIO R. ALVIAR, JR.,
CESO III**

As I review the Department of Agriculture-Regional Field Office No. 02 Plan for 2011, assess our performance over the last twelve months and look ahead into the future, I am highly encouraged by our progress toward achieving our medium-term goals.

I am delighted to present to you our 2011 Annual Report of accomplishments. This report speaks of the efforts not only of the management and staff but also with those of our partners DA Bureaus, Attached Agencies and Corporations, Local Government Units and other National Line Agencies, which all converged together and committed to pursue common goal for our farmer's and fisherfolk's upliftment.

Last April as I assumed as the Regional Executive Director of DA-RFO 02, we re-defined our organizational structures, staffing needs and present facilities based on Plan 2011, with particular focus on our provincial Research Outreach Stations and Regional Field Head Office in Tuguegarao City. By the end of 2011, a number of new leaders had been designated to head some of the key operating units and a number of staff with years of experience in DA-RFO 02 had assumed new roles. Special thanks to my predecessor and former boss, Director Andrew B. Villacorta for laying-out the foundation. I also appreciate the renewed sense of teamwork among my staff for showing vigor in the pursuit of our programs and projects.

Responding to one of the marching orders for this year of the Honorable Secretary Proceso J. Alcala, to improve DA research facilities, stations, and laboratories to be kept abreast on the demands of new trends and latest technologies; my staff and I came out with a motto for this year, "A transformation of DA-RFO 02 facilities from 'maroon' to 'green'. 'Maroon' implies 'marun-runot', a term in Ilocano which means dilapidated or rotten, and 'green' connotes a newly grown crop or fresh, implying new innovation. We believe that charity always begins at home, which means we can serve best if we have the best resources and we cannot share anything if we have nothing. In this case, we can easily convince farmers or clients to adopt technologies with proper and updated facilities.



Noteworthy to mention, a state-of-the art building, the Cagayan Valley Integrated Agriculture Laboratory (CVIAL), with its founding/groundbreaking held in November, is a comprehensive, all-in-one laboratory, a research and development facility, which will help ensure product quality, consumer safety and environmental protection. The CVIAL will greatly support the institutionalization of good agricultural practices (GAP) in all components of agribusiness value and supply chain: from pre-production, production to processing, marketing locally and abroad, and/or for consumption.

We continue to make steady progress in strengthening our management systems in finance, human resources, information technology, and resource development. With support from a number of DA Bureaus, Agencies who are generous enough to respond to our financial needs, the DA-RFO 02 facilities and services will be steadily improving. With these on hand, reaching our goals and objectives in the long and short term is not far behind.

On behalf of DA-RFO 02, I want to thank all partners, stakeholders, and friends who have supported our work in 2011. I greatly appreciate the continuing support and encouragement from my staff.

Together with my DA-Region 02 family, I re-affirm our commitment in contributing to the DA's vision, mission and mandate in improving the lives of rural poor farmers and fisherfolk, specially, attaining rice self-sufficiency in the country.

Mabuhay po tayong lahat!



Contents	Page
Message	
Contents	
I. Executive Summary	
A. Production Performance	
B. Contribution to the Regional Economy	
Value of Production	
Food Sufficiency	
Food Self-Sufficiency	
♦ Agriculture-Fishery Sector Accomplishment	
♦ Region 02's Major Accomplishments by Project Level Performance Indicators	
Production Support Services	
Market Development Services	
Credit Facilitation Services	
Irrigation Development Services	
Other Infrastructure and Postharvest Facilities	
Extension Support, Education and Training Services	
Research and Development	
Regulatory Services	
Information Support Services	
Policy, Planning and Advocacy	
♦ Gawad-Saka Agricultural Achievers	
II. Banner and Regular Programs: Highlights of Accomplishment	
Rice Development Program	
Corn Development Program	
High Value Crops Development Program	
Livestock and Poultry Development Program	
III. Programs and Projects funded by BAR and Other Sources	
IV. Special Programs/Projects (Organic Agriculture and ACEF)	
V. Other Interventions and Initiatives	
V. Gawad-Saka Agricultural Achievers	
VI. Human and Financial Resources	
VII. DA-RFO 02 Key Officials	
VIII. Regional Management Committee (RMC) Heads	
IX. Production Team	



Executive Summary

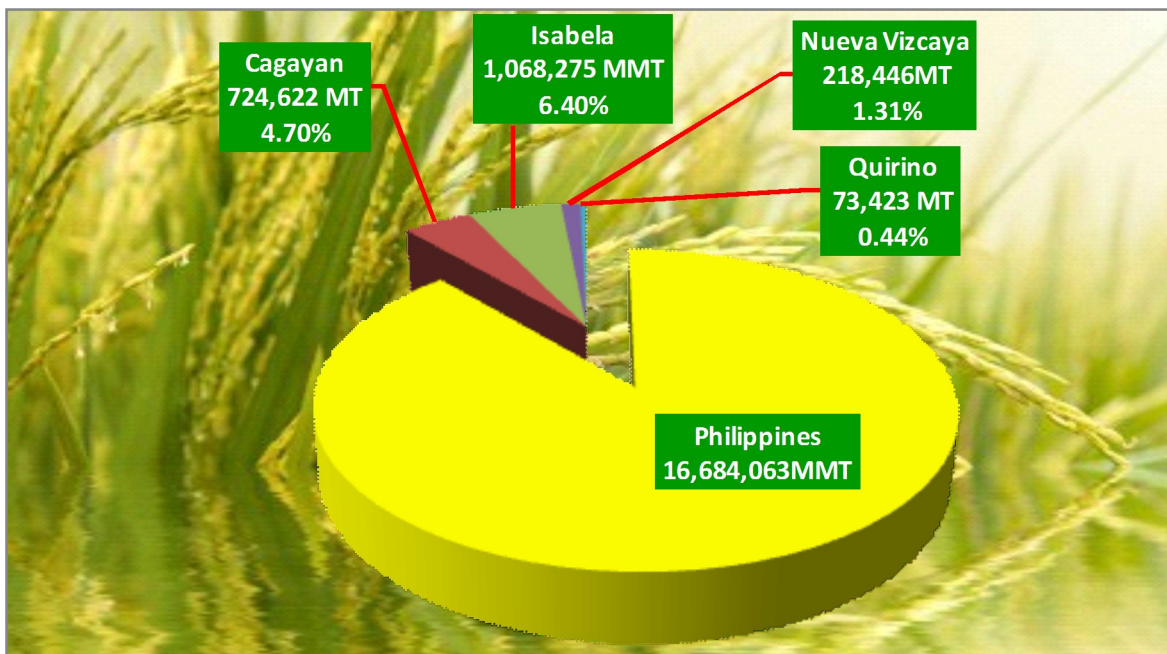
A. Production Performance

RICE

Region 02 rice sub-sector continued to be a major supplier of rice in the country. Its contribution showed 12.85 percent or about 2,144,766 million metric tons (MMT) to the national rice production of 16,684,063 MMT.

Among the Provinces in Region 02, Isabela shared the highest contribution of 6.40 percent, followed by Cagayan with 4.70 percent, 1.31 percent for Nueva Vizcaya and Quirino by 0.44 percent.

Chart I below showed the detailed percentage contributions of the provinces of the Cagayan Valley Region to the national rice production.



PERCENTAGE CONTRIBUTION OF REGION 02 RICE PRODUCTION
TO THE NATIONAL RICE PRODUCTION IN MMT, CY 2011

Batanes province is not included in the rice and corn map of Region 02 not only because the Province had a minimal production but also the Province is covered administratively by NCR in terms of grains supply and demand.

This year, Region 02 rice production grew by 22.86 percent or about 2,144,766 MMT from 1,745,722 MMT in 2010. An increase of 399,044 MT over last year's production was realized and this was attributed to the increase in area harvested by 11.15 percent or 56,455 hectares.

More harvested areas realized which contributed to this year's performance was attributed to the sufficient irrigation water, which encouraged farmers to plant and rainfall for the rainfed areas as it recovered from drought the previous year. Significant expansion and restored areas were likewise noted due to the completion of 11 sites Small Water Impounding Projects (SWIPs) amounting to Php 95.46 million.

The "palay" productivity or the average yield also improved by 10.43 percent from (3.45 mt/ha in 2010 to 3.81 mt/ha) in 2011 or an increase of seven bags at 50 kg/bag from the previous year's harvest yield.

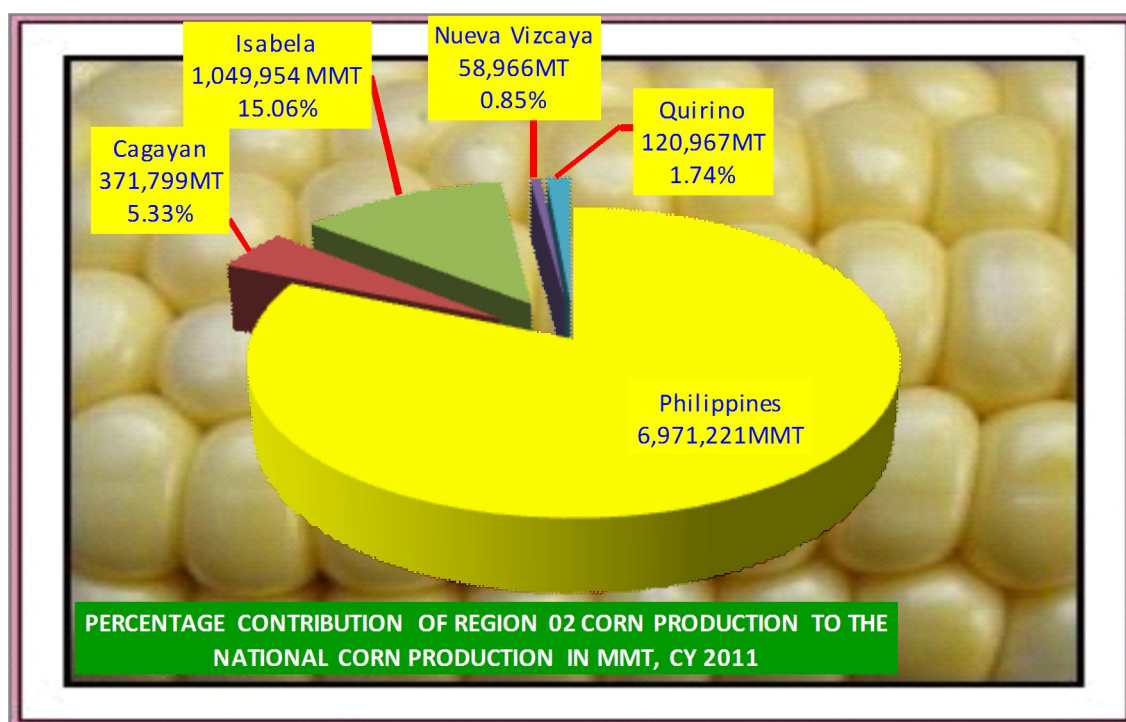
Of the total regional rice production of 2,144,766 MMT, Isabela shared the largest contribution with 50 percent or 1,068,275 MMT, followed by Cagayan with 37 percent or 784,622 MT, Nueva Vizcaya 10 percent or 218,446 MT and Quirino three percent or 73,423 MT.

Particular	2010	2011	Inc./Dec	Percent of Growth Rate
Production (MT)	1,745,722	2,144,766	399,044	22.86
Area Harvested (Ha.)	506,351	562,806	56,455	11.15
Yield (MT/Ha)	3.45	3.81	.36	10.43

Source: Bureau of Agricultural Statistics (BAS)

CORN

Region 02 continued to be the number one supplier of corn in the entire Philippines. Corn production reached about 1,601,686 MMT or 22.98 percent to the national production of 6,971,221 MMT. Among the provinces of Region 02, Isabela still the leading corn producer with 15.06 percent share. This was followed by Cagayan with 5.33 percent, Quirino by 1.74 percent and Nueva Vizcaya by 0.85 percent.



In terms of regional production, CY 2011 corn annual gross output improved by 26.75 percent or 1,601,687 MMT over last year's level. However, the production for the year was 4.25 percent below the target of 1,672,820 MMT. The production target was not attained due to occurrences of typhoons "Juaning", Mina, Pedring and Quiel".

Particular	2010	2011	Inc./Dec	Percent of Growth Rate
Production (MT)	1,263,614	1,601,686	338,072	26.75
Area Harvested (Ha.)	364,723	422,095	57,372	15.73
Yield (MT/Ha)	3.46	3.79	0.33	9.54

Source: Bureau of Agricultural Statistics (BAS)

An increase of 15.73 percent in area harvested was also realized and productivity by 9.54 percent. Additional planting areas were attained during the first semester of 2011 because of the restoration made for the damaged areas caused by the extended dry spell during the previous year. Likewise, gains in areas were also attributed to the plantings in newly opened areas brought about by the establishment of farm-to-market roads. Productivity per hectare was attributed to sufficient soil moisture and was further boosted by the increased usage of fertilizer owing to the mass utilization of improved seeds (BT/GMO) for yellow corn. Meanwhile, despite the reduction of production as a result of calamities over the target, Region 02 remained as the number one corn producer in the country. The province of Isabela still the leading province in the production of corn nationwide.

HIGH VALUE CROPS

Particular	Production (MT)		Inc./Dec	Percent Change
	2010	2011		
Fruits	517,849.92	389,305.58	(128,544.34)	(24.82)
Vegetables and rootcrops	244,069.57	270,747.09	270,503.02	10.93
Non food, industrial and commercial crops (NFICC)	280,050.77	273,258.44	(6,792.33)	(2.43)
Total	1,041,970.26	933,311.11	798,144.76	(16.32)

Source: Bureau of Agricultural Statistics (BAS)

Region 02 high value crops production showed positive growth on vegetables and rootcrops by 10.93 percent or about 270,747.09 MT over last year's level of about 244,069.57MT. The upward trend in this sub-sector was attributed to the additional area harvested, availability of high quality seeds and good crop management. On the contrary, fruits went down by 24.82 percent. The negative output on fruits was due to the lesser bearing trees harvested because of the damages caused by typhoons during the second half of the year and the effect of continuous rains during flowering and fruit set stage of some crops.

Non-food, industrial and commercial crops (NFICC) declined by 2.43 percent. This was attributed to the poor performance of the two banner commodities such as coconut and sugarcane, which are still recovering from the damages caused by calamities. Likewise, there were lesser area harvested/planted due to shiftings to palay, corn and other crops, and some areas left in-fallow due to lack of capital on sugarcane.

Priority Commodity	Production (MT)		Inc./Dec	Percent Change
	2010	2011		
Banana	368,074.23	262,193.41	(105,880.82)	(28.77)
Mango	58,781.20	46,438.53	(12,342.67)	(21.00)
Rambutan	433.65	421.72	(11.93)	(2.75)
Mongo	3,949.81	10,028.45	6,078.64	153.90
Cabbage	1,359.84	1,273.94	(85.90)	(6.32)
Eggplant	18,263.55	19,320.39	1,056.84	5.79
Tomato	10,605.48	10,318.13	(287.35)	(2.71)
Garlic	185.04	196.03	10.99	5.94
Onion	3,183.38	4,798.97	1,615.59	50.75
Camote	11,068.32	11,063.03	(5.29)	(0.05)
Cassava	41,291.29	70,059.85	28,768.56	69.67
Habichuelas	3,875.99	3,433.85	(442.14)	(11.41)
Cauliflower	87	308.35	221.35	254.43
Ampalaya	6,450.18	6,610.13	159.95	2.48
Stringbeans	18,409.68	17,502.12	(907.56)	(4.93)
Squash Fruits	45,635.84	38,837.42	(6,798.42)	(14.90)
Ginger	5,243.72	5,162.03	(81.69)	(1.56)
Carrots	758.12	712.5	(45.62)	(6.02)
Coffee dried w/ pulp	1,040.43	1,012.35	(28.08)	(2.70)
Cacao (dried beans w/pulp)	82.59	18,265.51	18,265.51	(23.11)
Total	598,779.34	527,956.71	(70,822.63)	(11.83)

LIVESTOCK AND POULTRY

Production level of livestock and poultry were on a downtrend level since 2008 until 2010. However, in CY 2011 an increased of 4.08 percent was noted. Cattle, chicken and duck eggs attained positive growth on production with 3.38, 19.9, and 2.23 percent, respectively. Poultry production gained 12.10 percent, while the livestock sub-sector decreased by a 0.99 percent. Decreased in the livestock production was attributed to the limited disposal caused by low farmgate price offered by the traders and some are not at marketable age yet.

The decrease was also due to shifting of consumers to less expensive meat like chicken. Positive production performance of poultry was due to the availability of good quality day old chicks, and increasing number of tunnel vent type of broiler farms in Cagayan and Isabela. Another contributory factor to poultry production increase is the improvement on duck eggs due to acquisition of additional laying flock in Cagayan and improved laying efficiency in Nueva Vizcaya and Quirino.

Commodity	Production (MT)		Inc./Dec	Percent Change
	2010	2011		
Carabao	13,586	12,688	(898)	(6.61)
Cattle	13,120	13,563	443	3.38
Swine	66,104	65,677	(427)	(0.65)
Goat	1,925	1,864	(61)	(3.17)
Chicken	39,409	46,970	7561	19.9
Duck	2,730	2,410	(320)	(11.72)
Chicken eggs	8,496	8,192	(304)	(3.58)
Duck eggs	3,314	3,388	74	2.23
Total	148,684	154,752	6,068	4.08

Source: Bureau of Agricultural Statistics (BAS)

FISHERY

Total production of fishery grew by 4.05 percent over last year's level. Of the 64,878 MT fishery output, municipal contributed 53.57 percent, followed by commercial with 24.73 percent while the remaining 21.70 percent was supplied by aquaculture.

Commodity	Production (MT)		Inc./Dec	Percent Change
	2010	2011		
Commercial	16,087	16,050	(63)	(0.23)
Municipal	33,821	34,755	934	2.76
Marine	21,995	22,155	160	0.73
Inland	11,826	12,600	774	6.54
Aquaculture	12,445	14,073	1,628	13.08
Total	62,353	64,878	2,525	4.05

Source: Bureau of Agricultural Statistics (BAS)

Commercial production declined by 0.23 percent brought by lesser fishing efforts owing to the diminishing fish catch on the fishing ground and dry docking of some vessels for repair and maintenance. Production on inland waters was boosted by extended fishing days and hours due to good weather and high water level and regular seeding dispersal by Bureau of Fisheries and Aquatic Resources (BFAR) and LGUs on rivers, lakes and SWIP and existence of fish shelters/sanctuaries.

Positive growth in aquaculture production was attained owing to the additional number of cages coupled with improved management practices on feeding and stocking in brackish water fish cages and more areas utilized in freshwater fishponds due to normal water level and availability of fingerlings.

B. Contributions of Agri-Fishery in the Regional Economy

Value of Production

Region 02 CY 2011 agri-fishery sector total value of production is not yet available on the (www.countrystat.gov.ph) website. However, CY 2010 total value of production at constant prices exhibited Php 42.05 billion, declined by 11.07 percent with that of 2009 value of Php 47.28 billion.

Total output at current price is valued at Php 67.63 billion, the CY 2010 declined by 9.56 percent with that of 2009.

Commodity	Value of Production (Php. in million pesos)					
	At Constant Price			At Current Price		
	2009	2010	GR%	2009	2010	GR%
Crops	35,479.03	30,146.85	(15.03)	57,197.50	49,928.55	(12.71)
Rice	18,361.03	15,432.16		31,093.29	25,819.20	
Corn	11,027.58	8,718.98		15,934.05	14,329.45	
HVC	6,090.42	5,995.71		10,170.16	9,779.90	
Livestock	5,640.54	5,664.37	0.422	9,031.64	8,704.14	(3.63)
Poultry	3,375.28	3,580.33	6.08	4,358.50	4,671.67	7.19
Fisheries	2,784.81	2,656.33	(4.61)	4,191.21	4,323.22	3.15
Total	47,279.66	42,047.88	(11.07)	74,778.85	67,627.58	(9.56)

Source: National Statistical Coordination Board

Food Self-Sufficiency

In terms of sufficiency level, rice and corn commodities are sufficient in Region 02. For rice, Region 02 posted a 262.08 percent sufficiency level for CY 2011. Corn production also recorded a 140.36 percent sufficiency level more than to meet the requirement of human and livestock sector as animal feeds.

Palay: Self Sufficiency Level by Province, Cagayan Valley 2011

Region/ Province	Production (MT)	Requirements				Sufficiency Level
		Consump- tion	Feeds/ Wastage (6.5% of Prod'n)	Seeds (75 Kg/Ha)	Total	
2011						
Cagayan Valley	2,144,766	636,754	139,410	42,210	818,375	262.08
Cagayan	784,622	241,933	51,000	15,919	308,853	254.04
Isabela	1,068,275	267,419	69,438	20,477	375,335	298.96
Nueva Viz- caya	218,446	92,498	14,199	4,200	110,896	196.98
Quirino	73,423	34,904	4,772	1,614	41,291	177.82

Note: 2010 Population was used for 2011 sufficiency level for there was no projections released yet by NSO.

Source: BAS

Corn: Self Sufficiency Level by Province, Cagayan Valley 2011

Region/ Province	Production (MT)	Requirements				Sufficiency Level
		Consump- tion	Feeds/ Wastage (6.5% of Prod'n)	Seeds (20 Kg/ Ha)	Other Uses 5% of Prod'n.	
2011						
Cagayan Valley	1,601,687	11,501	1,041,097	8,442	80,084	140.36
Cagayan	371,799	4,367	241,670	2,112	18,590	139.39
Isabela	1,049,954	6,716	682,470	5,338	52,498	140.55
Nueva Viz- caya	58,966	326	38,328	292	2,948	140.75
Quirino	120,967	92	78,629	700	6,048	141.53

Note: 2010 Population was used for 2011 sufficiency level for there was no projections released yet by NSO.

Source: BAS

2011 Results Matrix

Before the start of year, CY 2011, the Department of Agriculture set goals to achieve for the whole year. The table shows the targets for different commodities:

INDICATORS/UNIT	TARGET	ACCOMPLISHMENT
Increase in yield of major commodities in metric tons per hectare (mt/ha):		
Palay	3.85	3.81
Corn		
White	1.65	2.31
Yellow	3.82	3.89
Banana	21.29	20.32
Coconut (copra)	0.86	
Pineapple	39.58	17.48
Mango	4.39	48.28
Sugarcane	54.20	31.78
Coffee	0.80	0.55
Cacao	0.55	0.88
Rubber	3.12	
Vegetables		
Eggplant	10.06	10.30
Tomato	11.92	11.69
Cabbage	15.56	6.62
Cauliflower	11.21	3.08
Increase in volume of production (in '000 metric tons)		
Livestock		
Hog	1,927	
Chicken	1,410	

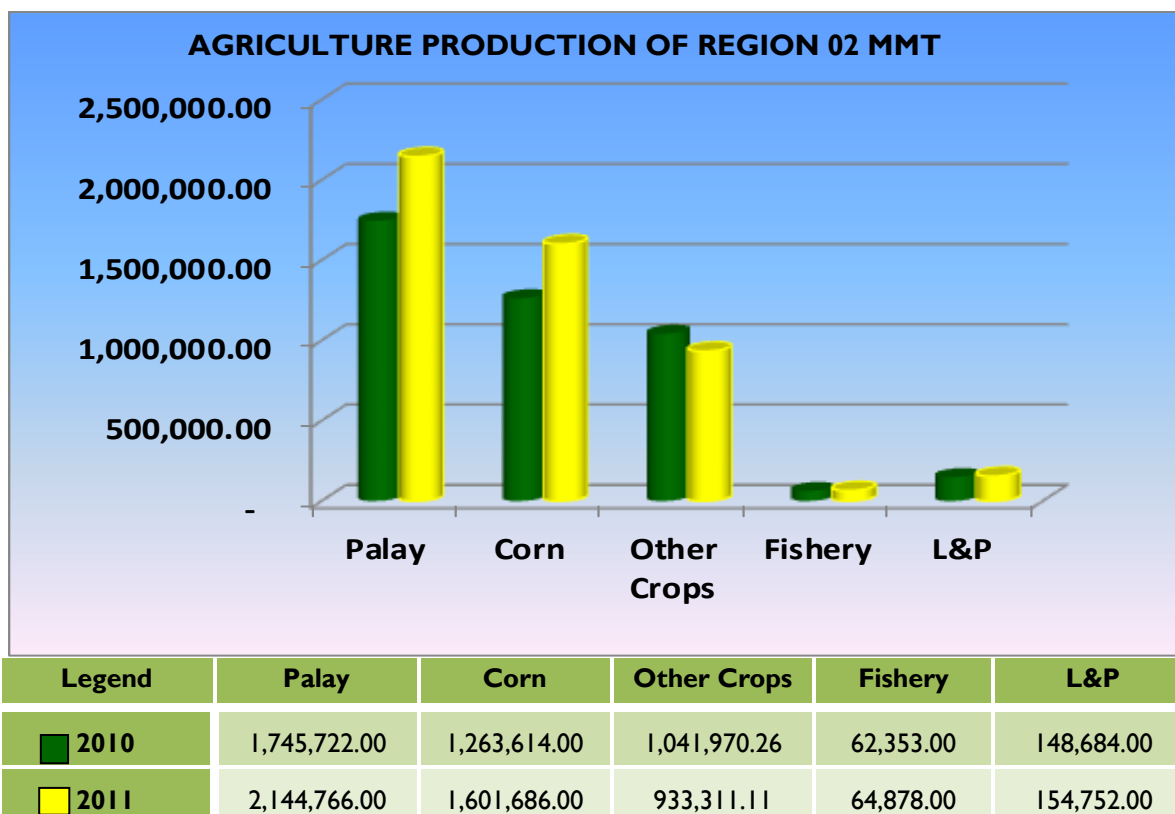


Agriculture-Fishery Sector Performance

◆ Agriculture Fishery Accomplishment

The Cagayan Valley Region or Region 02's CY 2011 agriculture and fishery sector served as a major driver of economic growth in the Region. It was able to surpass its growth of about 15 percent over last year's level. This growth is attributed from 15.51 percent increase of production for all crops, 4.05 percent increase of fishery production, and 4.08 percent increase in livestock and poultry production (Figure 1 below). It was likewise remained strong inspite of the series of typhoons (Mina, Pedring and Quiel), which hit the region during the 3rd and 4th quarters of said year, reeling down huge losses and damages to Region 02's crops and agri-infrastructures.

A substantial increase in grains production, i.e. palay and corn, was achieved based on the results of production performance surveys conducted by the Bureau of Agricultural Statistics (BAS).



Compared with 2010 production levels, palay production grew by 22.9 percent or about 1,746,000 million metric tons (MMT) in 2010 to 2,145,000 MMT in 2011. Similarly to corn, a very high growth rate of 26.8 percent in production was achieved from about 1,263,614 metric tons (MT) to 1,602,000 MT.

The positive growth rate in grains production was attributed by the increased in area harvested and yield for both rice and corn commodities, particularly during the dry cropping season. Across all ecosystems, palay yield increased from 3.45 metric tons pe hectare (MT/Ha) in 2010 to 3.81 MT/Ha in 2011. Average yield of corn likewise increased from 3.46 MT/Ha to 3.79 MT/Ha in 2011.

Other factors that contributed to the incremental production include (1) adoption of proper technology by the farmers as taught by extensionists; (2) timely government interventions like irrigation and use of registered and certified seeds; and (3) observance of appropriate planting calendar.

On other crops, particularly the high value crops (HVC), average production in the region showed positive growth, which is 10.93 percent on vegetables and rootcrops. On the contrary, non-food, industrial and commercial crops (NFICC) wherein the two banner commodities such as coconut and sugarcane belongs were down by 2.43 percent. This was due to lesser area harvested/planted because of shiftings to palay, corn and other crops. Some areas were left in-fallow due to lack of capital on sugarcane. In addition, most fruit trees are still on recovery stage during the year (2011) because of previous year's calamities.

The production levels of livestock and poultry were on a downtrend since 2008 until 2010, but in 2011, there was an increase of 4.08% for livestock and poultry. Poultry gained 12.10 percent. This was due to more supply of broiler chicks to contract growers, availability of day-old-chicks and the establishment of dressing plant. The livestock sector registered a 0.99% decrease due to less disposal of carabao, hog and goat as some are not at marketable age yet. The decrease was also due to shifting of consumers to less expensive meat like chicken.

Region 02's 2011 contribution to national production accounts for 12.85 and 22.97 percent in palay and corn, respectively, which is still a very significant share to the staple food self-sufficiency target of the Aquino Administration.

In terms of sufficiency level, rice and corn commodities are sufficient in Region 02. For rice, Region 02 posted a 262.08 percent sufficiency level for CY 2011. Corn production also recorded a 140.36 percent sufficiency level more than to meet the requirement of human and livestock sector as animal feeds.

Meanwhile, the 2011 agri-fishery sector value of production is not yet available on the (www.countrystat.gov.ph) website. However, CY 2010 value of production at constant prices exhibited Php 42.05 billion, declined by 11.07 percent with that of 2009 value of Php 47.28 billion. Of this value, the rice sub-sector has the biggest share of Php 15.43 billion, followed by corn with Php 8.7 billion, HVC with Php 5.10 billion, Livestock Php 5.6 billion, Poultry by Php 3.6 billion and Fisheries by Php 2.6 billion pesos.

Total output at current price is valued at Php 67.63 billion, the CY 2010 is declined by 9.56 percent from 2009 level.

◆ Region 02's major accomplishments by Project Level Performance Indicators

Production Support Services

- Services provided in Region 02 include seeds, planting materials, biological control agents, animal heads, semen straws and forages. There were 147,888.8 bags of rice certified seeds distributed as rehabilitation assistance to typhoons and flood affected farmers. To control rice black bugs, 6,068 packs of *metarhizium anisopliae* were distributed to farmers. To support the organic fertilizer production, Region 02 had likewise produced and distributed 146,218 packs at 400 grams each of compost fungus activator (CFA). The Region also produced 100 fertility maps in order to know the specific kind and rate of fertilizer to be applied in a specific area of a municipality;
- For corn, 2,563 bags of registered seeds (RS) of open pollinated varieties (OPV) were produced and distributed to 1,440 corn farmers of the Region. Likewise, 74,907 packets of Bio-N, 9,830 CFA, and 545,950 trichogramma cards to control major crop pests. Moreover, we also produced and distributed 1,981 colonies of earwig covering 990 hectares benefitting 990 farmers;
- For the assorted fruit planting materials like coffee, rambutan, pummelo, banana, malunggay and sweet potato, 606,092 pieces (pc) were distributed to growers/farmers. Likewise distributed 10,035 kilograms (kg) of assorted vegetable, adlai, and soybean seeds; and
- For the livestock sector, the DA-RFO 02 in collaboration with Philippine Carabao Center (PCC) and Local Government Units (LGUs) provided semen for 2,677 heads of carabao and 1,511 heads of cattle of which 577 FI carabao and 482 calve heads were produced. Two hundred fifty two heads of goats were also inseminated and produced 123 kids. Likewise, 2,516,000 pc of improved forages such as *bracharia humidicola*, *napier*, *indigofera*, *desmanthus*, *flemingia* and *setaria* were distributed to livestock raisers in the region. Twenty eight heads of bucks, of which 31 rams and ten bulls were likewise loaned-out to qualified raisers.

Market Development Services

- One of the significant accomplishments of Region 02 under this sector was the establishment of trading centers in the region. Noteworthy is the KinGBiKS Trading Center in Dupax del Sur, Nueva Vizcaya. Another focused project was the conduct of market studies/research on adlai, squash and soybeans. Regular price monitoring of priority commodities in major trading centers in Cagayan, Isabela, Nueva Vizcaya and Quirino Provinces were likewise conducted. On market related information and communication technology activities, briefing on Digital Media Signage (DMS) and use of Agriculture and Fisheries Information Service (AFMIS) program in monitoring prices of commodities were also conducted. Moreover, Region 02 also participated the national and local trade fairs.

Credit Facilitation Services

- Facilitated one project proposal for funding to Agriculture Competitiveness Enhancement Program (ACEF) entitled "Enhancement of Vegetable Production for KinGBiKS Vegetable Farmers Marketing Cooperative".

Irrigation Development Services

- To increase productivity of farmers, numerous projects under this sector was established or implemented. These include 11 new small water impounding projects (SWIPs) of which eight were established in Cagayan and four in Isabela Province. These projects contributed an additional 140 hectares (ha) of irrigated areas benefitting 105 farmers. There were also 852 water plastic drums distributed.

Other Infrastructure and Postharvest Facilities

- Postharvest equipment and machineries provided to Region 02 farmers clients include nine units processing equipment and three postharvest equipment and storage which include milling machine for adlai.

Extension Support, Education and Training Services

- Services conducted under corn sub-sector include the establishment of 197 sites Farmer-Led Extension (FLE) on Corn techno demonstrations with 6,905 enrollees covering an area of 6,905 ha and 1,264 method demonstrations on soil sampling, planting, Bio-N, trichogramma and earwig application. Four trainings and consultations participated in by 335 Corn-FLE, Task Force Mais, DA Staff, Daycare parents and guardians and other organization were likewise conducted;
- Printed six titles and distributed 5,833 pieces (pc) of Information, Education and Communication (IEC) materials such as “Bio-N para iti mais”, “Leaf Color Chart para iti mais”, “Panagusar iti apog”, “Mycotoxin flyers”, Panag paamiris iti daga” and “Trichogramma iti mais” to corn farmers in Region 02;
- For high value crops development program, Region 02 have developed and maintained seven farmer scientists. These were formerly Gawad-Saka awardees in the regional and national level. The program provided these scientists with seeds and other production inputs for the established techno demo farms;
- Also developed and distributed 3,655 pc of IEC materials which include the following: a guide to banana production, a guide to coffee production, a guide to lowland vegetable production, “malunggay” production guide, and adlai. Likewise, one thousand pieces of soybean handbook and dragon fruit production guides are for printing; and
- For livestock, Region 02 pioneered the conduct of sheep field day at the Isabela Breeding Station, Gamu, Isabela showcasing technologies on successful sheep raising. Two separate field days for goat were likewise conducted at the Cagayan Valley Hilly land Research Outreach Station (HILROS), Bagabag, Nueva Vizcaya and Cagayan Breeding Station (CBS), Solana, Cagayan. Meat processing training for senior citizens, Barangay Food Terminal (BFT) Operators, and parents and guardians of the day care pupils of the Child-Development Center of the DA-RFO 02 were also conducted.

Research and Development

- Research and Development activities under this include “Development and Improvement of Tropical Early White Flint, Glutinous and Yellow OPV Corn”, of which one white flint variety was approved by National Seed Industry Council (NSIC), and “Long Term Assessment of Organic and Lime Application on the Yield of Corn in Response to Climate Change”. Another is the “On Farmers’ Participatory Technology Development Program” wherein we have conducted five workshops and reviewed project proposals.
- On Livestock sector, there were three researches conducted at Island Agriculture Research Outreach Station (IAROS), two at HILROS and three from Regional Animal Diagnostic Disease Laboratory (RADDL). All these eight researches are continuing. The research from RADDL about “Nematophagous Fungi” and “Bovine Dermatitis” won second and third place, respectively during the Agency In-House Review on July, 2011. “Nematophagus Fungi” was also chosen as finalist during the 23rd National Research Symposium on October, 2011 and qualified as one of the Agriculture Fisheries and Modernization Act (AFMA) Research and Development (R&D) papers. It was one of the top five from the 20 entries under the category Applied Research Technology and Information Generation (T/IG) Agriculture.

Regulatory Service

- Services under this focused on the Quality Control of Seeds, Animal and Plant Quarantine Services, and Licensing and Regional Feed Laboratory Services/accreditation of feed establishments, veterinary clinics and petshops. On seed certification, Region 02 was able to issue 4,084 tags for Cagayan Valley Integrated Agricultural Research Center (CVIARC) OPV corn registered seeds (RS) and two for seed growers. Likewise, analyzed 50 samples on aflatoxin with significant reduction in content.

Information Support Services

- Finalized 28 thematic maps in seven municipalities which include Cabagan, San Pablo, Gamu, Tumauni, Luna and San Agustin, Isabela and Baggao, Cagayan;
- Maintenance of local area network (LAN), which consists of three routers, seven network hubs and six WiFi networks;
- The Department of Agriculture, Regional Field Office No. 02 (DA- RFO 02) through the Agri-Pinoy Rice Program in collaboration with the Philippine Center for Postharvest Development and Mechanization (PhilMech) conducted a two-month long School-on-the-Air Program on Postharvest Technologies with 1,200 farmer-enrollees. The said SOA was aired over five radio stations in the region: DWPE, Radyo ng Bayan Tuguegarao City; DWDY, Cauayan City; HOT-FM, Cauayan City; DWSI, Santiago City; and, U-FM, Bayombong, Nueva Vizcaya. A graduation ceremony was successfully conducted on November 16, 2011 at the FLDY Coliseum, Cauayan City, with the presence of the said farmer-enrollees, LGU technicians, Municipal Agriculturists (MAs), PhilMech staffs, DA RFO 02 staffs and other local officials and agri-stakeholders. Special prizes and certificates were given to outstanding graduates. More than the certificates of completion and prizes, the participating farmers and other agriculture stakeholders were educated of the new postharvest technologies and its uses as well as appropriate postharvest management practices in order to cut down post-harvest losses.
- DA-AgCom successfully documented the organization and other activities of the KinGBiKS Vegetable Farmers and Marketing Cooperative and came up with video presentation, feature stories published in the Bounty Valley Newsletter and other local and national dailies which have helped intensify the said organization as well as its roles in agricultural development both local and national. KinGBiKS stands for Kinabuan, Ganao, Biruk, Kimbutan and Sanguiet. The five barangays of Dupax del Sur, Nueva Vizcaya.

Policy, Planning and Advocacy

- Interventions include the preparation and submission of Work and Financial Plans, Operational Plan, and Accomplishment reports. Conduct of workshops/meetings/symposia/performance reviews were likewise tackled under this sector.

◆ Gawad-Saka Search for Agricultural Achievers

- For CY 2011 Gawad-Saka Search for Outstanding Agricultural Achievers, Region 02 bagged five National Gawad-Saka Awards under the categories of Outstanding Corn Farmer, Outstanding Sugar Cane Farmer, Outstanding Fisherfolk (Fish Capture), Municipal Agriculture and Fishery Council (MAFC) and Provincial Agriculture and Fishery Council (PAFC).

The Agriculture and Fishery Performance, Region 02's major accomplishment by Project Level Performance Indicators and Gawad-Saka Search for Agricultural Achievers are the major and significant accomplishments of Region 02 that contributed to the improvement of farmer's productivity not only in the Region but also to economic progress of the nation as a whole.



Banner and Regular Programs:

Highlights of Accomplishments

Rice Development Program



DIR. VALENTINO C. PERDIDO

Regional Technical Director for Operations and Extension
and Regional Banner Program Coordinator, Rice Program

The medium term goal of the region under the rice sub-sector is to be a major supplier of high quality rice in the country. The objectives of the Rice Program are as follows:

1. To attain and sustain average annual growth rate of at least seven percent from 2011 to 2013.
2. To increase yield per hectare from the CY 2010 level of 3.8 metric tons per hectare (mt/ha) to 4.1 mt/ha in 2011-2013 and 5.12 mt/ha in 2016.
3. To contribute by at least 2,697.2 million metric tons (MMT) to the national self-sufficiency target by 2013 and 2,947.3 MMT by 2016.



Highlights of Accomplishments

Production Support Services

Foundation Seeds to Registered Seeds (Inbred)

From the targeted area of 37.5 hectares (ha), only 69.81 percent was planted. The unaccomplished 11.32 ha were totally damaged at seedbed due to flooding caused by typhoon “Sendong”. The area planted of about 26.18 ha gave a production yield of 68.25 bags/ha below the expected production of 100 bags/ha. This is due to typhoons “Juaning, Mina, Pedring and Quiel”, which hit the region;

Seed Production for Climate Change Adaptation/Mitigation

Foundation and registered seeds planted areas were about three and six hectares, respectively. Varieties planted were as follows.

Submergence Tolerant – NSIC Rc194

Drought Tolerant – PSB Rc68 and NSIC Rc190

Saline Tolerant – NSIC Rc184 and NSIC Rc190

Rainfed and Upland – NSIC Rc11, NSIC Rc9 and NSIC Rc192

Production yield for foundation seed was only about 3.29 mt/ha. The low production was due to the effect of typhoons “Juaning, Mina, Pedring and Quiel”;



On Farm Certified Seed Production of Tolerant Varieties for Adverse Environment (thru FLE Seed Growers)

Areas planted for adverse condition such as drought, submergence, and saline tolerant varieties totaled to 15, 2 and 1 ha, respectively ;

Seed Assistance Under Rehabilitation Program (Dry season 2011-2012)

Areas affected by typhoons and flooding regionwide totaled to 170,867 ha. 75,318 bags were already distributed to affected farmer beneficiaries;

Community Seed Banking (2 kg RS)

One of the strategies to sustain the use of certified seed is the provision of two kilograms (kg) of registered seeds to farmers. Priority areas to be given are areas that have no or limited number of seed growers. Data showed that 2,139 bags were already procured and out of this, 2,087 bags or 97.6 percent were already distributed to farmer beneficiaries regionwide;

Production of Compost Fungus Activator (CFA) in Support to Modified Rapid Composting Technology (MRCT) and Organic Fertilizer Production

The Regional Soil and Isabela Seed Laboratories were able to produce 143,136 packs at 400 grams (g) and distributed 146,218 packs of CFA or about 111 percent accomplishment based from the target of about 131,400 packs. There was an increase in the number of packs distributed due to the increase in the production of CFA made from the previous years;

Biological Control Agents Distributed (*Metarhizium Anisopliae*)

In support to the control of rice black bug, which affected Divilacan, Isabela and Alfonso Castañeda, Nueva Viscaya, DA Region 02 produced 8,906 packs *metarhizium anisopliae* of which 6,068 were distributed. Distribution is still on-going for the control of the said pest.

Furthermore, buffer stocking of insecticides, fungicides and rodenticides were done to have available deterrents during any occurrence of infestation. The stock include about 12 liters (L) of insecticides, 55 kg of fungicide/bactericide and 64 kg of rodenticides or fourteen percent were already distributed to farmer beneficiaries;

Soil Sampling Analysis and Fertility Mapping and Soil Fertility Updating in Rice Areas under Communal Irrigation System (CIS), Small Water Impounding Project (SWIP)/ Diversion Dam (DD) and National Irrigation System (NIS).

To accomplish the soil fertility based map, 4,249 soil samples were collected regionwide covering an area of about 42,181 ha. Of these samples, 100 fertility maps were prepared and printed in tarpaulin, which was distributed to LGU's and NIA/CIS extension workers. The fertility maps were posted in various municipalities which indicate the kind and rate of fertilizer to be used in a particular area;

Irrigation Development Support

Eleven (11) new SWIPs were constructed, which contributed an additional 140 ha irrigated areas benefitting 105 farmers. Of the 11 SWIPs, eight and four are located in Cagayan and Isabela, respectively;



Other Infrastructure and Post Harvest Facilities

In response to the need of marginal farmers, DA-RFO 02 implemented different infrastructure projects which aim to boost agricultural productivity, reduce production losses, accessibility to production areas, and proper storage facilities to improve grain quality of farmer produce;

Efficient postharvest facilities were also provided by DA. Three hundred forty two units of Multi-Purpose Drying Pavements (MPDP) were constructed. For the Farm-to-Market Road , 34.46 kilometers were completed for CY 2011, which were funded from various and continuing appropriations. Typhoon ravaged rice fields were harvested by rice combine harvesters (RCH), thus minimizing typhoon damage losses; and

Information Support Services

The DA-RFO 02 through the Agri-Pinoy Rice Program in collaboration with the Philippine Center for Postharvest Development and Mechanization (PhilMech) conducted a two-month long School-on-the-Air Program on Postharvest Technologies with 1,200 farmer-enrollees. The said SOA was aired over five radio stations in the region: DWPE, Radyo ng Bayan Tuguegarao City; DWDY, Cauayan City; HOT-FM, Cauayan City; DWSI, Santiago City; and, U-FM, Bayombong, Nueva Vizcaya. A graduation ceremony was successfully conducted on November 16, 2011 at the FLDY Coliseum, Cauayan City, with the presence of the said farmer-enrollees, LGU technicians, Municipal Agriculturists (MAs), PhilMech staffs, DA RFO 02 staffs and other local officials and agri-stakeholders. Special prizes and certificates were given to outstanding graduates. More than the certificates of completion and prizes, the participating farmers and other agriculture stakeholders were educated of the new postharvest technologies and its uses as well as appropriate postharvest management practices in order to cut down postharvest losses.



(Counterclockwise) DA-RFO 02 Regional Executive Director Lucrecio R. Alviar, Jr., PhilMech ESETS Director I Raul R. Paz, and DA RFO 02-AgCom Chief Edito R. Bañares thanked the participating farmers and the local government units for their valuable support to the School-on-the-Air Program of DA-RFO 02 and PhilMech dubbed as “Sagip-Ani Radyo Eskwela”. The participants likewise extended their gratitude to the said agencies for bringing forward agri-services which help improve their farm productivity towards attaining food self-sufficiency.

Information Support Services

DA-AgCom Section packaged rice diseases flyers in Ilocano dialect (rice tungro virus, stem rot, bacterial leaf streak, sheath rot, brown spot, and bacterial leaf blight) and distributed to the participants of the on-going FLE trainings in the region, farmer-listeners of Magsasakang Pinoy and Agri-Pinoy Bantay Ani radio programs of DA-RFO 02 and other agriculture stakeholders. Said reading materials are aimed at educating farmers of the appropriate management options against rice diseases to avoid resorting to chemical-based applications which have long-term negative impact to human health and environment.



Corn Development Program

DIR. ORLANDO J. LORENZANA

Regional Technical Director for Research and Regulatory
Regional Banner Program Coordinator, Corn Program



Region 02 aimed to become the major producer, supplier and user of high quality corn for food, feeds and for industrial uses. As such, for CY 2011, Corn Development Program focused on two objectives as follows:

1. Increase productivity to 3.87 mt/ha; and
2. Increase quality of production and reduce postharvest losses.

Highlights of Accomplishments:

Production Support Services

Produced and distributed 2,563 bags registered seeds (RS) of OPV corn to 1,440 farmer beneficiaries of Cagayan, Isabela, Nueva Vizcaya, Quirino and other Regions, which can be recycled for planting purposes;

Produced and distributed 74,907 packets Bio-N to Corn Farmer-Led Extensionists (FLE) and farmers of the previously calamity affected corn areas;



Production Support Services

Analyzed 2,318 soil samples serving 4,206 ha with 1,016 clients from Cagayan, Isabela, Nueva Vizcaya, Quirino, Kalinga corn areas;

Produced and distributed 9,830 packets of Compost Fungus Activator (CFA) to FLE and corn cluster areas; and

Produced and distributed 545,950 trichogramma cards for the control of corn borers covering an area of 4,839 ha benefiting 4,525 farmers.

Produced and distributed 1,981 earwig colonies for 990 ha with 999 beneficiaries;

Monitored the occurrence of pest and diseases in 55,000 ha corn areas and provided technical assistance and recommendation to farmers regarding pest control; and

Distributed seven units four-wheel drive tractors. One unit is for delivery to MLGU Quirino, Isabela.

Market Development Service

Assisted 15 groups in market matching activities; and conducted 48 corn price monitoring in 12 major trading centers in Cagayan, Isabela, Nueva Vizcaya and Quirino.

Extension Support, Education and Training Services

Conducted and established 197 sites FLE on corn techno demonstrations with 6,905 enrollees with an area of 6,905 ha. Conducted 1,264 method demonstrations on soil sampling, planting, Bio-N, trichogramma and earwig application.

Conducted four trainings/consultations led by Institutional Development Section participated in by 335 corn FLE, Task Force Mais, DA Staffs, Daycare parents and guardians and other organization;

Extended support to 197 Local Government Unit Agricultural Extension Workers (LGU-AEW) under the Corn Program; and

Printed six titles and distributed 5,833 pieces IEC materials/flyers such as “Bio-N para iti mais“, “Leaf Color Chart para iti Mais”, “Panagusar iti Apog”, “Mycotoxin flyers”, Panagpaamiris iti Daga” and “Trichogramma iti Mais” to Region 02 corn farmers.

Research and Development

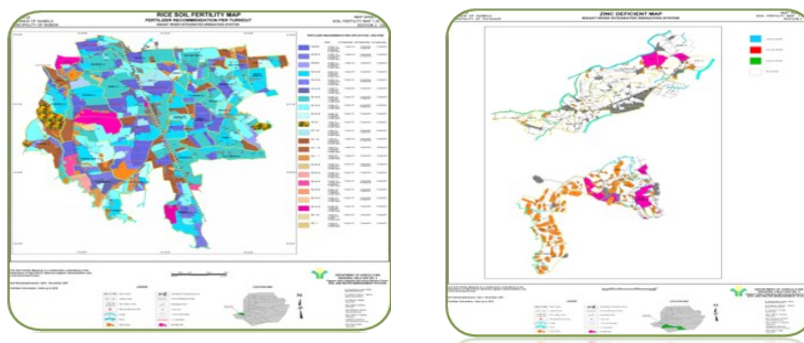
Conducted researches on the following:

- Development and Improvement of Tropical Early White Flint, Glutinous and Yellow OPV Corn. One white flint variety was approved by NSIC.
- Long Term Assessment of Organic and Lime Application on the Yield of Corn in Response to Climate Change.

On Farmers' Participatory Technology Development Program, conducted five workshops and reviewed project proposals.

Information Support Services

Finalized 28 thematic maps in seven municipalities, which include Cabagan, San Pablo, Gamu, Tumauni, Luna and San Agustin, Isabela; and Baggao, Cagayan.



Regulatory Services

On seed certification, issued 4,084 tags for CVIARC OPV Corn RS and two for seed growers. Analyzed 50 samples on aflatoxin with significant reduction in content.

High Value Crops Development Program



MR. ROBERT B. OLINARES

Regional Banner Program Coordinator - High Value Crops Development Program (HVCDP)

Highlights of Accomplishments:

Production Support Services

Planting Materials. Procured 677,393 pieces of various planting materials of coffee, rambutan, pummelo, banana, malunggay and sweet potato and distributed 606,092 pieces of such.

Based on the planting materials target of 677,393 pieces, we have procured 100 percent and distributed 89.47 percent of such. The balance will be accomplished on the first quarter of CY 2012.



Seeds. Of the 64,510 kilograms seed requirement of garlic, upland and lowland vegetables, adlai and soybeans, 52.82 percent was procured. Of the procured, 30.49 percent was distributed. There was a delay in the procurement of adlai and soybean seeds since the harvesting period for seed purposes will be on the first quarter of CY 2012.

Farm Equipment and Machineries. The small farm equipment includes six multi-crop cultivator equipped with eight horse power (8-Hp) gasoline engine, four-speed 2-forward/2-speed reverse with deep tilling knives. The equipment is used to set trench, bed forming, and plow and harrow for weeding. It is usually used by gardeners in sloping areas where big tractors are not feasible. The other equipment are six sets of power tiller equipped with 9-Hp diesel engine with trailer and heavy duty transmission with accessories (disc plow, disc harrow and gauge wheel). We have also procured and distributed 395 knapsack sprayers nationwide.

Support to Farm Production. Support to farm production include 45 draft animals and 114 small farm implements (moldboard plow). The draft animals were issued to farmer beneficiaries on a counterparting scheme. The farmer shares ten percent of the market value of the animal, which is P35,000.00 and this will be used for the insurance of the animal.

School Garden. There were 869 agriculture teachers who were able to establish their school garden in the Region. Of this 869 trained teachers, 534 came from the convergence areas of Isabela. There was an increase of participants because of the inclusion of convergence areas as part of the intervention to established school garden.

Production Facilities Established. These facilities which include ten rain shelters, two greenhouses system, two nurseries and one seed storage will be accomplished on the first quarter of CY 2012.

Production facilities rehabilitated include four units green house system, four units screenhouse/nethouse, four units nursery and five units seed storage.

Organic/biological fertilizer and biological control agent plant established. These facilities were incorporated in the Cagayan Valley Integrated Agriculture Laboratory Services (CVIALS) building at Government Center, Carig, Tuguegarao City. This is a one-stop-shop laboratory for crops and livestock. On-going construction of said laboratory.

Soil Analysis Instrument. Of the 219 pieces of soil pH meter procured, 109 pieces were already distributed. On-going distribution of the remaining 110 pieces.

Market Development Support Services

On going survey of market studies/research on adlai, squash and soybeans. Conducted activities related to Market Information and Communication Technology. Likewise, conducted briefing on Digital Media Signage (DMS) and use of AFMIS program in monitoring prices of commodities and attended three trade fairs in Metro Manila, namely: IFEX, AGRI-LINK, PHIL-FOODEX and AGRI-KULTURA (convergence).

Credit Facilitation

Facilitated one project proposal for funding to ACEF entitled “Enhancement of Vegetable Production for KinGBiKS Vegetable Farmers Marketing Cooperative”.

Irrigation Development Services

Small Farm Reservoir. This will be constructed as concrete tanks to be established in the DA-ROS to augment existing tank of the windmill.

Spring Development. Validated nine sites of spring development. Procurement of supplies are on-going.

HDPE pipes. Five thousand eighty (5,080) meters delivered and the remaining balance for delivery.

Water plastic drum. One thousand three hundred seventy three pieces were procured and distribution of such are on-going.

Other Infrastructure and Postharvest facilities

Processing equipment. Six units programmed for soybean milk and bean curd machines but the budget is not enough. As such, only four units were procured. Four vacuum packaging machines procured for soybeans and vegetables and one unit multi-purpose chopper, grinder/pulverizer for vegetables.

Postharvest equipment. Three units were procured and distributed which includes milling machines for adlai.

Processing facilities/plant established. The processing equipment include six coffee depulper and three coffee roasters, one unit multi-crop slicing machine and one unit multi-purpose dryer/sterilizer machine.

Extension Support, Education and Training Services

We have developed and maintained seven farmer scientists. These were formerly Gawad-Saka awardees in the regional and national level. The program provided them with seeds and other production inputs for the established techno demo farms.

For a more intensive extension delivery system, a year-round radio program dubbed as “Magsasakang Pinoy” is being facilitated and maintained by DA-Agricultural Communication (AgCom) Section which is aired daily over six (6) radio stations. Another radio program dubbed “Agri-Pinoy Bantay Ani” is being maintained by the DA-RFO 02 in partnership with the Provincial Local Government Unit (PLGU) of Isabela over DZNC Bombo Radyo, Cauayan City, Isabela. The said program is aired every Sunday aimed at imparting the complementary agri services of the DA and and PLGU Isabela.



In support to high value crop production, the DA-AgCom packaged 10, 000 flyers on indigenous vegetables production (talinum, malunggay, ampalayang ligaw, pako, labong, kuli-tis, himbabao, katuray, and saluyot) for farmers to help intensify organic farming in the region. Lowland vegetables, banana and coffee production kits were also distributed to the regionwide Gulayan sa Paaralan participants and other farmers.



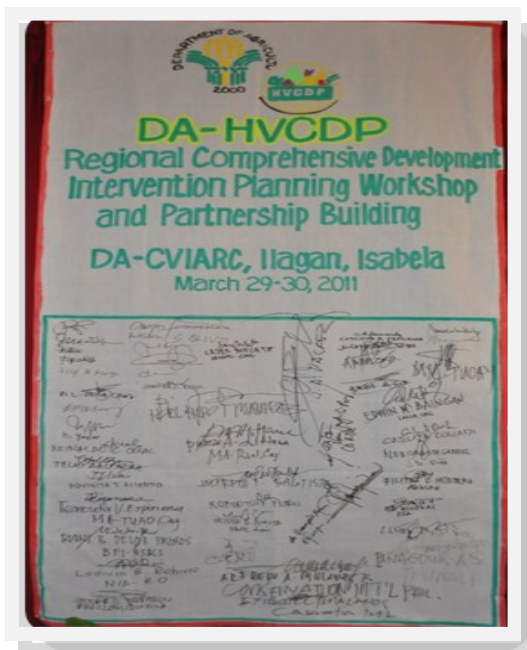
We have developed and distributed IEC materials of 3,655 pieces and 1,000 pieces for printing (soybean and dragon fruit , which include: a guide to banana production, a guide to coffee production, a guide to lowland vegetable production, malunggay production guide, adlai and soybean

Information Support Services

DA-AgCom successfully documented the organization and other activities of the KinGBiKS Vegetable and Marketing Cooperative and came up with video presentation, feature stories published in the Bounty Valley Newsletter and other local and national dailies which have helped intensify the said organization as well as its roles in agricultural development both local and national.



Policy , Planning and Advocacy



The DA-RFO 02 through its HVCDP conducted the first-ever two-day Regional Consultation and Planning Workshop on high value crops development on March 29 -30, 2011. The activity drew together participants from local government units, municipal and provincial agriculturists, non-government organizations, input suppliers, traders, members of the Regional Management Committee (RMC), and state colleges and universities. The AgCom being the information arm of DA-RFO 02 successfully documented the said activity and came up with a "Workshop Proceedings" submitted to DA-HVCDP Central Office which can serve as a reference for future policy formulation.

Livestock Development Program



DR. RONIE ERNST DUQUE

Agricultural Center Chief III, Regional Banner
Program Coordinator-Livestock Program

DR. GERONIMA G. LUDAN

Chief, Livestock Division



Highlights of Accomplishments:

Production Support Services

Genetic Improvement Program

The Small Ruminant Genetic Improvement Program focused on the production and promotion of purebred goats like fullblood boer and kalahari red, anglo nubian and purebred sheep like katahdin and st. croix. For CY 2011, 62 heads of boer and kalahari red kids were produced at the Cagayan Breeding Station (CBS) in Solana, Cagayan while 54 anglo-nubian heads were produced at the CVHILROS, Bagabag, Nueva Vizcaya. The Isabela Breeding Station (IBS) at Gamu, Isabela produced 128 lambs.

Unified Artificial Insemination Program

The Unified Artificial Insemination Program (UNAIP) was conceptualized to support the Genetic Improvement Program of the DA. UNAIP aims to harmonize all existing artificial insemination activities and at the same time set the strategic direction in carrying out efficient and effective livestock breeding programs and in localizing the delivery of AI services by LGUs.

The DA-RFO 02 in collaboration with the Philippine Carabao Center (PCC) and LGUs have artificially inseminated 2,677 and 1,511 heads of carabao and cattle, respectively. Five hundred seventy seven (577) F1 carabao heads and 482 heads of calves were produced. High conception rate is attributed to the improved AI delivery services of the LGUs and village-based AI technicians. Setting the current market prices of Php 15,000 per head, the program has contributed approximately Php 15.135 million worth of animals to the economy.

Two hundred fifty two (252) heads of goat were inseminated and produced 123 kids in the different production farms in the region. The said activity is in collaboration with the Cagayan Valley Small Ruminant Research Center (CVSRRC) at the Isabela State University (ISU), Echague, Isabela

To intensify upgrading of cattle and carabao, the DA-RFO 02 sponsored a training on AI in large ruminants to eight LGU technicians of Batanes.

Cagayan Valley Integrated Dairy Development Program

The Dairy Program is a collaborative effort duly supported by the National and LGUs including the private sector.

The DA-RFO 02 is the lead coordinator in the program implementation. The Dairy Advisory Committee was tasked to steer the implementation of the Dairy Industry Plans. Project cooperating entities include stakeholders such as Regional Line Agencies, LGUs, State Colleges and Universities, Private Sector, Non-Government Units and Dairy Entrepreneurs.

Three batches of training on Dairy Processing and two batches on Advanced Reproductive Physiology Training participated in by dairy cooperatives, regular AI Technicians regionwide and Village-based AI Technicians were conducted with the assistance of Canadian consultant.

Received two units milking machine from LDC-NABCOR for the Goat Dairy Development Project.

In the province of Quirino, CVUPROS conducted AI on cattle using Holstein friesian and sahiwal breeds, bulgarian buffalo for carabao and anglo nubian for goats.

Forage Development Program

Proper nutrition is one way of assuring the productivity and good health of animals. To complement the Small and Large Ruminant Genetic Improvement Program, 43.5 ha of pasture have been maintained and an additional 1.5 ha was established in the various livestock stations. Forage and fodder tree seed banks and grazing areas have been expanded to ensure a steady supply of feed resources and planting materials for in-house breeder animals. A total of 2,516,000 pc of planting materials such as bracharia humidicola, napier, indigofera, desmanthus, flemingia and setaria were distributed to livestock raisers in the region.

Breeder Loan Program

Twenty eight bucks, 31 rams and ten bulls have been loaned out to qualified livestock raisers after a thorough evaluation of their capabilities to raise purebred animals. Periodic monitoring of animal is conducted and technical assistance in terms of animal health and production is provided as part of the extension delivery services to beneficiaries.

Goat Dairy Development Program

CV-HILROS launched its Dairy Goat Development project thru the establishment of two units milking machine and milking parlor area.

Animal Health Services

As the Philippines is now free from Avian Influenza and Foot and Mouth Disease and recently, declared by the World Health Organization, the DA-RFO 02 Livestock Division is prioritizing and focusing to animal diseases, which are “zoonotic” and economically important.

As far as priority diseases are concerned, endemic diseases, which are regularly occurring in Region 02 did not cause major outbreak. This was attributed by a sustainable coordinating mechanism between the DA and the LGUs.

For this year, hemorrhagic septicemia vaccination posted an increase of 27 percent as compared with last year's level. The rabies vaccination increased by nine percent with 103,914 dogs served. Meanwhile, anthrax vaccination declined by 44 percent due to the decrease production of anthrax vaccine by BAI.

Disease Diagnostic Services

The Regional Animal Disease Diagnostic Laboratory (RADDL) Services with its major laboratory examinations such as parasitological, pathological, serological, microbiological and rabies was able to test 5,883 samples, a slight increase over the 5,800 total target for CY 2011.

Milestones for the RADDL are as follows:

- First laboratory to diagnose *Caseous Lymphadenitis* in the country.
- Recognized by different institutions/state universities and colleges as training ground for students taking up Veterinary Medicine, B.S. Biology and other Agricultural courses, for their internship, on-the-job trainings, and conduct of researches.
- Responded immediately with an accurate diagnosis and appropriate treatment recommendation in *Pasteurellosis* outbreak in Cagayan Breeding Station (CBS).
- Catered to private clinics and farms for fast and accurate diagnosis of diseases.
- Acquisition of basic facilities for the establishment of Livestock Molecular Laboratory to fast track diagnosis.

Extension Support, Education and Training

Conduct of Livestock Field Days

Region 02 pioneered the conduct of field days among DA Stations aside from the usual on-site farmers' field days. The first one which is the Sheep Field Day, which was initiated by the Isabela Breeding Station (IBS), Gamu, Isabela showcasing technologies on successful sheep raising. It was participated in by enthusiastic livestock raisers and other stakeholders as manifested by the large number of attendees. Two separate field days for goat were likewise conducted in CVHILROS and CBS. Small ruminant raisers, local officials, academe, livestock agencies participated in the said events.

The CBS focused its meat goat field day on fullblood boer and kalahari red processed meat and leathercraft, while CVHILROS showcased the purebred anglo nubian.



Regional Animal Products and By-Products Development Center (RAPDC)

A seminar on meat processing was conducted among 17 senior citizens. Lecture-demonstrations were also conducted to walk-in clients and pamphlets in meat processing were distributed to interested individuals.

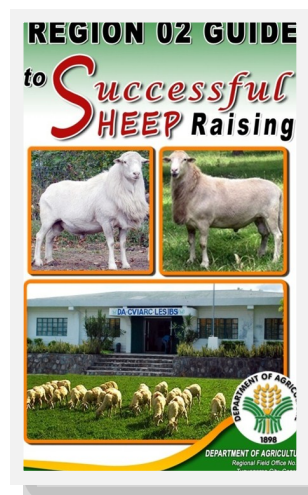
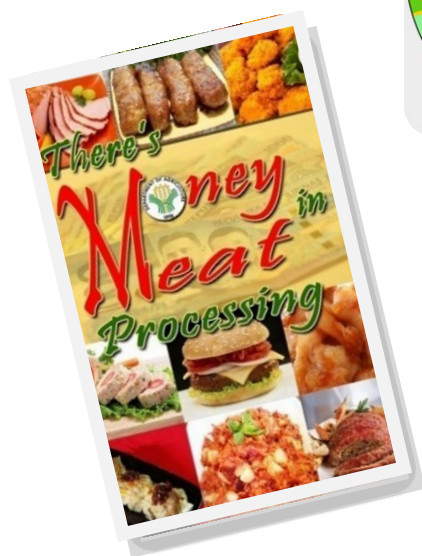
To enhance the skills and capabilities of its target clientele, the Regional Animal Products Development Center (RAPDC) conducted two trainings for the Barangay Food Terminal (BFT) Operators in the region and for the parents and guardians of the Day Care Pupils of the Child-Development Center of the DA-RFO 02. They are located at Sta. Fe, and Kayapa, Nueva Vizcaya; and Sta. Praxedes and Aparri, Cagayan.

Research and Development

There were eight on-going research studies being conducted on livestock. Three researches conducted in IAROS, two at HILROS and three in RADDL. The research of RADDL about “Identification of Nematophagous Fungi for the Control of Parasitic Gastroenteritis among Small Ruminants in Region 02” and “Epidemiological Study of Bovine Dermatitis (NUKA) in Five Batanes Municipalities” won second and third place respectively during the Agency In-House Review on July, 2011. Study on Nematophagus Fungi was also chosen as finalist during the 23rd National Research Symposium on October, 2011 and qualified as one of the AFMA R&D papers. It was one of the top five from the 20 entries under the category Applied Research Technology and Information Generation (TG/TA) Agriculture.

Information Support Services

The DA-RFO 02 through the IBS conducted the first-ever Field Day on Sheep products and technologies which was attended by sheep raisers, livestock development council (LDC), BAI, local government units, provincial and municipal agriculturists, agri-extension workers, state colleges and universities, and other agri-stakeholders. For its part, the DA-AgCom documented the different sheep production activities of the station and packaged video presentation and region 02 technoguide to successful sheep raising, which were distributed during the said event and to other farmers in the region. The IEC materials are aimed at upgrading the knowledge of existing and would-be raisers for a more efficient and sustainable sheep production in the region.



DA-AgCom likewise packaged brochures on meat processing in support to the livelihood program of the DA-AMAS for value-adding enterprises of women and other farmers in the region.

Regulatory Services

Regional Veterinary Quarantine Services

The Veterinary Quarantine and Inspection Services in Region 02 has established and strengthened eight Quarantine Station Checkpoints with sufficient manpower and logistics, catering 24/7 service in every strategic entry and exit points of the Region.

Through strict enforcement of existing quarantine policies, this office has regulated movements of animals, its products and by-products with registration of 88 Handlers' License and accredited 58 Livestock/Meat Transport carriers and ensure disease-free and good quality animals, meat products and by-products out going and incoming in the Region. There were 34,213,183 million heads of livestock and poultry; 28,373,793 kg of meat products; 80,206,454 pc of egg and 37,080 bags of chicken dung with 2,451 clientele served.

At least 66 violators were intercepted and prevented entry due to non-compliance of existing regulations with doubtful source of origin. Likewise, the Office was able to send back 36 heads livestock; 38,900 poultry; 23,950 kg meat; and 191,000 pc eggs.

Boarding and inspection of 77 foreign vessels arrived in the Region were undertaken. This is to ensure that the food stock for the vessels are not threat to human and animal health.

The Office also conducted 44 disease surveillance and post entry inspection of poultry and breeder animals. All blood and fecal samples submitted for laboratory tests were found negative from Avian Flu and other diseases of economic importance which redound in sustaining our region as Bird Flu-Free area.

Region 02 Quarantine Stations have monitored and recorded 1,745,304.24 MMT and prices of HVCC and grains being transported to Metro Manila and other points outside Region 02 as data seed bank in support to DA Marketing and Information System (MIS).

Licensing Services

With the continuous enforcement of Feed Quality, Veterinary Drugs and Biologics, and Products Standard, 388 licenses processed for Feed Establishments, nine for Feed Manufacturers, 70 for VDAP Establishments, 12 Feed Distributors, 116 Livestock Handlers and 63 Transport Carriers. Conducted an information dissemination seminar on Livestock and Poultry Handlers, Animal feeds/VDAP and Biologics Laws, rules, policies and regulations in Basco, Batanes.

Regional Feed Laboratory Services

The DA-RFO 02 Feed Laboratory, recognized by the BAI as a Tertiary Laboratory, catered the needs of livestock and poultry raisers, State Colleges and Universities, researchers and entrepreneurs of Region 02 and some provinces of Cordillera Administrative Region (CAR) for nutritional analysis of animal rations. It performed analytical tests on feeds, feed ingredients, as well as indigenous and alternative feed resources used by animal raisers for feeding and feed compounding.

For CY 2011, the Feed Laboratory was able to analyze 1,554 mixed feed samples and feed ingredients. Analytical Determination Tests conducted were: Protein, Fat, Fiber, Moisture and Ash. Samples analyzed were certified as to conformity and results of analysis and shall be used as basis for compliance to existing standards by the Animal Feed Standard Division of the BAI.



Programs and Projects

Funded by Bureau of Agricultural Research (BAR)

LISTS OF RESEARCH AND DEVELOPMENT (R&D) PROJECTS APPROVED AND FUNDED BY BAR

TITLE	PROPO- NENT	LOCATION	AMOUNT
A. COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH (CPAR) Projects			
1. CPAR in Enhancing Productivity and Income in the Lowland Irrigated Rice-Based Farming System of Tumauni, Isabela	L.A. Gaspar, et.al	Brgy. Ugad and San Mateo, Tumauni, Isabela	1,000,000.00
2. CPAR in Enhancing Productivity and Income in the Lowland Irrigated Rice-Based Farming System of Alicia, Isabela	L.A. Gaspar, et.al	Brgy. Rizaluna and Burgos, Alicia, Isabela	2,800,000.00
3. CPAR in Enhancing Productivity and Income in the Rainfed Rice Areas of Villaverde, Nueva Vizcaya	L.A. Gaspar, et.al	Brgy. Sawmill, Pieza&Ibung, Villaverde, Nueva Vizcaya	2,649,000.00
4. CPAR in Enhancing Productivity and Income in the Corn-Based Farming System of Quezon, Nueva Vizcaya	L.A. Gaspar, et.al	Brgy. Nalubbunan and Boliwao, Quezon, N. Vizcaya	400,000.00
5. Peanut Magic : CPAR Approach Towards Enhanced Productivity in Cereal-Based Areas in Region 02	R.G. Aquino, et.al	Jones, Isabela	1,500,000.00
Sub-total			8,349,000.00

LISTS OF RESEARCH AND DEVELOPMENT (R&D) PROJECTS APPROVED AND FUNDED BY BAR (Cont.)

TITLE	PROPO- NENT	LOCATION	AMOUNT
B. COMMERCIALIZATION			
6. Organic Soybean Pro- duction Development Program in Region 02	R.G.Aquino, et.al	Isabela,Vizcaya and Quirino	3,100,000.00
Sub-total			3,100,000.00
C. APPLIED RESEARCH			
7. Development and Improvement of White Flint and Glutinous Corn Varieties	S.C.Tumamang, et.al	CVIARC, Ilagan, Isabela	500,000.00
8. Development and Improvement of OPV Corn varieties	S.C.Tumamang, et.al	CVIARC, Ilagan, Isabela	645,000.00
9. Site Specific Nutrient Management in Maize	S.C.Tumamang, et.al	Sto Tomas and San Pablo, Isa- bela	241,000.00
10. Soybean Varietal Evalua- tion Under Organic Conditions in Region 02	R.G.Aquino, et.al.	CVIARC, Ilagan, Isabela	700,000.00
11. Local Peanut Breeding Program: Bridging the GAP Between Realized and Potential Yield	R.G.Aquino, et.al	CVIARC, Ilagan, Isabela	800,000.00
12. Development and Pro- motion of Adlai as an Alternative Staple Food in Region 02	R.Y.Aquino, et. al	CVIARC, Ilagan, Isabela	500,000.00
Sub-Total			3,386,000.00
TOTAL			14,835,000.00

LISTS OF INSTITUTIONAL DEVELOPMENT GRANT PROJECTS APPROVED AND FUNDED BY BAR

TITLE	PROPO- NENT	BUDGET (P)	BENEFICIARY/ IMPLEMENTING UNIT
1. Upgrading of the R&D Facilities of the DA-CVIARC ROS	RIARC	2,000,000.00	RIARC/ CVLMROS/ CVUPROS
2. Improvement of the DA-CVIARC RD Extension Building and Its Perimeter	CVIARC-IES	810,968.00	CVIARC-IES
3. Rehabilitation of DA-RFO 02 CVIARC Seed Cold Storage Building	CVIARC-IES	1,557,397.29	CVIARC-IES
4. Rehabilitation of DA-RFO 02 CVIARC Research Working Shed/Stock Room (Old RIARs Bldg.)	CVIARC-IES	1,201,869.04	CVIARC-IES
5. Rehabilitation of Damaged Perimeter Fence of the DA-CVIARC Soil and Water Management Station	CVIARC-SWMS	980,890.68	CVIARC-SWMS
6. Repair and Rehabilitation of Typhoon Juan Damaged Facilities Structures & Equipment at DA-CVIARC-IBS	CVIARC-IBS	1,500,000.00	CVIARC-IES
7. Repair of Research Working Shed (Old RIARs Building)	CVIARC-IES	4,000,000.00	CVIARC-IES

TITLE	PROPO- NENT	BUDGET (P)	BENEFICIARY/ IMPLEMENTING UNIT
8. Repair of one unit Staff House into Guest House No. 2	CVIARC-IES	3,478,000.00	CVIARC-IES
9. Repair of Motorpool	CVIARC-SWMS	980,890.68	CVIARC-SWMS
10. Repair of Guest House No. 1	CVIARC-IBS	1,500,000.00	CVIARC-IES
11. Repair of Administration Building Components	CVIARC-IES	4,000,000.00	CVIARC-IES
12. Repair of Research Building Components	CVIARC-IES	3,478,000.00	CVIARC-IES
13. Repair of Nursery Screen Cage	CVIARC-IES	150,000.00	CVIARC-IES
14. Repair of Farm Bodega	CVIARC-IES	128,000.00	CVIARC-IES
15. Rehabilitation of 2 Units Vegetable Green Houses	CVIARC-IES	300,000.00	CVIARC-IES
16.Rehab. of one unit Peanut Breeding Green House	CVIARC-SWMS	980,890.68	CVIARC-IES
17. Rehabilitation of DA-CVIARC Cold Storage and Equipment	CVIARC-IBS	1,500,000.00	CVIARC-IES
18. Const. of the Cagayan Valley Integrated Agricultural Lab Services (four proposals)	RIARC	20,000,000.00	DA-RFO 02 Laboratory to be integrated
19. Repair and Rehab of Typhoon Juan Damaged Facilities, Structures and Equipment at CVIARC-IBS	CVIARC-IBS	4,987,878.83	CVIARC-IBS
20. Strengthening the Extension Delivery System (EDS) for Small Ruminants Industry in Cagayan, Isabela, Quirino and Nueva Vizcaya Research Outreach Stations	CVIARC-IBS	2,000,000.00	DA Research Outreach Stations
TOTAL		47,063,003.84	

SUMMARY OF PROJECTS APPROVED AND FUNDED BY DA-BAR

PROJECT	NO. OF PROJECTS	BUDGET (P)
R&D	12	14,835,000.00
B. IDG	20	47,063,000.00
TOTAL	32	61,898,000.00

ABSTRACTS/HIGHLIGHTS OF BEST PAPERS DURING THE DA-RIARC IN-HOUSE REVIEW HELD ON JULY 27-28, 2011 AT ABULUG SEED FARM, ABULUG CAGAYAN

RESEARCH CATEGORY

Second Best Paper

First Best Paper

NSIC Pn16: THE FIRST DROUGHT-RESISTANT PEANUT VARIETY RESPONSIVE TO CLIMATE CHANGE IN THE PHILIPPINES

Rose Mary G. Aquino*, Orlando J. Lorenzana**, Vanessa Joy V. Fortin* and Roman M. Santos, Jr*.

ABSTRACT

Changing climate and environment changes negatively the crop productivity. This is indicative of the need for resilient crops like peanut which has adaptive mechanisms for drought escape, avoidance and tolerance, thus the bases for the identification of drought-resistant varieties through the DA-CVIARC crop improvement project.

In the yield trials conducted from 2005 wet season (WS) to 2009 dry season (DS) cropping, line ICGV 95390 is one of the DA-CVIARC identified promising selections officially entered as National Cooperative Test (NCT) entries in 2009 WS. Besides being drought-resistant, contributory to variety acceptance to the NCT are its high yield, large seeds, medium maturity and good fodder mass. From the 28 valid trials conducted across regions in the Philippines, line ICGV 95390 belongs to the top three consistent high-yielding entries during dry season with pod yield of 2,182.3 kg/ha and highest yielder during wet season giving pod yield of 2,481.9 kg/ha. It gave a more or less 50 percent yield advantage over NSIC Pn13 check variety in Central Mindanao and Visayas during wet season trials and four percent yield advantage in Northern and Central Luzon during DS, a manifestation that it is a climate change-adaptive variety, hence, named NSIC Pn16 or “G.D.Lasam Pride” of Cagayan Valley Region.

Keywords: drought-resistant, large-seeded peanut, medium-duration peanut, processing-type peanut.

* DA- Cagayan Valley Integrated Agriculture Research Center, Ilagan, Isabela

** DA-RFO 02, San Gabriel, Tuguegarao City



IDENTIFICATION OF NEMATOPHAGOUS FUNGI FOR THE CONTROL OF PARASITIC GASTROENTERITIS AMONG SMALL RUMINANTS IN REGION 02

GG.Ludan*, GT. Zulueta*, CV. Mamauag*, MF.Campanano*, JZ Tattao*, EH.Matias*, and Sibayan, BS**.

ABSTRACT

Two hundred twenty seven (227) fecal samples and forty eight soil samples were collected from some sheep and goat farms in Region 02 and screened for the presence of nematophagous fungi to control parasitic gastroenteritis among small ruminants. *Arthrobotrys* species and *dactylella* species have been successfully isolated at the Regional Animal Disease Diagnostic Laboratory (RADDL), Tuguegarao City using the agar block, tube dilution and slide culture techniques. Both isolates manifested encouraging predatory activities on infective larvae of nematodes through the production of profuse conidia.

Only *arthobotrys* isolate was mass produced on cooked rice medium for an on farm testing for the control of nematode parasites. To test its efficacy, fungal drenching trials were done at Cagayan Breeding Station (CBS), Maguirig, Solana, Cagayan, using twelve goats, which are naturally infected with nematode parasites (predominantly *haemonchus* species). A dose rate of approximately 2.7 kilogram (kg) was divided and deposited onto the center of each of the two replicate plots per day. Fecalysis and fungal culture were conducted at RADDL following each fecal collection. The experimental plots were left undisturbed for six weeks to allow the eggs to hatch and larvae to survive. Collection of herbage samples for the isolation of infective larvae was conducted after six weeks.

The results of the study showed that there was a reduction of larva on the experimental plots. This indicates that *arthobotrys* species can be used as part of bio-control program against nematodes of small ruminants.

Keywords: anthelmintics, blastospore, culture, chlamyospore, conidium, canidiophores, fecal samples, hypha, hyaline, inoculation, larvae, morphology, mortality, mycelium, nematodes, spore.

* DA-RFO 02, San Gabriel, Tuguegarao City, Cagayan

** DA-Solana Breeding Station, Solana, Cagayan



EPIDEMIOLOGICAL STUDY OF BOVINE DERMATITIS (NUKA) IN FIVE (5) BATANES MUNICIPALITIES*

Stephanofilarial Dermatitis

G.G. Ludan**, G.T. Zulueta**, M.F. Campañano, J.Z. Tattao**, C.V. Mamauag**, E.H. Matias**

ABSTRACT

The objective of the study is to report the first confirmed “stephanofilariasis” in cattle in the Philippines, stressing the clinical appearance and topographical distribution of skin lesions and histopathology. Six hundred forty (640) male and female adult cattle from five municipalities of Batanes with high prevalence of dermatitis were examined for the appearance and location of skin lesions. Skin scrapings and swabs were taken from 89 cattle with ulcerative skin lesions for direct microscopic parasitological examination and bacterial culture. Mammary gland tissue samples collected from affected cattle sent for slaughter were subjected for deep skin scraping. Worms seen during skin scrapings were removed by forceps, washed thoroughly in normal saline, concentrated by centrifugation and then identified. Flies feeding on skin lesions, as well as ticks, were collected. “Stephanofilaria sp. Filarid” worms were recovered from 58 cattle (65.2 percent mainly from females than males) 4.4 female to male ratio, and more commonly in Uyugan (41.7 percent) compared with the municipalities of Basco, Mahatao, Ivana, Uyugan and Sabtang. However, there was no rate difference in sex and geographical distribution. Most skin lesions were observed in the dewlap, brisket and udder, and medical canthi. Lesions varied from swelling, cuts, blisters, abrasions, ulcers and scabs, with the latter two being the most common. Majority of the animals had normal leucocyte counts (84 percent) and packed cell volume (70.8 percent) but abnormal red blood counts (77.5 percent). “Histopathologic” examination revealed that patchy areas of “hyperkeratosis, dyskeratosis and acanthosis,” with accumulation of “histiocytes and eosinophils” around first stage larva of “Stephanofilaria”. Control and treatment measures eight were identified and scientifically evaluated. “Levamisole, ivermectin and trichlorfon” paste were recommended.

Key words: *bovine dermatitis, bovine, dermatitis, filarial nematodes, Stephanofilarial dermatitis*

Paper Presented to the 23rd National Research Symposium of the DA-Bureau of Agricultural Research

* DA Regional Field Office 2 Scientific Paper

** DARFO 02-Regional Animal Disease Diagnostic Laboratory, Tuguegarao City, Cagayan

DEVELOPMENT CATEGORY – RESEARCHER-MANAGED

First Best Paper

FARMER – LED EXTENSION ON RICE

Ernesto Guzman

HIGHLIGHTS



Improved and modern technology are disseminated to the farmers by the Agricultural Technologists (AT) through the use of several extension methods and techniques such as farm visits, farmers' meetings, seminars, field days and radio programs. However, it has been observed that the adoption of these technologies is relatively slow. This could be due to some reasons which include: few extension workers to serve all farmers. In the country, the ratio is 250 rice farmers per AT, and in Region 02, 363 rice farmers per AT. It is in this context lies the basic foundation of the Farmer-

Led Extension (FLE). The FLE is a multi-directional communication process between and among extension staff and farmers involving the sharing, sourcing and development of knowledge and skills in order to meet farming needs and develop innovative capacity among all actors. There are six extension delivery components used by the farmer leaders namely: technology demonstration; field research; field day; field visits; business dialogue; and planning, monitoring and evaluation. These extension delivery components are used by all the farmer extensionists.

Admittedly, the close supervision of AT of techno-demo areas are considered a plus factor to yield increment compared to those in the commercialization areas. However, the available technician of the Local Government Units (LGUs) could not supervise all the farmers during the critical stages of crop establishment.

Harnessing the potential of advanced farmers to teach and supervise co-farmers may aid extension in the countryside. The indigenous technical knowledge of these farmers gained from continuous experience may be worth considering in extension as they are survived by the test of time, climate and other adversities in specific locations. If these could be combined with scientific knowledge of the AT, it will result to a more concrete, less risk and more location-specific extension approaches in rice. This extension approach was piloted in Region 02 and its success has been replicated to other regions of the country.

The study sought to institutionalize FLE as a location-specific extension model to promote improved rice technologies in Region 02. Specifically the objectives were: (1) pilot the extension model and refine further, if necessary to suit specific group of farmers or rice growing environment; (2) popularize the FLE as a model for rice extension of the Local Government Units (LGUs); (3) capacitate the Farmer-Extensionist in promoting improved technologies in their own localities; and (4) assess the effectiveness of the FLE approach as a model of extension in promoting rice programs of the DA. In 2004, during the first year of project implementation in the region, there were 118 farmer-extensionists. It increased to 442 in 2007, but only 300 were now actively performing their duties as farmer-extensionists. Drop-outs were owing to health problems, employment abroad, change of residence, and pre-occupied with other commitments. The farmer-extensionists acted as

demonstrator to showcase the different location-specific interventions (LSI) to increase rice yield. There were 271 and 267 techno-demo farms established in the entire region during the WS2010 and DS 2010-2011, respectively. Of the 271 demo sites, only 59 percent conducted field days owing to the damaged caused by typhoon. While during the dry season, 78 percent of the 267 farms conducted its field days. As to the technology adoption rates of FLEs, about 86.9 percent used Bio-N as technology intervention in demo farms, followed by the use of hybrid seeds in demo farms with 82 percent. The use of muriate of potash recorded a 80.7 percent adoption rate. As to the technology adoption rates of enrollees, 60.95 percent of the enrollees adopted the hybrid seeds and muriate of potash, followed by Bio-N with 60.58 percent. Owing to the adoption of technological advancement on rice production by the farmer extensionists and other enrollees, an increase of about 0.3 mt/ha over the non-enrollees was observed. Hence, 2,457 mt and 2,340 mt were contributed to the regional production during the WS and DS, respectively.

* DA Regional Field Office 2, San Gabriel, Tuguegarao City, Cagayan

Second Best Paper

ENHANCING CORN PRODUCTIVITY THROUGH FARMER-LED EXTENSION IN REGION 02

Alviar Jr., LR*, Lorenzana OJ*, Aquino MFM**, Agsawa JS*, Bayucan RA***, Miguel VI****, Balao PVG***** and NM Yabis*

ABSTRACT

Region 02 ranks number one in corn production in the country. In 2008, the annual production was 1,476, 879 metric tons (mt) or 21.3 percent of the national corn production. Low productivity, however, is still a problem at an average production of only 3.78 mt/ha which is way below the economic yield potential of 8.0 to 10.0 mt/ha. This study, therefore, focused on increasing corn productivity in Region 02. The project was implemented in the four mainland corn growing provinces in Region 02 namely, Isabela, Cagayan, Nueva Vizcaya and Quirino. A total of 235 farmer-leaders were selected and trained on FLE-Extension Delivery System (EDS) from 2005 wet season (WS) to 2009 WS. Additional 56 farmers were trained during the last quarter of 2010. One thousand two technology demonstrations were established in the region since 2005. The method demonstration was focused on the different application of production technologies such as soil sampling, Bio-N, muriate of potash (MOP) and lime application, insect pest and disease diagnosis, herbicide application and maturity indices. Field days were conducted following the required for FLE. Technical briefings and open forum were also done during field days. FLE has been successfully tested and piloted in Region 02 as extension model in technology transfer of productivity enhancing technologies for the past five years of implementation. The promising results of Bio-N as demonstrated by the FLEs prompted the agency for the establishment of Bio-N mixing plant in the region. An average corn yield increment of 940 and 870 kg/ha per season can be realized in the application of Bio-N and lime, respectively with a net financial impact of Php 620.00 for Bio-N and Php 5,250.00 for lime use.

* DA Regional Field Office 2, San Gabriel, Tuguegarao City, Cagayan

** DA-CVIARC-RCPC, Ilagan, Isabela

*** DA-CVIARC, San Felipe Ilagan, Isabela

**** DA-CVLMROS, Iguig, Cagayan

***** DA-HILLROS, Bagabag, Nueva Vizcaya

PRODUCTION AND UTILIZATION OF BIOLOGICAL CONTROL AGENTS: A COST SAVING MEASURE FOR CORN MAJOR INSECT PESTS

MindaFlor M. Aquino*, Aida Z. Maramag**, Celestina L. Argonia*, Susana P. Calingasan*,
Edelito D. Baysa*, Lorenzo M. Caranguian*** & Orlando J. Lorenzana***

ABSTRACT

To save corn farmers from the burden of high production cost and low income owing to the use of expensive insecticides for insect control, this project was implemented. This was started with the participation of two Regional Crop Protection Center (RCPC) staff to RP-German sponsored training in 1989-90 and 2004 which equipped them to undergo production of biological-control agents like Trichogramma and Earwigs. Owing to the various technology promotion events (Techno demo, trainings, technical assistance and distribution of IEC materials), which were undertaken, utilization and adoption of the technologies were realized.

As an effect of strong technology promotion, an average of 675,920 Trichogramma cards and 1,037 earwig colonies were being produced annually. For Tricho cards alone, it has served 5,999 farmers covering an area of 6,728.8 ha as an annual average. In 2004, 1,037 earwig colonies were already distributed to 458 farmers which served 534.5 ha corn areas and to some extent vegetable areas within corn areas. These are indications of the technical feasibility and social acceptability of the technologies, thereby increasing corn income owing to the absence of chemical spraying that help farmers save about Php3,025.00/ha and Php 2,275.00/ha using Trichogramma and earwig, respectively.

* DA-CVIARC-Regional Crop Protection Center, Ilagan, Isabela

** DA-Cagayan Valley Lowland and Marine Research Outreach Station

*** DA RFO 02, Tuguegarao City, Cagayan



DEVELOPMENT CATEGORY - LGU MANAGED

First Best Paper

COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH (CPAR) IN ENHANCING PRODUCTIVITY AND INCOME OF THE RICE-BASED FARMING SYSTEM IN DIFFUN, QUIRINO

Paculna, S.P.; I. Erana; R.L. Sison; R.S. Busania; EV Eslava; B.T. Galoso; L.A. Gaspar and O.J. Lorenzana

HIGHLIGHTS

Enhancing the productivity and income of the rice-based farming system is one of the aims of this community-based participatory action research (CPAR). The project was focused in Diffun, Quirino where lowland rice is being considered as the base crop of farmers. The site is in two barangays, Liwayway and Ricarte Norte. The specific objectives of the project are (1) assess and determine agricultural development constraints in the rice-based farming community, (2) demonstrate rice-based farming enterprise and technology



options appropriate to increase productivity and income of farmers, and (3) capacitate farmer to avert risks. All activities in the CPAR processes were through team approach. A multi-disciplinary team was composed of researchers from DA-RFO 02 and Local Government Unit (LGU). Participatory rural appraisal or PRA was done to assess the agricultural problems of the community. The results of PRA helped to develop four project components composing of (a) increasing rice production with PalayCheck technologies, (b) integration of vegetable production in the rice-based farming system, (c) improvement of existing goat production management, and (d) duck raising in the rice-based farming system.

Results of the PRA conducted revealed constraints and problems including (a) insufficient farmers' capital for rice production, (b) low yield and income from farming, (c) poor soil fertility, (d) high incidence of malnutrition, and (e) undeveloped pasture areas that limit animal production as an enterprise in the area.

The first year of implementation of the PalayCheck System showed positive results and the integration of CPAR intervention gave higher yield and income for the farmers compared with using their practice. The income derived from the intervention of CPAR was higher than that of rice monocropping for both dry and wet season of 2010. A difference of Php 10, 923.16 and Php 10,376.17 was gained in rice production for DS and WS,

respectively. The PalayCheck intervention in rice production showed a mean net income of Php 56,390.36, while cash derived from vegetable production was Php 10, 200.00. The integration of goat and duck gained lesser cash owing to the high mortalities incurred. The CPAR interventions then, were simple and practical in application of the technologies. The farmer cooperators followed the proper utilization and management of resources. Involving in animal raising and vegetable production paved way to the readily available and healthy food such as meat and egg for the family. Other than additional income from these interventions, the assurance of healthy diet for the family was more or less achieved.

It was envisioned that after this project, self-sufficiency in rice, vegetables, goat and duck would be attain in the province of Quirino. Sustainability of the project will be the basis for the successful implementation of the project.

Second Best Paper

COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH (CPAR) IN ENHANCING PRODUCTIVITY AND INCOME OF THE CORN-BASED FARMING SYSTEM IN QUEZON, NUEVA VIZCAYA

Alcantara, R. Macadangdang, L.B.; E.B. Malihan; E.D. Rodriguez; J Dela Cruz; B.M. Lopez; A.B. Domingo; A. Apostol; E.V. Eslava; B.T. Galoso; L.A. Gaspar and O.J. Lorenzana

HIGHLIGHTS

This community-based participatory action research (CPAR) aimed to accelerate promotion of appropriate technologies for increasing productivity and income of farmers. It was implemented following the integrated farming approach maximizing the potential of the area for production and agribusiness ventures. The project was started during the wet season of 2008. It specifically aimed to (1) assess and determine agricultural development potentials and constraints on corn-based farming community, (2) identify appropriate farming enterprise and technology options for increasing productivity and income, (3) demonstrate corn-based farming enterprise and technology options, (4) generate job opportunities for other farmers within the community, and (5) capacitate farmers to avert risks. Quezon, Nueva Vizcaya, belonging to fifth class municipality was identified as one of the location in the region.



Participatory rural appraisal (PRA) was conducted in Brgy. Nalubbunan and Boliwao to identify the farmers' agricultural problems and constraints. The project was done on these two barangay for they represent the recommendation domain for corn-based farming system in Nueva Vizcaya. The results of the PRA revealed that the constraints and problems limiting development of households and farming conditions were (a) traditional cropping pattern of corn monocrop, (b) insufficiency of farmers' equity in providing capital requirements for corn production due to low yield and income, (c) insufficient production of cash crops and (d) limited extra sources of livelihood.

There were four project components identified to improve the present agricultural situation in the area namely; (1) yield boosting and cost reduction technologies for corn, (2) integration of high-valued vegetables, (3) integration of goat production, and (4) enhancement of agri-based enterprises for income generation. The integration of the four components revealed positive results. It gained the highest productivity and income. Aside from the income derived from the integration of the four components, other non-cash benefits were identified, such as, daily supply of fresh vegetables, basic commodities was met thru the daily proceeds from the vegetables while waiting for the base crop harvest, and limited incurring of loans.

In sustaining the CPAR project, there were support activities conducted like values formation workshop, technical trainings on corn, vegetable and goat production, and method demonstration on the critical aspects of the technologies being presented to farmers. A farmers' field day was also conducted. With the implementation of CPAR project it was envisioned that Quezon, Nueva Vizcaya would be known as the major source of quality goats and high-valued vegetables in Region 02.

Third Best Paper

COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH (CPAR) IN ENHANCING PRODUCTIVITY AND INCOME OF THE RICE-BASED FARMING SYSTEM IN BALLESTEROS, CAGAYAN

Oandasan, E.C.; W.T. Nicolas; R.O. Tabunar; M.P Callueng; J.R. Binarao; B.T. Galoso; L.A. Gaspar and O.J. Lorenzana

HIGHLIGHTS



capacitate farmer to avert risks.

Enhancing the productivity and income of the rice-based farming system is one of the aims of this community-based participatory action research (CPAR). The project was focused in Ballesteros, Cagayan where lowland rice is being considered as the base crop of farmers. The site is in two barangays, Fugu and Zitanga. The specific objectives of the project are (1) assess and determine agricultural development constraints in the rice-based farming community, (2) demonstrate rice-based farming enterprise and technology options appropriate to increase productivity and income of farmers, (3) become a goat-milk producing community in Northern Cagayan, and (4)

All activities in the CPAR processes were through team approach. A multi-disciplinary team was composed of researchers from DA-RFU 02 and Local Government Unit (LGU). Participatory rural appraisal or PRA was done to assess the agricultural problems of the community. The results of PRA helped to develop four project components composing of (a) introduction of modified rapid composting technology (MRCT) in rice production, (b) integration of vegetable production in the rice-based farming system, (c) improvement of existing goat production management, and (d) enterprise development/agribusiness.

During the implementation of the project, there was a decrease in rice production cost using MRCT compared to farmers' practice. Compost-making utilizing goat manure and other farm debris was demonstrated to provide other sources of organic fertilizer. This was applied on vegetable areas to lessen the inorganic fertilizer cost. Integration of vegetable and goat provides the daily households' requirements for fresh vegetables and additional income for the family.

The number of cooperators increased over the years of implementation, as well as the adopters of the different interventions presented. However, problems were also encountered during the project implementation including use of good seeds, natural calamities, pest and disease occurrence in rice and vegetables, and high mortality rate and low breeding quality of goats. To sustain the CPAR project, a roll-over scheme was implemented. The repayments from the rice component were used to finance the production requirements of the new cooperators. Other activities include values formation workshop, and technical trainings or farmers' field school. Sustainability of the project even without financial assistance from agricultural agencies will be the basis for assessing its successful implementation.

Special Programs and Projects



A. Organic Agriculture Program

The Republic Act No. 10068 also known as the “Organic Agriculture Act of 2010” which is a consolidation of the Senate Bill No. 3264 and House Bill No. 7066 was finally passed by the Senate and the House of Representatives on February 1, 2010. It is an act providing for the development and promotion of organic agriculture in the Philippines and for other purposes.

As stipulated in Section 2 (Declaration of Policy), it is the policy of the State to promote, propagate, develop further and implement the practice of organic agriculture in the Philippines that will cumulatively condition and enrich the fertility of the soil, increase farm productivity, reduce pollution and destruction of the environment, prevent the depletion of natural resources, further protect the health of farmers, consumers and the general public, and save on imported farm inputs. Towards this end, a comprehensive programs for the promotion of community-based organic agriculture systems which include, among others, farmer-produced purely organic fertilizers such as compost, pesticides and other farm inputs, together with a nationwide educational and promotional campaign for their use and processing, as well as the adoption of organic agriculture system as a viable alternative shall be undertaken.

Organic agriculture includes all agriculture systems that promote the ecologically sound, socially acceptable, economically viable and technically feasible production of food and fibers. Organic agriculture dramatically reduces external inputs by refraining from the use of chemical fertilizers, pesticides and pharmaceuticals. It also covers areas such as, but not limited to, soil fertility management, varietal breeding and selection under chemical and pesticide-free conditions, the use of biotechnology and other cultural practices that are consistent with the principles and policies of this Act, and enhance productivity without destroying the soil and harming farmers, consumers and the environment as defined by the International Federation of Organic Agriculture Movement (IFOAM): Provided, that the biotechnology herein referred to shall not include genetically modified organisms or GMOs.

Highlights of Accomplishments:

I. Briefing conducted on RA 10068

Regional and Provincial meetings and briefings were conducted to discuss the Implementing Rules and Regulations (IRR) of the Republic Act 10068. There were 1,220 participants to these briefings came from the different provinces in Region 02 including organic agriculture farmers and organic agriculture practitioners.

2. Capability Building for Provincial and Regional Organic Agriculture Enthusiasts

National and local trainings/meetings/conferences were attended to equip the Organic Agriculture Focal Person on the organic agriculture policy direction updates, alternative technologies to be used in the establishment of organic agriculture projects and other activities related to Organic Agriculture Program.

Training of Trainers (TOT) were conducted in coordination with the Agricultural Training Institute-Regional Training Center. There were 11 batches already conducted with 446 participants attended.

3. Evaluation of Project Proposals and Project Implementation

Project proposals were submitted by the different project leaders/study leaders from the DA-Outreach Stations for evaluation. The Organic Agriculture Regional Technical Committees convened in order to determine and evaluate the project proposals submitted. Out of ten proposals, eight were considered for funding amounting to Php 13,561,124.00.

Two and six projects were undertaken in coordination with the Local Government Units of Sta. Fe, Nueva Vizcaya and Sabtang, Batanes; and Department of Agriculture-Regional Field Office No. 02 Stations, respectively. These will served as technology demonstrations cum training to showcase the organic agriculture alternative technologies for vegetables, rice, corn and livestock.

The demo farms were established in the strategic locations so that nearby farmers will have an access to the method demonstrations being undertaken by the project leaders. These farmers shall act as enrollees to be trained using the demo farms as their field schools and soon emulate the organic agriculture practices employed in the techno-demonstration farms.

B. Locally Funded Projects

The Casecnan Social Measures Project is a locally funded project which is being implemented only in the Province of Quirino.

C. AGRICULTURAL COMPETITIVENESS ENHANCEMENT FUND (ACEF)

PROJECT	PROPONENTS	DATE APPROVED	PROJECT COST (In Pesos)			REMARKS
			ACEF	Proponent's Equity	Total	
1. Upgrading of Bio-Organic Fertilizer Manufacturing Project	Norphil Multi-Purpose Cooperative, Sampaguita, Solana, Cagayan	August 1, 2002	8,297,914	23,058,547	31,356,461	Repayment started but requested loan re structure. Amount of loan paid P1,439,895.91. Ar-rears as of March 2010-P6,858,018.31. Second demand letter issued on Nov. 25, 2010.
2. Malabing Valley Citrus and Tropical Fruit Services Center	Malabing Valley Multi-Purpose Cooperative Malabing, Kasibu, Nueva Vizcaya	Dec. 17, 2003	17,845,000	22,813,000	40,658,000	Loan fully released. Repayment started but requested loan re-structure.
3. Acquisition of 4WD Tractor with accessories and Forward truck	Calayan SN Multi-Purpose Cooperative (MPC) Calayan, Gonzaga, Cagayan	Dec. 7, 2006	2,800,000	650,000	3,450,000	Loan released. Payment started Sept. 2007
4. Acquisition of 4-WD Tractor with accessories	Sto. Domingo MPC Centro, Baggao, Cagayan	Dec. 7, 2006	2,800,000	700,000	3,500,000	Loan Released. Payment started Sept. 2008
5. Acquisition of 4WD Tractor with accessories	ARBA MPC , Reina Mercedes, Isabela	Dec. 7, 2006	2,500,000	500,000	3,000,000	Loan released. No payments made as of this date. Arrears-P1,000,000.00. Demand letter issued on November 25, 2011
6. Acquisition of 4WD Tractor with accessories	Maddela Integrated Farmer Cooperative. Dumabato Norte, Maddela, Quirino	Dec. 7, 2006	2,500,000	500,000	3,000,000	Loan Released. Payment started on September 2007
7. Nararagan Valley MPC Grain Center	Nararagan Valley MPC, Nararagan, Ballestes, Cagayan	July 6, 2007	6,740,000	3,035,000	9,775,000	Loan released. Re- payment started on September 2009
8. BGD Farm Swine Production Upgrading Facilities	Mr. Bernard faustino Dy, Nagrumbuan, Cauayan City, Isabela	December 18, 2009	45,000,000	42,536,250	87,536,250	2nd Tranche Released. 63.03% of building accomplish as of January 6, 2012

PROJECT	PROONENTS	DATE APPROVED	PROJECT COST (In Pesos)			REMARKS
			ACEF	Proponent's Equity	Total	
9. Establishment of Tunnel Ventilated Chicken Contract. rowing Farm in Isabela.	Atienza Agribusi- ness Enterprises/ Ronald Atienza, Minante II, Cauayan City, Isabela	18-Dec-09	14,800,000	6,650,000	21,450,000	No Released due to Non-Payment of Loan to QUEDANCOR
10. Establishment of Tunnel Ventilated Chicken Contract Growing Farm in Isabela	Y.E.F. Farm. Dominic Laguata, Minante II, Cauayan City, Isabela	18-Dec-09	14,800,000	6,650,000	21,450,000	2nd Tranche Released 44.42% building accomplished
11. Establishment of Tunnel Ventilated Chicken Contract Growing Farm in Isabela	EDV Market- ingEloisa D. Valle, Minante II, Cauayan City, Isabela	18-Dec-09	14,800,000	6,650,000	21,450,000	2nd Tranche Released 77.07% building ac- complished
12. Establishment of Tunnel Ventilated Chicken Contract Growing Farm in Isabela	RVJ Industrial Sales and Services. Engr. Romulo V. Valle, Jr., Minante II, Cauayan City, Isabela	18-Dec-09	14,800,000	6,650,000	21,450,000	2nd Tranche Released 54.36% building ac- complished
13. Establishment of Tunnel Ventilated Chicken Contract Growing Farm in Isabela	Raymund D. Val- le San Isidro, Cauayan City, Isabela	18-Dec-09	14,800,000	6,650,000	21,450,000	2nd Tranche Re- leased97.70% building accomplished

SUMMARY OF ACEF LOAN	AMOUNT
Total ACEF Loan Approved	162,482,914.00
Total ACEF Loan Releases	135,082,914.00
Total ACEF Loan Unreleased	27,400,000.00



Other Initiatives and Innovations

Other Innovations and Initiatives for Promotion

1. Research-based breakthroughs/ innovations/initiative:
 - a. Developed and identified new “Nematophagus Fungi (*Anthrobotrys* sp.) “organic de-wormer” effective to control parasitic gastro-enteritis of small ruminants in Region 02 which we are initiating its commercialization in Batanes province.
 - b. Recommendation and nomination of Line ICGV 95390 as NSIC Pn16 (locally called “GD Lasam-Pride”) known as the first drought tolerant variety in the Philippines.
 - c. Developed newly approved open pollinated variety (OPV) white corn with NSIC name IES 09-02 white flint.
 - d. First RADDL in the country to diagnose *Caseous Lymphadonitis*.
2. Immensely assisted San Mateo, Isabela in developing its Mungo Industry, till it became the “Mungo Capital of the Philippines” (DA-AO Nov 2011).
3. Launched the Organic Soybean Program in May 2011 and initiated the development of the First Handbook on Soybean Production and Distribution.
4. Started research and development projects on pigeon pea.
5. Initiated grand field days inside DA-ROS as techno-showcase of various (if not all) available technologies, a diversified-type from that of the usual farmer-led techno demonstrations.
6. Initiated a development of a clustered small farmers (KinGBiKS) into an empowered group, employing the strategies of converging efforts and resources of all stakeholders to decrease production cost engaging the complete value chain approach from provision of pre-production assistance until the post-harvesting activities.
7. Sustainable agriculture was practiced through the Organic Agriculture program.
8. Planning with LGUs and other stakeholders, crafting the regional agriculture and fisheries modernization plan 2011-2017 through the agribusiness value chain approach, emphasizing the interrelationship of ridge to reef approach in the plan.



Gawad-Saka

Agricultural Achievers



Gawad-Saka

Agricultural Achievers

DA Region 02 Gawad-Saka CY 2011 Agricultural Achievers were recognized for their exemplary performance. This year, the Cagayan Valley Region bagged five national awards.

National Awardees

I. Outstanding Corn Farmer - Mr. Diosdado M. Bermudez



At the heart of Isabela province, in its capital town Ilagan, rests an inspiring story of Mr. Diosdado M. Bermudez, adjudged as 2011 Gawad-Saka Most Outstanding Corn Farmer for 2011.

“Kap Judy”, as he is fondly called, does not only strive hard to create farming opportunities for himself, farming endeavor but his neighbors.

He began his farming endeavor with his wife Susana in 1984 by planting native corn in a half-hectare land while swine raising in his backyard. Through hardwork, they were

able to acquire an additional area and planted it with hybrid yellow corn.

To further enrich his knowledge in farming, he attended seminars and trainings, kept reading information materials and listened to radio programs of the Department of Agriculture (DA). More so, he coordinated all his farming operations with DA, a strategy that gave him a chance to become farmer cooperater of DA’s farm mechanization program on hybrid corn.

Eventually, he was chosen as techno-demo cooperater by various private companies for many cropping seasons.

“Kap Judy” gradually shifted to mechanized farming and developed improvised planting guide and marker which ensured high plant population and proper plant spacing. These planting implements enabled him to produce better quality and higher yield.

Out of his earning, he was to acquire a five-hectare agricultural land, other farm implement and transport truck which he used to ship his farm produce. Likewise, he was able to construct a decent house and purchase as motor vehicle for his family.

As a farmer-leader extensionist, “Kap Judy” wants his fellow farmers to be productive that is why he never ceases in sharing whatever knowledge he learns.

He also been actively assisting the DA and LGU in their artificial insemination and anti-rabies campaign activities making him learn the title certified “para-veterinarian”.

“Kap Judy” has another wealth of his own. He is a responsible husband and a good provider to his three children. The two are already college graduates while his youngest son is currently the Chairman of the Sangguniang Kabataan of their barangay.

Kap Judy remains humble and approachable amidst all the blessings he gained as he continuously strives to improve his farming endeavors for his success and his fellow neighbor farmers.

2. Outstanding Sugarcane Farmer –Mr. Roberto A. Cauilan, Furagui, Solana., Cagayan

Even at young age, Roberto Cauilan was already trained by his father to work in the farm, which captured his interest and later on became his armor in his future venture.

On his first stint in farming, Mang Bert decided to plant *palay* applying all the technologies he learned from attending trainings and seminars conducted by the Department of Agriculture–Regional Field Office No.02 (DA-RFO 02).

Owing to his determination and expertise, he became an accredited seed grower and one of the pioneers of hybrid rice production in Region 02.

However, in spite of remarkable profits he gained from *palay* production, Mang Bert expanded his farming endeavor by planting sugarcane production in a leased five-hectare land.

Everything went smoothly for Bert with technical support extended by the DA-RFO 02, Sugar Regulatory Administration (SRA) and the Cagayan Local Sugarcane Planters Association.

He used mechanized farming especially on land preparation, high yielding varieties, and organic fertilizers from animal manures and mud press to improve his farm’s soil quality.

He also designed a mechanical cultivator attached to the four-wheeled tractor to cultivate the inter-rows of his farm, control the growth of weeds, chop cane trashes and he incorporates them in the soil for organic fertilizer upon decomposition.

Noteworthy, he practices zero-burning of canes during harvest which helps reduce greenhouse gas emissions.



All these practices enabled him to attain good harvest and added 14 hectares more to his area.

He was able to purchase two four-wheel tractors with complete implements, three trucks to haul harvested canes, three service cars and decent houses for his family.

To maximize his area, Mang Bert also engaged in palay trading, piggery project, sheep production, and backyard poultry and was able to provide jobs to his neighbors.

More so, he was blessed with good leadership qualities and served as leader in different organizations and he is now the vice mayor of Solana, Cagayan. All of these are the sweet fruits of Bert's diligence, patience and perseverance which are greatly attributed to the unconditional blessings of the Lord Almighty and for believing that without Him, he is nothing.

3. Outstanding Fisherfolk (Fish Capture) – Eddie V. Amorada Palawig, Sta. Ana, Cagayan

Mr. Eddie Ventura Amorada grew up near the sea. The body of water which was his playground when he was a child is now his source of bread and butter.

Mand Eddie decided to work to provide good education for his younger siblings and help his mother who worked as laundrywoman in their neighborhood, when his father met a tragic accident.

On his own, he improved the fishing techniques taught by his father. Soon enough he became a productive fisherman in their locality.

As the country has unpredictable weather condition, Mang Eddie acquired a tricycle and put up a sari-sari store as other sources of income.

Mang Eddie is a wise man because when the price of fish in the market is low, he processed his produce into fish paste or "bagoong", providing an additional income for the family.

He attended various livelihood trainings on fisheries and other livelihood programs conducted by both local and national governments and shared what he learned to his fellow fisherman.



In October 2010, Mang Eddie was also instrumental in the prompt rescue of more than 20 stranded marine mammals in the locality by informing immediately the concerned agencies about it. He believes that he needs to take care of his environment because it is the source of his living.

With almost six decades of fishing experience, Mang Eddie is always tapped as a leader of fisherfolk associations in their community.

4. Outstanding MAFC -Municipal Agriculture and Fishery Council of Kayapa, Nueva Vizcaya



The MAFC of Kayapa, Nueva Vizcaya started in 1980's with only 16 barangay members and joined by the 14 remaining barangays later on.

To ensure strong and continued partnership among all the members, regular meetings and dialogues were conducted to settle issues and other matters concerning the council.

Soon it gained the trust of the Local Government Unit

and the “Liga ng mga Barangays” and was given fund allocations for their activities.

As an organized group, the Kayapa MAFC introduced livelihood programs such as mushroom production and processing of high value crops.

It also distributes fruit bearing trees, coffee seedlings and vegetable seeds to qualified farmers.

At present, the council maintains revolving fund from repayments of dispersal project, used for petty cash loans to members with a minimal interest.

The council is an active partner of the Municipal Nutrition Committee in the implementation of Municipal ordinances including control and preservation of Avian Influenza virus, prohibition of electro-fishing, explosive fishing and use of poisonous substances, implementation of the New Solid Waste Management and recycling activities of the municipality.

5. Outstanding PAFC—Provincial Agricultural and Fishery Council (PAFC) Nueva Vizcaya

The PAFC Nueva Viscaya, with 30 private and eight public sector-members strongly supports the province's vision for its people, to enjoy a good quality of life in an ecologically-balanced and sustainable environment.

Having been awarded as National Outstanding PAFC (three times), the council vows not to rest on its laurel but work harder to maintain and even surpass its outstanding achievements.



The Nueva Viscaya PAFC sustained strong linkages with national and local agencies that resulted to the implementation of various projects such as construction of and rehabilitation of irrigation canals, farm to market roads, mechanical flatbed dryers, tramlines, multi-purpose drying pavements, and irrigation systems.

Noteworthy, it is an instrumental in the successful organization and operation of the KingBiKS Vegetable Farmers and Marketing Cooperative, a federation of five vegetable growing barangays of the town of Dupax del Sur. Being a member of the Provincial Development Council, it regularly monitors the implementation of agricultural and fishery programs and projects being funded by Department of Agriculture, Local Government Units and other agencies and takes part in the passage and implementation of various municipal and provincial ordinances on agriculture, fisheries and environment.

The council's commitment to service goes beyond agriculture as it is active in many community activities.

Their capable members sometimes serve as resource speakers during trainings to complement the efforts of agricultural extensionists.

With the leadership of the Nueva Vizcaya PAFC, the agri and fishery sector of the province is off to greater heights.

Regional Awardees

Aside from the five National Gawad-Saka awardees, Region 02 also recognized the 15 Regional and one special awardee during the Regional Gawad-Saka Awarding Ceremony held on November 4, 2011 at Crown Pavillion, Ugac, Tugegarao City, Cagayan. The champion province with 15 awardees is Isabela followed by Cagayan with eight awardees, Nueva Vizcaya with two and Quirino with one awardee.

CATEGORY	AWARDEE	ADDRESS
NATIONAL AWARDEES		
Outstanding Corn Farmer	Mr. Diosdado M. Bermudez	Rugao, Ilagan, Isabela
Outstanding Sugarcane Farmer	Mr. Roberto A. Cauilan	Furagui Solana, Cagayan
Outstanding Fisherfolk (Fish Capture)	Mr. Eddie V. Amorada	Palauig, Sta. Ana, Cagayan
Outstanding PAFC	Nueva Vizcaya PAFC	Nueva Vizcaya
Outstanding MAFC	Kayapa MAFC	Kayapa, Nueva Vizcaya
REGIONAL AWARDEES		
Outstanding Rice Farmer (Adopting Integrated Rice-Based Farming Systems)	Romeo G. Manalo	San Juan, Alicia, Isabela
Outstanding Hybrid Rice Farmer	Jomar D. Jarvinia	Nueva Era, Cabatuan, Isabela
Outstanding Coconut Farmer	Natividad A. Bernardo	Centro West, Palanan, Isabela
Outstanding HVC Farmer	Telly B. Baltazar	Centro I, Sto. Niño, Cagayan
Outstanding Small Animal Raiser	Edmerel A. Viernes	Sta. Filomena, San Mariano, Isabela
Outstanding Large Animal Raiser	Florencio A. Balagso, Jr.	Tapel, Gonzaga, Cagayan
Outstanding Fisherfolk (Fish Culture)	Nelson B. Dadural	Salvador, Santiago City, Isabela
Outstanding Young Farmer/ Fisherfolk	Virgilio Ryan J. Sambo	Taguntungan, Baggao, Cagayan
Outstanding Agricultural Scientist	Severino C. Tumamang	DA-CVIARC, Ilagan, Isabela
Outstanding Farm/Fisherfolk Family	Simplicio C. Valdez	Magrafil, Gonzaga, Cagayan
Outstanding Agri-Entrepreneur	Eugenio L. Britania	Bannawag, Santiago City
Outstanding Small Farmer/Fisherfolk Organization	Abrasa MPC	Diffun, Quirino
Outstanding Rural Improvement Club (RIC)	Sto. Domingo RIC	Alicia, Isabela
Outstanding Barangay Food Terminal (LGU-Operated)	Liniao Barangay Food Terminal	Liniao, Tuguegarao City
Outstanding Organic Agriculture Organization	Payoga/Kapatagan MPC	Guibang, Gamu, Isabela
SPECIAL AWARD		
Outstanding Rural Women Achiever	Felina G. Castillejos	Abulug, Cagayan



Human and Financial Resources

A. MANPOWER

DA-RFO 02 is manned by 300 regular and 329 contractual competent and excellent employees worked together in a quest for agricultural excellence in Region 02.

Lists of Regular/Permanent Employees

Operating Units/Division	Number of Personnel
Office of the Regional Director	21
Administrative Division	28
Finance Division	12
Operation Division	63
Regulatory Division	38
Research Division	19
Research Outreach Stations:	
Timberland Stock Farm (Quirino)	11
HILROS	8
Isabela Breeding Station	8
Basco Breeding Station	5
Cagayan Breeding Station	7
Ilagan Soils and Water Conservation Research	7
Regional Crop Protection Center	11
Ilagan Experiment Station	11
Abulug Seed Farm	24
Agricultural Pilot Center	27
Total	300

Lists of Contractual Employees

DA-Division/ Research Outreach Station	Term of Reference	Piecemeal	Total
RFO 02	47	115	162
CVLMROS	11	28	39
ASF, (Abulug)	8	13	21
CBS	7	1	8
CVIARC-IES	21	2	23
IBS	8	0	8
CV-HILROS	10	16	26
CV-UPROS	9	6	15
CV-IAROS (Batanes)	0	22	22
BAS	5	0	5
Total	126	203	329

B. FINANCIAL RESOURCES

Region 02 CY 2011 has a total fund allocation of Php 449,446,186.00 million pesos.

FUNCTION		AMOUNT (P)
CURRENT APPROPRIATION		
	GASS	6,705,000.00
	STO	1,562,000.00
	LIVESTOCK	6,481,000.00
	RICE	251,885,586.00
	CORN	44,645,000.00
	HVCDP	53,744,000.00
	LIVESTOCK	14,981,400.00
	BAGSAKAN	7,761,900.00
OTHERs		
	PDAF	350,000.00
	CASECNAN	60,000,000.00
	A.III.d1 BAFPS Focal Persons	164,500.00
	A.III.d.3 GAP	238,700.00
	Automatic Approp. PHILCAP	927,100.00
TOTAL		P449,446,186.00



DA-RFO 02 Key Officials

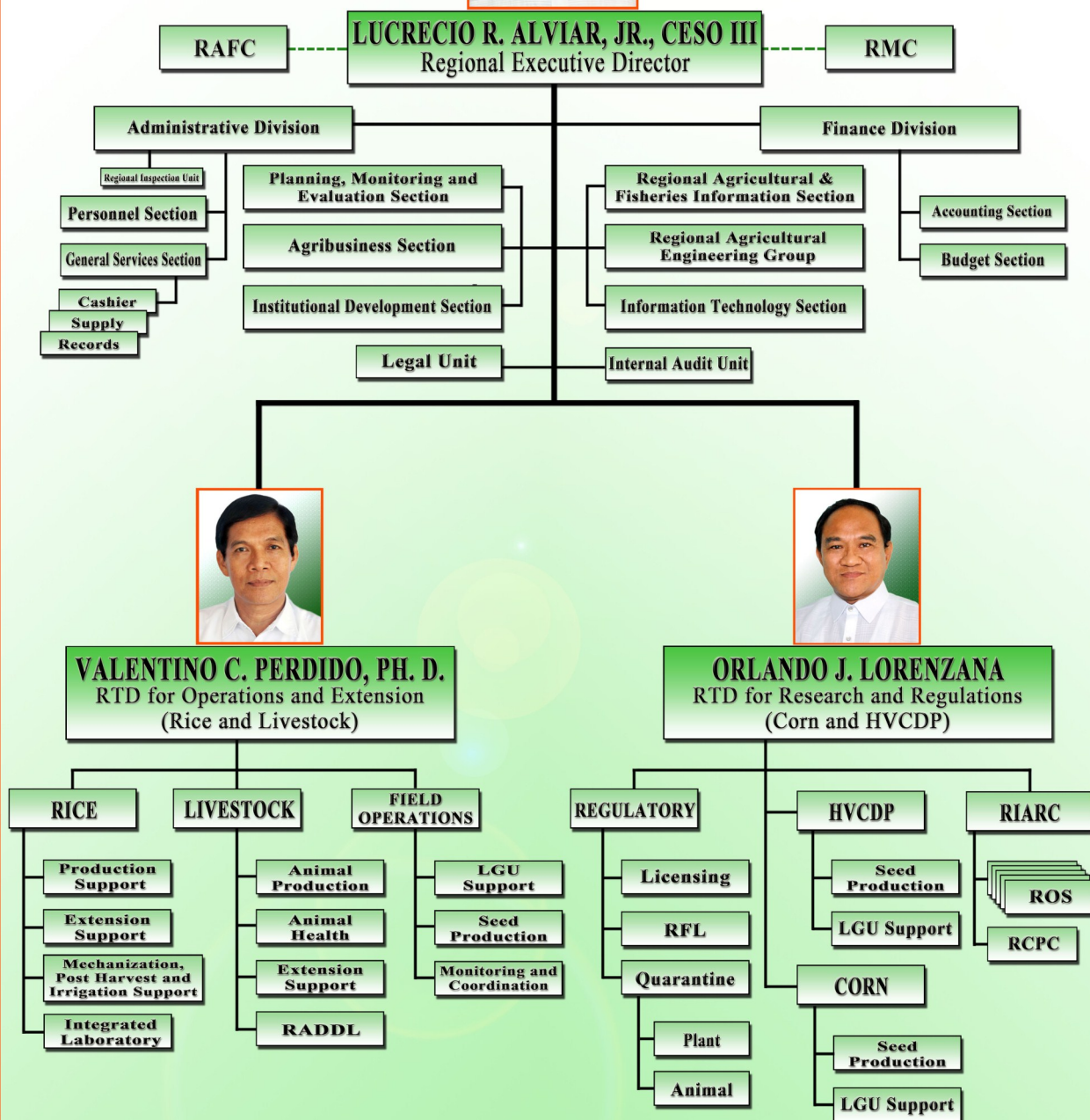


DEPARTMENT OF AGRICULTURE

Regional Field Office No. 02
Tuguegarao City



INTERIM ORGANIZATIONAL STRUCTURE





DA-RFO 02 Key Officials

DIR. LUCRECIO R. ALVIAR, JR., CESO III

Regional Executive Director (April - December 2011)

DA-Regional Field Office No. 02

San Gabriel, Tuguegarao City, Cagayan

DIR. ANDREW B. VILLACORTA, CESO III

Regional Executive Director (January - April 2011)

DA-Regional Field Office No. 02

San Gabriel, Tuguegarao City, Cagayan

DIR. VALENTINO C. PERDIDO

Regional Technical Director for Operations and Extension (Rice and Livestock)

(January-November 2011)

DIR. LORENZO M. CARANGUIAN

Regional Technical Director for Operations and Extension (Rice and Livestock)

(November-December 2011)

DIR. ORLANDO J. LORENZANA

Regional Technical Director for Research and Regulatory (Corn and HVCDP)/

Regional CORN Program Coordinator

MR. ZOTICO R. PEREZ

Chief Administrative Officer

Administrative Division

MR. JAIME M. PAGALILAUAN

Chief Administrative Officer

Finance Division

DR. GERONIMA G. LUDAN

Chief-Livestock Division

MR. ROBERT B. OLINARES

OIC Chief-Research Division & Regional High Value Crops Development Program (HVCDP) Coordinator

DR. LORENZO M. CARANGUIAN

OIC-Chief-Operations Division

DA-RFO 02 Key Officials (continuation)

MR. EDITO R. BAÑARES

Chief-Agricultural Communication (AgCom) Section

MS. KAY S. OLIVAS

OIC-Chief-Planning, Monitoring and Evaluation Section (PMES)

MS. JOSEPHINE R. TULIAO

Chief-Personnel Section

MS. VIVIEN DELOS SANTOS

Chief-Agribusiness and Marketing Assistance Section (AMAS)

MS. ROSEMARIE MARTIN

Chief- Institutional Development (ID) Section

MS. EDERLINDA A. MARIANO

Chief-Budget Section

MR. BONIFACIO TUGADE

Chief-Accounting Section

MR. JOSELYN A. BOSITO

Chief-General Services Section

ENGR. RESTITUTO SAMATRA

Chief-Regional Agriculture and Engineering Group (RAEG)

MS. MARGARET C. AGUINALDO

Head-Regional Soil's Laboratory

DR. ZALDY A. OLIVAS

Chief, Regional Quarantine Section





DA- RESEARCH OUTREACH STATIONS

ENGR. VIRGILIO ADRIATICO

Manager, Cagayan Valley Integrated Agricultural Research Center (CVIARC)

San Felipe, Ilagan, Isabela

Contact No.: (078) 376-0703/622-0961/0962

MS. CELERINA T. MIRANDA

Manager, Cagayan Valley Hillyland Research Outreach Station (CVHILROS)

Tapaya, Bagabag, Nueva Vizcaya

Contact No.: (078) 648-5939/0916-304-4032

MR. CHARLES A. CABACCAN/MR. RODOLFO BAYUCAN

Manager, Cagayan Valley Upland Research Outreach Station (CV-UPROS)

Dungo, Aglipay, Quirino

Contact No.: 0906-624-2054/0927-465-6312

MR. ERNESTO GUZMAN

Manager, Cagayan Valley Lowland and Marine Research Outreach Station (CVLMROS)

Minanga Norte, Iguig, Cagayan

Contact No.: (078) 501-0889

MR. CELSO R. BATALLONES

Manager, Cagayan Valley Inland Agricultural Research Outreach Station (CVIAROS)

Basco, Batanes

Contact No.: 0908-581-7466/0926-771-0942

DA- SATELLITE STATIONS



MS. MARILOU A. AGAID

Head, Abulug Seed Farm (ASF)

Maquire, Lucban, Abulug, Cagayan

Contact No.: 0926-621-0551

MS. CHARITY A. VERSOZA

Head, Cagayan Breeding Station (CBS)

Maguirig, Solana, Cagayan

Contact No.: 0927-676-0219

DR. ANITA ASUNCION

Head, Isabela Breeding Station (IBS)

Upi, Gamu, Isabela

Contact No.: (078) 622-3012/ 0905-356-7008

MS. CORAZON A. BAYUCAN

Head, Regional Crop Protection Center (RCPC)

San Vicente Hill, Ilagan, Isabela

Contact No.: (078) 624-2283 Telefax (078) 622-3899

ENGR. VIRGILIO ADRIATICO/

ENGR. FIDELINO R. CABANTAC

Head, Soil and Water Management Station (SWMS)

Baligatan, Ilagan, Isabela



DA–Regional Management Committee Officials

DA-REGIONAL MANAGEMENT COMMITTEE

KEY OFFICIALS



DIR. LUCRECIO R. ALVIAR, JR., CESO III

Regional Executive Director
DA-Regional Field Office No. 02
San Gabriel, Tuguegarao City, Cagayan

MS. MARILYN T. ESTRADA

Regional Agricultural Statistic Officer
Bureau of Agricultural Statistics
Tuguegarao City, Cagayan

DR. JOVITA P. AYSON, CESO II

Regional Director
Bureau of Fisheries and Aquatic Resources
Carig, Tuguegarao City, Cagayan

MR. RUBEN RESIDE

Regional Manager
National Food authority
Santiago City

DR. BIENVENIDO F. HUGO, CESO IV

Regional Technical Director
National Meat Inspection Services (NMIS)
Tuguegarao City, Cagayan

ENGR. MARIANO DANCEL/

ENGR. HELSEY BERMUDEZ

Regional Operations Manager
Magat River Integrated Irrigation System
National Irrigation Administration (NIA) Minante I,
Cauayan City, Isabela

VP. RAMON R. MONTELOYOLA

Vice President and Regional Head
Land Bank of the Philippines
Tuguegarao City, Cagayan

MR. RENATO A. MAGUIGAD

Center Director
Agricultural Training Institute-Regional Training
Center
Cabagan, Isabela

MR. RIONI B. DELOS TRINOS

Agricultural Center Chief III
Bureau of Plant Industry-NSQCS
San Mateo, Isabela

DR. EDMUND C. GUMPAL

Cagayan Valley Agricultural Resources Research
and Development (CVARRD)
ISU, Echague, Isabela

MR. HENRY FRONDA

Manager
Fertilizer and Pesticide Authority (FPA)
Tuguegarao City, Cagayan

ENGR. VICENTE I. GALVEZ

Regional Manager
National Irrigation Administration (NIA)
Minante I, Cauayan City, Isabela

DR. SILVINO Q. TEJADA

Executive Director
Bureau of Soils and Water Management
Elliptical Road, Diliman, Quezon City

DR. RICARDO CACHUELA

Executive Director
Philippine Center for Postharvest Development
and Mechanization
Science City of Muñoz, Nueva Ecija



DR. CORAZON B. RIAZONDA

OIC-Provincial Manager
National Tobacco Administration
Tuguegarao City, Cagayan

MR. HERMAN TORRES

Department Manager III
National Tobacco Administration (NIA)
Ilagan, Isabela

MS. LORETA DELA CRUZ

Provincial Manager
Philippine Coconut Authority (PCA)-Cagayan
Tuguegarao City, Cagayan

MR. MELCHOR CUREG

Provincial Manager
Philippine Coconut Authority (PCA) – Isabela
Ilagan, Isabela

DR. FRANK RELLIN

Regional Manager
Philippine Carabao Center
Piat, Cagayan

MNGR. EDNA SP. MARALLAG

Regional Manager
Philippine Crop Insurance Corporation (PCIC)
Tuguegarao City, Cagayan

MS. FIDELA P. BONGAT

Regional Manager
Philippine Rice Research Institute (PhilRice)
San Mateo, Isabela

MR. ISIDRO B. ACOSTA

Chairman
Regional Agriculture and Fishery Council
(RAFC)
Tuguegarao City, Cagayan

DR. MILAGROS MORALES

OIC-Assistant Regional Director, BFAR
Center Chief, Regional Fishermen's Training
Center (RFTC)
Aparri, Cagayan

MR. ERNESTO R. FRANCIA

Regional Asst. Vice President
QUEDANCOR
Santiago City

DIR. VALENTINO C. PERDIDO

Regional Technical Director for Operations
and Extension (Rice and Livestock)
(January-November 2011)

DIR. LORENZO M. CARANGUIAN

Regional Technical Director for Operations
and Extension (Rice and Livestock)
(November-December 2011)

DIR. ORLANDO J. LORENZANA

Regional Technical Director for Research and
Regulatory (Corn and HVCDP)/
Regional CORN Program Coordinator

MS. KAY S. OLIVAS

RMC Secretary



MRS. PRISCILLA V. NANUD

Provincial Agriculturist
Basco, Batanes

DR. MILDRED ABELLA, Ph.D.

Provincial Agriculturist
Capitol Hills, Tuguegarao City, Cagayan

MR. DANILO B. TUMAMAO

Provincial Agriculturist
Ilagan, Isabela

MR. FELIPE PANGANIBAN

Provincial Agriculturist
Bayombong, Nueva Vizcaya

MR. PEDRO GARCIA

OIC- Provincial Agriculturist
Cabarroguis, Quirino

DR. ALBERT TABILE

Provincial Veterinarian
Basco, Batanes

DR. JAIME GUILLERMO

Provincial Veterinarian
Capitol Hills, Tuguegarao City, Cagayan

DR. ANGELO NAUI

Provincial Veterinarian
Ilagan, Isabela

DR. CHRISTOPHER SERASPI

Provincial Veterinarian
Bayombong, Nueva Vizcaya

DR. MARCELINO G. DELSON

Provincial Veterinarian
Cabarroguis, Quirino



Produced by

Planning, Monitoring and Evaluation Section (PMES)

Agricultural Communication Section (AgCom)

DEPARTMENT OF AGRICULTURE

Regional Field Office No. 02

Tuguegarao City, Cagayan