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Banana production and cooperatives in the Philippines: a structure for self-reliance of farmer growers under agrarian reform

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Based on a field survey conducted by the author, this study inquires into the role of cooperatives in promoting self-reliance among banana farmers in the Philippines. It shows how land distribution under the Comprehensive Agrarian Reform Program (CARP) and the participation of agrarian reform beneficiaries (ARBs) in cooperatives can, in fact, give farmers a chance to become self-reliant. It describes the operational changes made in a banana plantation affected by land reform from the viewpoint of the cooperative's management, as well as highlights the cooperative's role as a community that nurtures essential social norms among the members.

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1. Introduction

Productivity growth and increasing farm incomes are the fundamental issues in agriculture for developing countries. In the Philippines, these policy concerns have led to the recognition of agribusiness as an important component of an agricultural strategy. The Agriculture and Fisheries Modernization Act of 1997 (Republic Act 8435) enacted during the Ramos administration (1992-1998) specifically sought to promote agribusinesses in the Philippines. The Arroyo administration (1998-2010) complemented this through the issuance of the Agriculture and Fisheries Modernization Plan 2001-2004. The plan sought to modernize agriculture and fisheries by emphasizing the role of entrepreneurship and private investments and by encouraging private sector participation. Special emphasis was given then

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to regions in Mindanao in developing the cultivation of high-value commercial crops. The succeeding Aquino administration in turn sought to strengthen the country's revealed comparative advantage in tropical foods, including bananas, as articulated in Philippine Development Plan 2011-2016 as well as in the Philippine Export Development Plan 2015-2017. The current Duterte administration has also broadly affirmed these thrusts in its "Ten-point socioeconomic agenda," which speaks of promoting "rural and value chain development toward increasing agricultural and rural enterprise productivity" (Point 6) and "ensur[ing] security of land tenure to encourage investments" (Point 7).

For the banana industry, these sustained policy directions come at an opportune time. The production of bananas for export has received increasing attention as a promising agribusiness sector with demand for the Cavendish-type of Philippine bananas increasing, especially in the Middle East and China.

A counterpoint to these developments, however, is the common view that banana production for export entails the continuing impoverishment of many small-scale growers owing to their exploitation by multinational corporations (MNCs). Poverty among small growers is thought to be exacerbated by high input prices and low buying prices of bananas, causing farmers to borrow and to become buried in debt. An influential view was the work of David, Rivera, Abinales, Teves and Resabal [1981] on relations between banana farmers and MNCs through field surveys. That work described a situation where many hired agricultural laborers who were engaged in banana plantations endured difficult living conditions.

Based on a field survey and interviews conducted by the author in Mindanao from November 2011 to February 2012 among cooperatives producing bananas for export, this paper presents a different picture. It shows how land distribution under the Comprehensive Agrarian Reform Program (CARP) and the participation of agrarian reform beneficiaries (ARBs) in cooperatives have made farmers self-reliant, particularly through contract growing schemes in the framework of Agribusiness Venture Arrangements (AVAs). It describes the operational changes made in a banana plantation affected by land reform from the viewpoint of the cooperative's management. The paper also highlights the cooperative's role as a community that nurtures essential social norms among the members.

The rest of this paper is organized as follows. Section 2 gives an overview of the salient features of banana production and the management styles of MNCs, while also enumerating the advantages of contract growing and decentralized farm management by the cooperatives. Section 3 describes the framework of agrarian reform, with a special focus on its relevance to commercial farming. We explain AVAs as well as the issues raised by their application. Section 4 clarifies the institutional framework for self-reliance of farmer growers in banana production, focusing attention on the cooperatives which were issued Collective Land Ownership Awards (CCLOAs). Section 5 presents data and information obtained from the interviews the author conducted with four banana-producing

cooperatives in Mindanao, with types of AVA schemes being related to the management styles of cooperatives. The final section underscores how contract growing within the framework of individual farming encourages cooperative members to achieve self-reliance.

2. Characteristics of banana production in the Philippines

While management styles may differ among corporations engaged in commercial banana farming, a common feature among them is the centralized management system by which all aspects of banana production and marketing are controlled.

Since bananas are highly perishable, a centralized management system within a hierarchical organization is considered essential in order to control the schedule of production and ensure the freshness required by foreign markets. This includes tight control from the initial stage of production down to shipping owing to the critical need for close coordination between production and processing/marketing. Harvested bananas must be packed, sent to the wharf, and loaded onto a refrigerated vessel all within one day, and the vessel itself must be collected within a few days. Precise scheduling and control are also required to avoid overproduction during the seasons of low demand [Hayami, Quisumbing, and Adriano, henceforth HQA 1990: 142].

To manage production, MNCs must own or lease vast tracts of land or contract out banana cultivation to numerous growers. They must also arrange for significant on-farm infrastructure. The packing plants themselves for processing bananas and cable network of the overhead cable propping (OHCP) for transport of harvested bananas from the farms to the packing plants represent significant investments. Marketing management demands facilities such as refrigerated vessels, wharves with storage and ripening facilities, and a worldwide distribution network

Growing the same plant over a wide contiguous area inevitably raises the risk of pest outbreaks and the incidence of contagious disease, such as Sigetoka, Panama Disease, and the like. Strict pest and disease control must therefore be applied consistently over the entire area to maintain the quantity and quality of bananas [HQA 1990: 142].

More than 80 percent of total employment in banana plantations consists of regular workers; casual workers are hired only during peak seasons when labor demand is high. This characteristic of labor as a quasi-fixed factor entails intensive labor supervision under a centralized management system, for which reason some 10 percent of total employment on banana farms consists of supervisors and/or administrators [HQA 1990:139].

Economies of scale are traditionally acknowledged to exist in much of plantation agriculture. Dividing the land into smaller parcels (e.g. by land reform) reduces the efficiency expected for the production of commercial crops,

especially those for export such as sugar. The economies of scale argument thus played a major role in exempting commercial crop plantations in the Philippines from agrarian reform under successive administrations.

In this connection, HQA [1987, 1990] conducted an extensive field survey on the issues of economies of scale in Philippine plantations of commercial crops with an eye to its relevance to the implementation of land reform. Where economies of scale are absent, as in the case of tree crops like coconuts, they argued that asset reform is usually called for. Even where economies of scale exist, however, HQA argued that alternative ways could be found to overcome the productivity bottleneck that has trapped many small farmers.

Particularly in banana production for export, HQA [1990] observe that the most important source of scale economies lies not in land indivisibility per se but in the functions of the centralized management system discussed above. Data on banana production at the time showed no significant differences in per-hectare yields as between small contract growers and large corporate growers for Dole-Stanfilco or those associated with MNCs [HQA 1990: 137-143].

These authors suggested that even in the face of scale economies from centralized management the disadvantages of small farms might nonetheless be overcome. In particular, contract growing would allow MNCs and their corporate growers to maintain or even expand their processing and marketing activities while the production process could be left to small independent growers. Indeed, contract growing by small growers seemed to have a positive impact on production per hectare. A related possibility was the organization of prospective contract-growers into growers' associations, which would increase not only productivity but also the bargaining power of small growers in relation to their agribusiness partners [HQA 1987: 39].

The current study asks whether these conjectures made over two decades ago have indeed been realized and sustained on the ground. A proper understanding of the available modes and the choices ultimately made, however, requires an appreciation of the institutional environment in which the industry operates.

3. Agrarian reform and agribusiness

3.1. Agribusiness Venture Arrangement

The institutional framework for banana plantation agriculture is currently provided by the Comprehensive Agrarian Reform Law (CARL, RA 6657) and its administrative elaborations. Unlike previous attempts at land reform, CARL covered lands planted to all crops, including lands owned or operated by MNCs, commercial farms, and corporation lands. Commercial farms are private agricultural lands devoted to commercial livestock, poultry, swine raising, aquaculture, including salt beds, fishponds and prawn ponds, fruits farms,

orchards, vegetable and cut flowers, and cacao, coffee and rubber plantations.[2] A significant CARL provision (Section 11), however, was that commercial farmlands would be subject to acquisition and distribution only after ten years from the law's effectivity, partly as a result of lobbying efforts by industry and landed interests.[3]

The CARL's original ten-year lifespan (1988-1998) was extended in 1995 for another ten (1999-2009).[4] Strong representation by farmers' organizations subsequently saw the law further extended by another five years (2009-2014) through legislation.[5]

With the lapse of the original ten-year deferment period for commercial farms, the Department of Agrarian Reform issued administration orders (Administrative Order 9 in 1998 and Administrative Order 2 in 1999[6]) specifying how agrarian reform would be implemented in such areas. In principle, land would be distributed directly to individual worker-beneficiaries, but where it was "not economically feasible or sound" to divide the lands, they would be owned collectively by worker-beneficiaries who were to form workers' cooperatives or associations to deal with the corporation (Administrative Order No. 9, Section 2e).

The department's Administrative Order 9 introduced the concept of the Agribusiness Venture Arrangement (AVA) with the intent of developing cooperatives made up of plantation workers. The AVA aims to optimize the operating size of agricultural production as well as to promote agricultural security of tenure and security of income to beneficiaries (Section 30 d 1). The emphasis on raising productivity, also mentioned in Administrative Order 2, implicitly brought economies of scale within the CARP framework. The introduction of agribusiness marked a "paradigm shift of agrarian reform policy," expanding its goals beyond simple land transfer to include productivity issues.

The new rules envision attracting domestic as well as foreign investors into agribusiness. Under AVAs, ARBs and investors are expected to enter into agreement, especially since investors have the means to provide financial, technical, and managerial inputs for improved production (Administrative Order 9, Sec. 30 d 2). Former landowners may enter into AVAs, provided they have no outstanding obligations with the qualified ARBs (Administrative Order 9, Sec. 30 a 5). AVAs may be applied to all types of commercial farms, with banana, pineapple, and rubber being cited explicitly as examples (Administrative Order 9,

[2] Details of the classification of plantations are mentioned in Nozawa [2011: 8-10].

[3] In the banana sector, for example, one of the tasks of the Pilipino Banana Growers and Exporters Association was to exert influence to defer CARP implementation in the sector for ten years [Quitoriano et al. 2008: 35].

[4] RA 7905, An Act to Strengthen the Implementation of CARP and Other Purposes (RA 7905).

[5] RA 9700. An Act Strengthening CARP.

[6] Respectively titled "Rules and Regulations on the Acquisition, Valuation, Compensation and Distribution of Deferred Commercial Farms" and "Rules and Regulations Governing Joint Economic Enterprises in Agrarian Reform Areas".

Art. Section 2 f). The said provisions are also understood to apply to lands owned or leased by MNCs.

Seven possible modes of contracting are enumerated under AVA: joint venture agreements; lease arrangements; contract growing; management contracts; build-operate-transfer schemes; production, processing and marketing agreements; and service contracts. The applicable mode is to be chosen by the ARBs or their cooperatives.[7] A study by the Development Academy of the Philippines on AVA applications for banana plantations reported that 28 banana plantations, all in Mindanao, applied AVA schemes during the years 1998-2006. Of these, 17 were lease arrangements and 11 were cases of contract growing [Quitoriano et al. 2008: 137-143]. The area covered by lease arrangements was 2.5 times bigger than that covered by contract growing, i.e., 4,395 hectares versus 1,743 hectares.

3.2. Land title and type of CLOA

An issue affecting AVAs is the type of Certificate of Land Ownership Award (CLOA) issued to ARBs. Under an Individual CLOA (henceforth ICLOA), an ARB is awarded a parcel that is physically distinct and identifiable. As generally provided under CARL as amended (Section 10, RA 9700), the land awarded to a farmer beneficiary should be in the form of individual title. The second type however is the Collective CLOA (henceforth CCLOA), where title to the property is issued in the name of the co-owners or a collective organization (RA 9700, Section 10) and the individual ARB holds legal title to no specific parcel. This is relevant to arrangements in the banana sector, where commercial farms were initially distributed collectively or under co-ownership (CARL Sec. 25 and Administrative Order 9 of 1998, Sec.17).

A stipulation requires the Department of Agrarian Reform to immediately undertake the parcelization of the said CLOAs (RA 9700, Sec. 10). As of 2011, however, the area under the CCLOA nationwide was 70 percent of the total area of CLOAs, the remainder being under ICLOAs. It has been observed (e.g., World Bank [2009]) that at least part of the reason for this disproportion is the expediency associated with the need to demonstrate a higher rate of accomplishment in land transfer. In the event, the overall situation is reflected in Davao del Norte, a major banana-producing province, where the area covered by CCLOAs was three times larger (i.e., 75.2 percent of total area) than that covered by ICLOAs (Table 1).

[7] Compound contracts with plural schemes may also be chosen. For instance, the predominant systems are contract growing agreements combined with a management, production, processing and marketing agreement, as well as lease arrangements of land with service contracts.

TABLE 1. Certificates of Land Ownership Award (CLOA) by type (as of December, 2011)

Region/Province	Individual CLOAs			
	Number	Percentage	Hectares	Percentage
Philippines	830,675	79.4	1,026,530	30.0
Northern Mindanao Region	54,936	77.7	99,526	38.9
Bukidnon	26,291	79.6	52,783	38.5
Davao Region	37,231	69.5	46,708	22.0
Davao del Norte	11,421	74.7	12,479	24.8
Compostela Valley	9,603	74.1	12,338	24.3
	Collective CLOAs			
	Number	Percentage	Hectares	Percentage
Philippines	215,612	20.6	2,399,265	70.0
Northern Mindanao Region	15,768	22.3	156,593	61.1
Bukidnon	6,752	20.4	84,291	61.5
Davao Region	16,317	30.5	165,709	78.0
Davao del Norte	3,866	25.3	37,857	75.2
Compostela Valley	3,356	25.9	38,388	75.7

Source: Department of Agrarian Reform

The department's Administrative Order 7 (2011), entitled Revised Rules and Procedures Governing the Acquisition and Distribution of Private Agricultural Lands under RA 6657,[8] affirms the general rule in CARP that land awarded to an ARB should be under ICLOA up to a maximum of three hectares. However, ARBs may nonetheless opt for collective ownership through a co-workers' or farmers' cooperative or association. The total area to be awarded should not exceed the total number of co-owners or member of the cooperative multiplied by award limit of three hectares. On the other hand, under collective ownership, a CCLOA to the property is issued in the names of the co-owners in a farmers' cooperative or association. The issuance of CCLOAs is attended by special circumstances, namely: where the current management system of the land covered by the CARP is inappropriate for either individual farming or division of the landholding into farm parcels; where the farm labor system used is specialized according to function (e.g. spraying, weeding, packing); where potential beneficiaries are currently not farming individual parcels but collectively working on large contiguous areas; and where the farm consists of multiple crops being farmed in an integrated manner or includes non-crop production areas that are necessary for the viability of farm operations, such as a packing plant, storage area, dikes, and

[8] This was a revision of Administrative Order No. 2 of 2009, which also dealt with the acquisition and distribution of private agricultural lands.

other similar facilities that cannot be subdivided of assigned to individual farmers. Even in such situations, however, an individual ARB in a commercial farm may still choose to be awarded an ICLOA, subject to maintaining the adjacency and contiguousness of the area held by other ARBs who share a CCLOA. Fulfillment of these conditions is a bureaucratic determination made by the municipal agrarian reform officer (Administrative Order 7 of 2011, Sec 99).

4. Banana export production under agrarian reform

From 1998 to 2000, in banana plantations 1,982 hectares were distributed to 1,919 farmers [De Leon and Escobido 2004: 66, 122]. To appreciate and compare the various contracting modes chosen by ARBs in this development, this section discusses the regulations and practices associated with each. All post-reform cases examined here involve cooperatives of agrarian reform beneficiaries dealing with corporate plantation management. We describe the two most prevalent types of contracts governing those relations, namely contract growing and leaseback arrangements. While it is possible in principle for plantation corporations to contract individually with ARBs possessing ICLOAs, this is not frequently encountered. The reasons have to do with inherent transaction costs. First is the obvious fact that the pre-existence of large-scale plantations meant that more CCLOAs than ICLOAs are likely to have been issued. Opting out of such arrangements would require additional expense and effort for individual farmers. Moreover, from the viewpoint of plantation corporations themselves, there is bound to be less enthusiasm for dealing with individual smallholders owing to higher costs of contracting and monitoring.

Against these external transaction-cost advantages, however, one must set off the internal collective-choice and collective-action problems that are prone to arise within cooperatives themselves. Already present in any collective, such problems are more pronounced where most cooperatives are formed not through voluntary association but as an auxiliary consequence of collective land transfer. This is especially true for contract growing, where the cooperative must assume greater responsibility and risk for decisions relating to production.

4.1. Contract growing

In a situation typical for banana production, cooperatives composed of ARBs who hold the land under a CCLOA produce the crop by entering into growing contracts with plantation corporations. Organization into cooperatives allows members collectively to negotiate better terms with the counterpart corporations; basic contract conditions include the selling price of the product and appropriate times to sell.

Relative to previously existing conditions where plantations were covered by centralized management systems, with vertically integrated production and marketing operations, the crucial step towards self-reliance among such growers is the degree to which they themselves or their cooperatives can manage production. In practice, this means implementing a decentralized management system where the field production operations, including packing plant operations, are separated from marketing operations. On the other hand, the plantation corporation undertakes the marketing operations of the business, that is, ex-packing plant or *ex-patio*. Accomplishing this obviously requires close coordination between production and marketing operations, or between cooperative and plantation corporation. It is the cooperative's task to integrate the views and demands of its members through the general assembly of the cooperative in order to come to a consensus on important issues. Hence the institutional development of cooperatives affects not only productivity in the farm, but also the cooperative's bargaining power in negotiations with corporations.

Production management after the demarcation of responsibilities is transferred to the cooperative. An Individual Farming System (IFS) is a possible production scheme under a decentralized management system. The IFS allows individual growers to specify their own production capacity, thus providing a production incentive to participating members, quite different from the Centralized Management System, which was previously adopted under corporate growership.

A prerequisite for the adoption of the IFS is the operational subdivision of the plantation into small lots to allow allocation of the land among the members of the cooperative. This can occur even while the whole farm area is covered by a CCLOA. Subdivision may be performed by the drawing lots but in all cases must involve a process unanimously approved by the general assembly of the cooperative.

Because the farm is managed by the cooperative, some collective work may be implemented, such as harvesting, packing engineering operation, pesticide spraying, agri-service, and administration and finance. This collective work requires direct control by the cooperative. Expenses for inputs such as fertilizer, pesticide, and labor, as well as the administration are initially shouldered by the cooperative and eventually shared among members according to their share of quantity produced.

Contract growing is formalized through banana sale and marketing agreements (BSMAs) or banana production and purchase agreements (BPPAs). These agreements provide for a full FOB purchase price and a delineation of obligations and risks between producer/seller and buyer. The provision on specific obligations states that the cooperative/seller shall handle and shall fund the operating costs of the plantation. Contracts also clarify where the seller's responsibility over the produce ends and that of the buyer begins. This change-of-hands may be set ex-packing plant, ex-wharf, or ex-vessel. This is meant to prevent "pole-

vaulting" of the banana products. Another common provision is the stipulation that the aggregate subject land should be solely used for banana (specifically Cavendish) production, although several hectares may be reserved to be used by the cooperative either for infrastructure or alternative livelihood projects.

From the viewpoint of cooperatives, the advantage of growing contracts take the form of: continuing technical support and advice from companies, although the latter are not liable for losses or damage to crops as a result of such technical recommendations [Deriquito 2004: 21]. The arrangement also affords them a degree of autonomy as well a powerful incentive to produce and sell the fresh fruit based on own-effort. The result is a degree of self-reliance relative to their former status as agricultural laborers. Set off against this of course is the concomitant risk now borne by farmers in regard to output and income variations owing to natural or economic factors.

From the viewpoint of plantation corporations, on the other hand, the main advantages to contract growing—aside from being an obvious accommodation to the implementation of agrarian reform—have to do primarily with risk mitigation [De Leon and Escobido 2004: 97, 98]. Mitigated risks pertain to labor relations and obligations (e.g., negotiations for higher wages and fringe benefits, unionization); flexibility of output relative to fluctuating market demand; coping with natural phenomena; and easier divestment or exit. Depending on bargaining strength relative to cooperatives, moreover, profits need not be inferior relative to the pre-reform situation, especially given the dominance in marketing and processing by a few MNCs. For these reasons, many companies worldwide are in fact beginning to shift to contractualization.

4.2. Lease arrangements

The second major type of contract prevalent in the banana plantation sector is the lease or leaseback contract. Under this arrangement, ARBs lease out the lands awarded to them, usually to the previous landowners or operators of the commercial farm. The latter then continue to exercise general control over the use of land and the management of the farm during the term of the lease. ARBs meanwhile receive annual lease rentals and may be retained as farmworkers, depending on the management decisions of the company lessee [Deriquito 2004: 12].

Department of Agrarian Reform policy initially ruled that lease periods should not exceed ten years (Administrative Order 9 of 1998). Under the Estrada administration, however, the ten-year limit on lease arrangements was lifted (Administrative Order 2 of 1999, Section 7 f vii), the intent being to attract external investors. Concomitantly, the lease rental-amortization tie-up has been observed to determine lease rental periods. A 30-year initial lease period is common in all lease/leaseback contracts reviewed here. For the majority of ARBs in banana plantations, the next 30 years after receiving their CLOA are the practically a

lifetime. Entering into lease/leaseback arrangements, therefore, is tantamount to giving up control over the land awarded to them under agrarian reform, with control effectively reverted to former owners and operators [Deriquito 2004:13].

Under the department's guidelines, lease rental rates should be no lower than the amortization payments on land (Administrative Order 9 of 1998, Section 3 j), so that effectively lease rental rates are vary directly with land valuation amortization payments. Lease rental rates are generally fixed every five years, but there are no explicit provisions for regular rate reviews or renegotiations, with lease rates being determined solely by company lessees [Deriquito 2004:14]. The contract period is thus effectively the same as the amortization payment period.

Companies typically prefer lease arrangements since these allow them to control quality and quantity of output, with minimal changes relative to conditions prior to the application of agrarian reform. Economies of scale associated with the centralized management system are also retained with minimal disruption.

On the other hand, ARBs enter into lease/leaseback arrangements mainly for employment and income security. In particular, three related reasons are mentioned: security of farmers' living standards; sustaining land productivity; and security in meeting land amortization obligations.

Against this is the downside that, whether in the case of cooperatives under CCLOAs or individual farmers with the ICLOAs, leaseback arrangements leave little space for formers to ultimately attain self-reliance.

5. Case studies of four cooperatives

In the following case studies, I describe how actual AVAs were applied to banana plantation cooperatives and what kind of schemes and responses were devised to overcome challenges these cooperatives faced. A summary profile and typology of the four cooperatives examined in the field survey are provided in Table 2. Two of the cooperatives surveyed were into contract growing under CCLOAs, while one was also into contract growing but under an ICLOAs. A final cooperative had entered a lease arrangement under a CCLOA.

TABLE 2. Profiles of the four cooperatives interviewed

	Cooperative H	Cooperative C	Cooperative D	Cooperative L
Location	Madaum, Tagum City	Tibungol, Panabo City	DAPCO, Panabo City	Callaw, Buhangin, Davao City
History	Hijo Plantation owned by Tuazon family	Checkered Farm → Diamond Farm → Unifruitti	DAPCO → ALDA	Lorenzo Family → Lapanday
Date of establishment	1996, CDA registered 1996, 2009	1995, CDA registered 1996	1998, CDA registered 1998	1999, CDA registered 2000
Number of members	343 agrarian reform beneficiaries (ARBs)	87 ARBs	21 ARBs	113 ARBs and 65 associate members
Total area	274 hectares	220 hectares (net area: 113 hectares)	23 hectares	100 hectares (90 hectares of which are planted to bananas)
Area per ARB	0.812 hectare	1.298 hectares	1.180 hectares	0.796 hectare
Agrarian reform	1996 Voluntary Offer to Sell	1996 Voluntary Offer to Sell	1999 Compulsory Acquisition	2000 Direct Land Transfer (banana) Voluntary Offer to Sell (mango)
Type of Collective Land Ownership Award	Collective	Collective	Individual	Collective
Assessed value	₱350,000 per hectare	₱153,000 per hectare	₱500,000 per hectare	₱39,000,000 per 100 hectares
Amortization	₱95,900,000/274 hectares	₱33,660,000/220 hectares	₱115,000/23 hectares	₱13,000/hectare/year
	₱11,667/hectare/year	₱5,100/hectare/year	₱14,400/hectare/year	Amortization was deducted from lease rental.
	₱500/lot/month		Under court case	
	₱1,200/lot/year			

TABLE 2. continued

	Cooperative H	Cooperative C	Cooperative D	Cooperative L
Contracting mode under the Agribusiness Venture Arrangement	• Contract growing, 1998 • Banana sale and marketing agreement with Hijo Plantation, Inc. • Buying contract with members • FOB ex-packing plant • 2 quality inspectors	• Contract growing • Banana production and purchase agreement with Unifruitti • Buying contract with pay slip • FOB ex-packing plant	• Contract growing, 2005 • banana production and purchase agreement with Dole-Stanfilco • Buying contract with pay slip • FOB ex-patio, ex-vessel	• Lease arrangement, labor service 2005 • Lease contract with Lapanday Agricultural and Development Corporation • Outside labor service contract with Lapanday Agricultural and Development Corporation and Lapanday Food Corporation
Farming scheme	Individual Farming System, adopted 2008	Individual Farming System, adopted 2002	Individual Farming System, adopted 2005	Project operation
How land was divided	Road, lot, soil fertility, raffle	Equally divided by lot, soil fertility, raffle	Lot divided through raffle	Not arranged
Total production, 2010	• Class A 3,127 boxes per hectare • Class B 448 boxes per hectare • Class C 516 boxes per hectare • Total 4,091 boxes per hectare • 1,121,186 boxes per 113 hectares	• Class A 4,789 boxes per hectare • Class B 395 boxes per hectare • Total 5,194 boxes per hectare • Total 587,056 boxes	• Class A converted 4,300 boxes per hectare • Total 98,900 boxes per 23 hectares	• Potential 2010 • Class A converted 3,300 boxes per hectare
Gross sales, 2010	₱129,750,911 (274 hectares)	₱91,032,043 (113 hectares)	₱12,332,830 (23 hectares)	₱12,797,711 (90 hectares)
Total net surplus, 2010	₱-1,618,445	₱3,431,634	Not available	₱3,327,654

5.1. Cooperative H: contract growing under a Collective CLOA

Cooperative H has 343 ARBs. The total area of the plantation is 274 hectares, all of which were planted to banana.

In 1996, when a CCLOA was issued under CARP, Cooperative H adopted a Collective Farming System. In this system, the ARBs in their cooperative collectively produce bananas and sell these to the company. From the sales amount received from the company, the cooperative then deducts its costs—of employed labor for collective work in the farm, inputs, and administration. The surplus is then distributed equally among the ARBs.

Against the cooperative's expectations, however, the system of equal surplus distribution failed to motivate members to increase production. For this reason, in 2008 the cooperative decided to shift from the Collective Farming System to the Individual Farming System and to equally divide the land among all the members of the cooperative by drawing lots (Table 3).

TABLE 3. Distribution of Cooperative H members by soil type

Type of soil	Contents	Number of members
Soil Type I	Good areas with Over Head Cable Cropping (OHCP)	101
Soil Type II	Good Areas without OHCP	189
Soil Type III	Poor Areas without OHCP	32
Mixed Area	Mixed Areas considered good areas but some areas with and without OHCP	21
Total		343

Source: Agreement between Cooperative H and its Members in Accordance with the Resolution of General Assembly by the Cooperative Members.

Each apportioned parcel of land was then placed under the direct management of an assigned ARB, who covered the operations of fruit care, plant care, pest and disease control, and engineering.

The farm operations that require collective effort—such as processing, harvesting, and agri-services—remain under the cooperative's management. The cost per operation was based on the proposed manning requirements and prevailing market price of all inputs and materials.

Cooperative H entered into a contract-growing arrangement with Hijo Plantation, Inc. This agreement was tailored to the requirements of an Individual Farming System. It contained the phrase "the products of bananas belong to the farmers" as the key production incentive for the ARBs. Each ARB would manage his area and exclusively sell Class A and Class B bananas to the cooperative, which would in turn sell the same to contract counterpart.

A unique feature of the agreement is that the retention fee by the cooperative varies in accordance with the types of soil. The retention fee is deducted from the

price of bananas to pay for administration costs and the expenses for the collective activities of all the members.

The soil is categorized based on its qualities—such as fertility, location, and proximity to the packing plant—and accessibility to the overhead cable network used to bring the harvested bananas to the packing plant. The share of the member-ARB is directly related to type of soil, increasing with lower soil quality. The aim of this pricing innovation is to approximately equalize the ARBs' incomes from banana production.

To illustrate the computation of the net individual income, a box of Class A banana (13.5kg-regular) shall be used as a standard banana quality. The computation is as follows.[9]

For Soil Type I: Given the Class A banana production volume of 4,428 boxes/hectare, gross income is ₱380,808/hectare (4,428 boxes/hectare x $2.00/box x ₱43/$1). Net income is computed as ₱114,242/hectare (₱380,808/hectare x 0.30). For each ARB, the distributed amount is ₱92,764/ARB (₱114,242/hectare x 0.812 hectare/ARB).

For Soil Type II: Given the Class A banana production volume of 3,674 boxes/hectare, gross income is ₱331,762/hectare (3,674 boxes/hectare x $2.10/box x ₱43/$1). Net income is computed as ₱104,260/hectare (₱374,560/hectare x 0.30). For each ARB, the distributed amount is ₱84,659/ARB (₱104,260/hectare x 0.812 hectare/ARB).

For Soil Type III: Given the Class A banana production volume of 3,000 boxes/hectare, gross income is ₱283,800/hectare (3,000 boxes/hectare x $2.20/box x ₱43/$1). Net income is computed as ₱85,140/hectare (₱283,800/hectare x 0.30). For each ARB, the distributed amount is ₱69,133/ARB (₱85,140/hectare x 0.812 hectare/ARB).

Adjustment of net income to Soil Type II amounts to ₱4,739 (3,674 boxes x $0.10/box x ₱43/$1 x 30%). In case of Soil Type III, it amounts to ₱7,740 (3,000 box x $0.20/box ₱43/$1 x 30%). Although the difference in soil type was not wholly adjusted, it gives the individual farmer an incentive to increase production.

For each case ₱7,389/hectare (₱6,000/ARB x 0.812 hectare/ARB) is to be deducted as land amortization. Thus, the total income of each ARB member having Soil Type 1, after a deduction for amortization of ₱106,853/hectare, is equal to ₱86,764/ARB.

[9] The number of boxes of Class A bananas produced in the different soil types was obtained through interviews with the operation manager of Cooperative H.

5.2. Cooperative C: contract growing under a Collective CLOA

Cooperative C entered into a ten-year contract growing arrangement with Diamond Farm, Inc., which is under Dole Philippines, Inc.-Stanfilco (Dole-Stanfilco). However, the cooperative had a huge debt at the time, and it was unhappy with the contract terms, which it considered onerous. Although the buying price of bananas was ₱24.68 per box, the cooperative auditing report showed that production cost was actually ₱11.00 higher than the contract price. The cooperative started negotiations with the Diamond Farm, Inc. and demanded a higher contract price.

Then, the cooperative decided to change contracts instead of asking for a price increase. They demanded a shift to a Free on Board contract, where they have free reign over the production process.[10] Under contract growing, members would grow bananas under Dole-Stanfilco's terms and conditions, while the company would provide inputs and technical expertise and market the commodity. Under a Free on Board scheme, Dole-Stanfilco's role will be reduced to being a mere buyer, meaning that the quality requirements for individually packed bananas produced by Cooperative C are lowered and bought by Stanfilco at a higher price. The buying price increased from ₱24.68 (US$0.60) to ₱106.60 (US$2.60) per box.[11] Free on Board pertains to the free on board to the Free on Packing Plant as the arrangement to reduce transportation cost to the wharf of the bananas' vessel and the documentation charge for shipping.[12] This was also a good time for Cooperative C to shift their management system from a Collective Farming System to an Individual Farming System to increase their productivity.

After 83 of their members withdrew, Cooperative C was reorganized as an independent association in 2002. It had 87 remaining members and a total area of 113 hectares. Upon the expiration of the contract with Diamond Farm, Inc., Cooperative C entered into a growing contract with the Unifrutti Corporation in 2008, following the terms and conditions of its previous FOB contract with Diamond Farm, Inc. All production costs, under the FOB ex-packing plant terms, are shouldered by the cooperative, while all transportation and shipping costs are to be shared by Unifrutti.[13]

Annual amortization payment is ₱153,000/hectare. However, the initial payment for 14 years out of 30 years was condensed to nine years because they had enough working capital to spare.[14]

The major operation of Cooperative C is the contract growing of bananas with Unifrutti. Of the total export-quality fresh bananas, 80% was for Japan; the remaining 20% was for Middle East countries.

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[10] Homeres, Mendoza, and Yumol [2000: 9]
[11] Regarding the process of the negotiation indicated in Homeres, Mendoza, and Yumol [2000: 9-19]
[12] As explained by the operation manager of Cooperative C.
[13] As explained by the operation manager of Cooperative C.
[14] As explained by the operation manager of Cooperative C.

Contract growing was started in 2008 between Cooperative C as seller and Laysun (Far East) Limited, a buyer represented by Unifrutti. Under the agreement, Cooperative C would provide Unifrutti with a report indicating the estimated quantity of bananas to be cut, cleaned, and boxed during the next nine weeks following the submission of the report and other data Unifrutti may require. The cooperative shall permit authorized representatives of Unifrutti to enter the banana plantation at any time to observe all operations involved in planting, growing, fruit care, harvesting, and delivery of fruits to packing plant and to give such assistance as may be necessary. Cooperative C shall exclusively sell and deliver to Unifrutti all the export-grade bananas that meet Unifrutti's quality specification.

Unifrutti provides free technical assistance and financial assistance to Cooperative C for the improvement of the farms and packing plant. It pays incentives to Cooperative C to promote the increased productivity of good quality bananas.

To increase productivity, Cooperative C shifted from the Collective Farming System to the Individual Farming System in 2002. To ease the transition, Cooperative C created guidelines[15] that state that the cooperative must adhere to good agricultural practices and standard operating procedures to ensure an annual production of 4,500 boxes/hectare.

The guidelines state that the plantation will be divided equally among the member ARBs. The members are empowered to manage their assigned lots under the supervision of the cooperative to ensure that all standard operation procedures are followed. The income of the individual areas will go to the member ARBs. Only a certain amount will be retained by the cooperative to shoulder the cost of the collective works and administrative expenses.

In 2010, Cooperative C produced a total of 587,056 boxes of bananas. Class A bananas comprised 542,341 boxes, while Class B bananas accounted for 44,715 boxes. The average yield was 5,194 boxes/hectare out of which Class A was 4,799 boxes/hectare while class B was 395 boxes/hectare. The volume was higher compared to 3,989 boxes/hectare during the time of Collective Farming System under the cooperative grower, and to 3,500 boxes/hectare under the Corporate Farming System.[16]

Gross sales in 2010 were ₱91,032,043 including the cost of materials. Net surplus was ₱1,825,625, which is equivalent to 2.0% of gross sales.

5.3. Cooperative D: contract growing under an Individual CLOA

This cooperative is relatively small in terms of members and area. The member ARBs were awarded the Individual CLOA in 1999 under the Compulsory

[15] Cooperative C (2010), Manual of Policies, Systems and Procedures prepared for Cooperative C, assisted by the Foundation for Agrarian Reform Cooperatives in Mindanao, Inc.

[16] Interview with the manager of Cooperative C.

Acquisition[17] of the CARP scheme. Cooperative D aimed to create an Individual Farming System that provides direct incentives to individual member ARBs.

The cooperative entered a growing contract with Dole-Stanfilco in 2005. The 2005 agreement is an amendment of the 2003 agreement. A major amendment is the shift of the buying scheme from ex-Vessel to "ex-Free on Board" in order to respond to the demand of Cooperative D. In comparison with the agreement of Unifrutti and Cooperative C, the agreement between Cooperative D and Dole-Stanfilco has been focusing on the operation of the packing plant for which most of costs are shouldered by the Dole-Stanfilco. This is reflected the long experiences by the Dole-Stanfilco which has contracted mainly with the small grower farmers for banana production.

The basic provisions of the 2005 agreement specify the following. The cost of labor, materials, and electricity on packing and processing are borne by Dole-Stanfilco. However, the cost of security guards and maintenance of the packing plant are borne by Cooperative D.

Dole-Stanfilco constructs its own packing plant for processing and packing of banana fruits. It pays Cooperative D the amount US$0.06/box processed by Dole-Stanfilco at the packing plant. Cooperative D provides ample space of 500 square meters for the mobile packing plant and warehouse of Dole-Stanfilco. Dole-Stanfilco subsidizes the rental of the space at ₱3,125 per period.

The packing plant to be installed shall conform to Dole-Stanfilco's manual on Good Manufacturing Practice, food safety, and other quality assurance requirements. The schedule and manner of processing at the packing plant are exclusively determined by Dole-Stanfilco.

Cooperative D did not issue a financial statement for the year 2010. According to an interview with the chairman of the cooperative, banana production amounted to 98,900 boxes, and average production was 4,300 boxes/hectare. Given a buying price of $2.90/box (the price is amended higher than in contract, and inclusive packing plant fee $0.06/box), the volume of sales totaled ₱12,332,830 (4,300 boxes/hectare x 23 hectares x $2.90/box x ₱43/$1).

In Cooperative D's case, the cost of production was 60%. Gross income amounted to ₱4,933,132 (₱12,332,830 x 40%). The production cost included payroll costs for administration and rental for administration office of ₱30,000. However, these administration costs are not recorded in the financial statement.[18] No other deduction from production costs was made, resulting in a gross income of ₱4,933,132, equal to the net surplus.

[17] Under compulsory acquisition, the government expropriates the landholding with or without the landowner's cooperation. Settlement is made in staggered bond-cash payments as follows: for landholdings exceeding 50 hectares, the cash portion is 25 percent of total payment; for 24 hectares up to 50 hectares, 30 percent; and for 24 hectares below, 35 percent; the maturity of bond is 10 years (CARL, Sections 16 and 18).

[18] The packing plant fee was increased from $0.06/box of the contracted to $0.08 of the actual rate.

The net surplus of Cooperative D amounted to ₱4,933,132 or ₱214,484/hectare. Net farm income of the individual member-ARB comes after deducting administration costs and land amortization payment. Administration costs were ₱12,203/hectare (₱1,200/month x 12 months ÷ 1.18 hectares), which includes personnel expenses for 5 employees (two office clerks, one advisor in the field, and two in packing plant), and office rental. The amortization payment of the land was ₱12,203/hectare (₱1,200/month x 12 month ÷ 1.18 hectares). Deducting the mentioned amounts, net farm income of the member ARBs was ₱190,078/hectare (₱214,484/hectare – ₱12,203/hectare – ₱12,203/hectare). The distributed amount for each ARB was ₱224,292/ARB (₱190,078/hectare x 1.180 hectares/ARB).

5.4. Cooperative L: lease arrangement under a Collective CLOA

Cooperative L has 178 members, 113 of whom are regular member ARBs awarded a CCLOA under CARP in 2000. The remaining 65 are associate members who only participate in store operations.

After the land transfer, Cooperative L entered into a lease arrangement that allows them to lease the land and use service contracts to provide the plantation operation's labor. According to the cooperative's managers, it selected lease arrangement and the service contract for the following reasons:[19] (a) It lacked the funds needed for the initial investment required by other alternatives such as the contract-growing arrangement. (b) The cooperative needed to acquire the latest production technology. (c) It wanted to assure regular paid workers that they would work in the plantation. And (d) it also wanted to assure land amortization payments.

The activities of Cooperative L consist of project operation, consumer operation, and lending operation. Total revenues of the three operations for the year 2010 amounted to ₱12,797,711.

Project operation, the main component, is composed of land leasing operations and servicing operations. Land leasing operations depend on the land rental specified in the lease contract signed between Cooperative L and Lapanday Agricultural and Development Corporation in 2005. The annual rental amount for the first five years is set at ₱18,000/hectare, from which ₱13,000/hectare annual amortization payment to the corporation is deducted. As a result, net income from the operation is ₱5,000/hectare. For the next five years starting 2010, the annual rental increased to ₱30,000/hectare. After deducting ₱13,000/hectare for amortization, net income from this source increased to ₱17,000/hectare.

Since the amortization is paid directly to the corporation and regarded as debt payment, the ₱13,000/hectare is not recorded as income in the financial statement, which reflected ₱30,000/hectare net profit. Consequently, rental amount for 2010 was ₱3,000,000 (₱30,000 x 100 hectares). The actual amount recorded in the

[19] Interview with the chairman of Cooperative L.

statement was ₱3,621,884, the difference of ₱621,884 being the rental for the years prior to 2004.[20]

Servicing operations are used by Lapanday Agricultural and Development Corporation for outside labor of management and by Lapanday Foods Corporation to handle plantation maintenance and packing plant operation. According to Cooperative L, the outside labor service contract between it and the two corporations describe 24 kinds of outside labor services, such as fruit care, harvesting, and packing.

The unit price of outside labor was ₱339/day, which was approved by the Department of Labor and Employment as the minimum wage rate. Therefore, the ₱84 difference between the contracted price of ₱339 and actual payment of ₱255 to the participating ARBs is considered as profit from outside labor service. The gross income of outside labor service operation for 2010 was ₱7,087,676, making it the biggest income operation for Cooperative L.

Thus, total revenue of projects operation amounted to ₱11,703,269 after adding interest and other incomes. After deducting financial and administration costs, the net surplus was recorded at ₱2,744,478.

The net farm income of the member ARBs of Cooperative L is composed of wages paid from participating in the outside labor service and the dividend and interest distributed from net surplus. For the former, the annual income for 2010 was ₱79,560 (₱255/day x 26 days x 12 months).

With regard to dividend and interest, a salient feature of the cooperative's income is counting land leasing rental after the land distribution as revenue of the cooperative together with revenue from other operations. Therefore, ₱3,161,271, which was calculated by total amount of net surplus ₱3,327,654 deducted retirement provision ₱166,383, was distributed to the each ARB member as the dividend of patronage fund and interest of share capital.

For the distribution of Cooperative L's net surplus, the dividend of patronage fund and interest of share capital consists of 70% of total net surplus. The ARBs receive net income amounting to ₱19,009/ARB (₱2,907,723 x 70% ÷ 113 ARBs + ₱253,548 x 70% ÷ 178 ARBs).[21] Thus, each member ARB receives a net income of ₱98,569/ARB (₱79,560+ ₱19,009) (₱123,830/hectare).

The most salient feature of Cooperative L is that it is the only cooperative that did not enter into production operations. Instead, it engaged outside labor service operations to provide plantation labor to which the land was leased for banana production. As a result, Cooperative L was awarded as 2010's most outstanding cooperative in agriculture in Davao City because all its members are ARBs. It was also recognized as the most self-reliant cooperative because it operated with no financial assistance from other organizations or institutions.

[20] Interview with the manager of Cooperative L.

[21] Total net surplus for distribution was ₱3,161,271 after deducting ₱166,682 for retirement provision.

5.5. Discussion of the survey on the four cooperatives

This section summarizes the survey of the four cooperatives. All four cooperatives were awarded land titles by VOS, VLT or CA under CARP, and were issued whether the Individual CLOA or the Collective CLOA. Members of the cooperatives are Agrarian Reform Beneficiaries (ARBs). In their cases, basic management of the cooperatives is dependent on the kind of Agribusiness Venture Agreement (AVA) mode selected. Three of the cooperatives namely, Cooperative H, Cooperative C, and Cooperative D selected the contract growing arrangement. Only Cooperative L used the lease arrangement.

A common criticism of plantation corporations partnering with MNCs is that the latter may still control the management of the cooperatives even after the agrarian reform. There will certainly exist the instruction on tight schedule control and monitoring by MNCs. However, technology advice and financial assistance are arranged at the same occasion. The question is how the technological transfer introduced by them from now on.

The important point regarding the contract growing is indicated in the contract which is arranged through the negotiation between the plantation corporation and the cooperative representing the ARB members. Namely, the banana production operation is managed by the cooperative and ownership of the products belongs to the ARB members. Previously, the plantation corporations unified management from the production to the marketing operations under the centralized management system. The centralized management system has been drastically changed to the decentralized management system.

Under the decentralized management system, operations of harvesting, cutting, processing and packing are enforced by the cooperatives in the farms. Thereafter, the boxes of banana are handed over to plantation corporations at the packing plant. Thus, operations by the plantation corporation are clearly identified as such transport of ex-packing bananas, shipment, and sales.

The necessary conditions of the decentralized management system will provide the incentive to the small banana farmers to increase productivity, thereafter, these conditions lead to construct the new farming system which encourage growing farmers to form the self-reliance.

After the agrarian reform the agricultural workers in the plantation tried to transform from the simple laborers to the Collective Farming System (CFS) in which ARB members participate production collectively and receive the equally divided net income. However, the CFS has fatal defect of not giving the enough incentive to the individual farmer. Therefore, the Cooperative H, and the Cooperative C decided to transform to the Individual Farming System (IFS) at the General Assembly of the cooperatives, and introduced the policy as the guideline of the IFS to the ARB members.

A basic requirement for the IFS is that the cooperative should decide the parcel of land to be assigned equally to the individual ARB member. The cooperative then buys the bananas from the ARB members and sells them exclusively to the company. With this precondition, the cooperative clarifies the classification of individual farm labor by the ARB members and the collective farm labors by outside workers. Based this clarification, the production cost of the bananas for one box (13.5kg/box) can be calculated. For the administration cost of the cooperative, a fixed amount is deducted as the cooperative retention. The implication of this basic principle means that "the bananas produced in ARB farmer's own lot belongs to him," this principle provides the farmers the production incentive as aforementioned. This principle also implies that the IFS enable the increase of production and of net income by his own effort. The banana farmers start for their self-reliance.

At the background of the IFS, there are the traditional social norms in which consensus among the ARB farmers to equally distribute the land as the endowed production factor is accepted. During the process of equal distribution of land plot, fertility of soil, availability of Over Head Cable Propping (OHCP) and distance to the packing plant, and raffle in some cases, are considered to classify the type of soil. Thereafter the amount of deduction is decided as the cooperative retention in proportion to the type of soil. If the quality of land is decided lower, the cooperative retention decreases, then the farm income of the ARB member increases as it was adjusted to the quality of soil.

Giving the concrete procedure of the calculation of income, the cooperative records the volume of the production of the individual member, and pays the amount to him twice a month after deduction of cost of input such as fertilizer, pesticide, fee for collective labor such as packing plant works, harvest works, splaying works. In addition to it, administration cost which includes machine, charges for accountants and the depreciation for building are deducted in advance from unit price of individual selling as the cooperative retention. The retention of the Cooperative H amounted to $0.95/box (Class A bananas) and the Cooperative C amounted to $0.50/box (Class A bananas). Both cooperatives entered the IFS. However, as the Cooperative D was issued the Individual CLOA at the beginning of the establishment and its total ARB members numbered only 21 farmers, there is no cooperation retention from the unit selling price and deducted only the actual expenses each time.

Under contract growing, not much difference can be seen in per-hectare productivity as between Cooperatives H, C and D in 2010. Cooperative H was at 4,091 boxes/ha. (less than the initial forecast of 4,397 boxes/ha), Cooperative C was at 5,194 boxes/ha. and Cooperative D was at 4,300 boxes/ha, while average data for the year 2011 was 3,847 boxes/hectare (based on data provided by Pilipino Banana Growers and Exporters Association (Table 4).

TABLE 4. Banana yield per hectare per cooperative (2010*, in boxes/hectare)

	Cooperative H	Cooperative C	Cooperative D	Cooperative L
Individual Farming System	4,091**	5,194	4,300	n.a.
Collective Farming System	4,600	3,989	n.a.	n.a.
Corporate Farming System	4,600	3,500	n.a.	3,300 (at nearby plantation)

*Average production was 3,847 boxes/hectare for the year 2011, according to the data provided by Pilipino Banana Growers and Exporters Association.
**Initial forecast of 4,397 boxes/ hectare could not be achieved due to the embargo of the Iranian import of banana.
Sources: Interviews with managers of the four cooperatives

Higher production is evident in the case of the Cooperative C when it operated under the Individual Farming System, as compared with production under the previous collective and corporate farming systems.

Members of Cooperative D, however, already had their ICLOAs, which meant that each member ARB adopted the IFS. Since the number of members is relatively small, cooperative retention is not deducted, and only a small amount of the actual cost is deducted from the sales revenue.

In 2010, net farm income per hectare of the member ARBs was ₱106,853/ hectare (or ₱86,764/ARB) for Cooperative H, ₱203,380/hectare (₱263,987/ARB) for Cooperative C, and ₱190,078/hectare (₱224,292/ARB) for Cooperative D. Cooperative C delivered the highest income per ARB because it succeeded in minimizing overhead cost. Meanwhile, Cooperative H showed relatively lower income because of a lower selling price of bananas at $2.95/box and a higher cooperative retention at $0.95/box, as compared with a selling price of $3.15/box of selling price and $0.50 retention in Cooperative C (Table 5).

TABLE 5. Net farm income of ARB members (2010) in pesos*

Net farm income	Cooperative H	Cooperative C	Cooperative D	Cooperative L
Per hectare	₱106,853	₱203,380	₱190,078	₱123,830
Per agrarian reform beneficiary	₱86,764	₱263,987	₱224,292	₱98,569

*Incomes of cooperatives, excluding Cooperative L, are deducted amortization payment.
Source: Interviews with managers of the four cooperatives.

The IFS is associated with an increase of income to each ARB member through the increase in production, thus providing an initial step towards the self-reliance of the farmer grower.

The loans to the three cooperatives were provided by the plantation corporation, Land Bank of the Philippines, the private banks and the plantation corporations.

In contrast to the aforementioned three cooperatives, Cooperative L selected the lease arrangement and utilized outside services of workers for the plantation corporation. The net incomes of the members consist of wages from farm work and dividends resulting from the difference between the actual wage and contracted wage accumulated within the Cooperative L. Net income of individual members of Cooperative L was ₱123,830/hectare (₱98,569/ARB). The biggest accomplishment of Cooperative L was achieving positive net surplus by land rental and labor servicing. As a result, Cooperative L was awarded 2010's most outstanding cooperative in Davao City because they did not receive any kind of loan from banks or other organizations. On other hand, Cooperative L lost the opportunity to generate potential gain from production of bananas through contract growing. That is the reason why they should reconsider their choice of lease agreement. The Chairman of Cooperative L explains that assistance is needed in order to upgrade computer facilities. This need is quite understandable since computers and other office appliances are essential in computing for the distributive amount of individual overhead cost in contract growing's farm operations.

For the two cooperatives with collective CLOA in contract growing, the next issue is how to respond to the growers' strong demand to realize the subdivision of land *de jure* and not merely *de facto*. That would however require a special provision to protect the cooperative against the land conversion for other purposes, change of crops, and any other irregular activities on the farm.

In the long run, contract growing leads to the expansion of the operations and building-up of self-reliant growers. Cooperative H opened an additional two branches in Asuncion with 27.0 hectares and Compostela with 25.0 hectares to extend main operations; Cooperative C expanded 13.4 hectares of cooperative land in Carmen. These expansions were achieved only by learning from past experience and utilizing know-how taken from contract growing for banana production. The accumulation and dissemination of information on good practices, based on Cooperative H's and Cooperative C's success may play a role in the emergence of more self-reliant banana growers.

6. Conclusion

This paper provides a perspective that differs from the common view that poverty among small growers in banana production is exacerbated by their exploitation by MNCs, high input prices, and low product-prices. We presented our own understanding of the issue by describing how some growers were found to be on their way to becoming self-reliant banana farmers within the framework of AVA's contract growing scheme formulated through the Department of Agrarian

Reform's administrative orders. The study shows how the policy to develop self-reliant growers has improved through the participation of cooperatives.

While economies of scale are observable in other commercial crops such as sugar, only small productivity differences due to land-size exist in the case of contract banana growing. On the other hand, owing to the high perishability of bananas and stringent foreign market standards, a hierarchical organization and a Centralized Management System are thought indispensable in controlling the various stages of banana production. It is this which led the management of various plantations in the past to seek deferment of agrarian reform.

The situation changed drastically however when land distribution became possible through the issuance of Collective CLOAs. This type of CLOA is issued to cooperatives or associations composed of the ARBs when it is not economically or physically feasible to divide the land into small lots. The contract-growing scheme was simultaneously introduced as one of the eligible schemes under the AVA's guidelines.

Through the synergies of agrarian reform, AVA, and contract growing, the cooperative has responded to the new circumstances in banana production. The decentralized management system has become viable for cooperatives under this framework. Under contract growing, the cooperative can sell bananas bought from member-ARBs to the plantation corporation. The cooperative thus manages production including harvesting, processing, and packing of bananas. On the other hand, the plantation corporation manages operations, including the transport of boxed bananas to the cold refrigerator-equipped warehouse up to the special vessel. Most importantly, all the major rules of operations in farm production are decided by consensus among member-ARBs.

One of the decisions reached by consensus among ARBs is the implementation of the individual farming system (IFS), under which the grower owns all bananas produced in his or her assigned lot. As a result, growers are provided a strong incentive to increase their lot's production. The land is subdivided equally among all member ARBs, taking the quality of soil into consideration. Overhead costs, or cooperative's retention, are deducted individually from selling price. By agreement, as the quality of land soil decreases, the retention becomes smaller, leaving more net income for the ARB farmer. Thus, each member ARB receives an equitable value of the production harvested on his lot. The equally assigned and distributed lands ensure equal opportunity of production. The introduction of the IFS is the initial stage for generating self-reliant growers. The equitable distribution on the other hand embodies the social norm inherent in the community.

Strong governance within the cooperative is essential in maintaining the IFS. An important aspect is preventing extra-contractual sales of the product to third parties. This phenomenon, also known as *warik warik*, or "pole vaulting" is rampant during the lean season when middlemen offer better prices in order to

cater to the increasing demand for bananas, especially for the Class B (middle class quality) in Middle East.

The real cause of these rule violations is the inability to respond to external buying price of bananas in this season. Both the cooperative and plantation corporation must be thoroughgoing in imposing preventive measures. An institutional price adjustment mechanism must be in place to ensure that the current selling price is closely related to the world banana price as also shown in the case of contract growing in oil palm production [Nozawa 2012b: 195-198].

Efforts to demonstrate governability must be made by the cooperatives through the management and control of the plantation, while plantation corporations must respond quickly to the volatility of banana pricing. To further develop the sustainability of both cooperatives' and plantations' operations, a closer relationship is needed to establish credibility on both sides.

That a number of cooperatives still find themselves in leasing agreements with plantation corporations poses a challenge. Technological and managerial assistance from the plantation corporation is urgently required if these cooperatives are to be encouraged to shift to contract growing and thus produce self-reliant growers. To this end, it is hoped the comparative experiences of the four cooperatives studied in this paper might play a role. ■

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