

Agro-organizational Assessment of the Bismartz Small Farmers Multi-Purpose Cooperative (BSFMPC) in Bismartz, Don Carlos, Bukidnon

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ABSTRACT

The Department of Agrarian Reform plans to develop a sugarcane block farm enterprise in Bismartz Agrarian Reform Community in Don Carlos, Bukidnon to alleviate poverty among small sugarcane farmers. With this, the Bismartz Small Farmers Multi-purpose Cooperative (BSFMPC) was assessed through survey and focus group discussion in determining its agricultural and organizational capacity to implement a sugarcane block farm enterprise in Bismartz ARC. The study shows an experienced local organization established since 1993 that engaged in small-scale agricultural enterprises where farmers share information, skills, and knowledge in farming and have exhibited high social capital in terms of empowerment and political action, trust and solidarity, and social cohesion and inclusion. However, information, technical, and market inefficiencies within and outside the farmers' cooperative could affect the development of sugarcane block farm enterprise in the ARC. Together with the provision of interventions regarding capability building and common service facilities, the Department of Agrarian Reform could utilize the high social capital among the farmers in consolidating small sugarcane farms into a sugarcane block farm enterprise.

Keywords: *cooperatives, agrarian reform, sugarcane production, agricultural development*

INTRODUCTION

The Philippines is a major sugarcane producer and one of the largest U.S. sugar quota recipients. Based on national sugarcane production, the island of Negros in the Visayas accounts for more than one-half (57%) of domestic sugar production, followed by Mindanao (19%) and Luzon (14%). Domestic sugar consumption is expected to increase due to expanding food processing demand, a strengthening economy, and a growing population. However, sugarcane farms of less than five hectares have a productivity average of 5.03 MT/ha much lower than those farms of 100 hectares and more. Because of this, the Department of Agriculture (DA) promotes block farming to consolidate small farms and take advantage of plantation-scale production. The DA enjoins other government agencies to finance and support the program to develop a strategically diversified sugarcane industry that produces raw, refined, processed, and other sugar by-products (USDA FAS-GAIN Report, 2013-2014). The importance of consolidating small farms was legitimized with the passing of Republic Act 10659 otherwise known as the Sugarcane Industry Development Act of 2015. This act promotes the competitiveness of the sugarcane industry and maximizes the utilization of sugarcane resources to improve incomes of farmers and farm workers. Consolidation of small farms to develop block farming enterprise necessitates organization of farmers.

Farmers' organizations are potent tools for agricultural development. And organizational assessment is a critical activity which aims to identify performance targets and the knowledge, skills, and abilities needed to achieve the set objectives. It is a systematic process of determining the performance of an organization including the causes and reasons to mitigate or eliminate the gap and alleviate the problems and weakness as well as enhance strengths and competencies. Effective assessment will help prioritize resources to fulfill organizational mission, optimize productivity, and provide quality products and services (Asopa & Beye, 1997; Visualize Data, n.d.).

One important aspect which could strengthen farmers' organization is the presence of social capital (Dudwick, et al., 2006, Ormston & Reid, 2012). According to Putnam (2000, 2002), social capital refers to the connectedness and collectiveness among individuals which consists of six dimensions: groups and networks; trust and solidarity; information and communication; collective action and cooperation; social cohesion and inclusion, and empowerment and political action. These networks could enable people to build and strengthen communities/organizations by forming a knit of the social fabric which could lead individuals to commit themselves and to their common goals. Putnam (2002) argues that this sense of belongingness can bring significant benefits to people and their communities/

organizations. Besides, social capital is also considered as an economic idea which is necessary for achieving economic growth. With technological advancements, companies have increasingly relied on social capital to drive business more than ever before.

In particular, the Department of Agrarian Reform (DAR) has created the Agrarian Reform Communities (ARCs) to serve as entry points for its projects and activities. DAR supported the development of the ARCs through the training of the agrarian reform beneficiaries (ARBs) and the provision of rural infrastructure. To help improve the farm and off-farm incomes of the ARBs, the DAR implements the Agrarian Reform Community Connectivity and Economic Support Services or the ARCESS program (DAR-ARCESS Project Document, 2012) utilizing the farmers' organization in the ARCs.

More specifically, DAR-South Bukidnon plans to mainstream the ARBs in the sugarcane industry by enabling their cooperatives to become active players in the sugarcane value chain. This program is consistent with DAR Provincial Development Plan of positioning itself as a dominant provider of integrated services to farmers and rural dwellers. This also serves as a convergence between and among the Sugar Regulatory Authority (SRA), Department of Agrarian Reform (DAR), Department of Agriculture (DA) and Department of Environment and Natural Resources (DENR) to establish sugarcane block farms in South Bukidnon.

In general, this study was conducted to determine the agricultural and organizational needs of the Bismartz Small Farmers Multi-Purpose Cooperative to promote block farming and support the implementation of the Sugarcane Block Farms Agro-Industrial Enterprise of the Department of Agrarian Reform in Don Carlos, Bukidnon.

Specifically, this agro-organizational assessment sought to describe the economic profile of the cooperative and its members, evaluate the organizational capability of the BSFMPC in terms of the presence of social capital. It also aims to determine the required agricultural and entrepreneurial capability-building interventions in terms of the provision of business development training and common service facilities to competently organize and manage a viable and sustainable sugarcane block agro-industrial enterprise.

METHODOLOGY

The study was conducted in the Agrarian Reform Community of Bismartz, municipality of Don Carlos in the province of Bukidnon in close coordination with the Department of Agrarian Reform Provincial Office (DARPO) for Southern Bukidnon and the BSFMPC. From the list provided by the DARPO, 112 members

of the BSFMPC were selected by the leaders through simple random sampling as participants of the survey comprising 64% of the total membership of the cooperative. The study employed descriptive design using survey questionnaire through a personal interview in gathering primary data.

The questionnaire included both structured and non-structured statements to elicit information from the respondents relevant to the objectives of the study. The questions/statements were translated into the Cebuano dialect during the data collection. Participants were interviewed at the People Organization (PO) Center at Bismartz, Don Carlos, Bukidnon. Filled up questionnaires were re-checked to ensure completeness of required information. Data collected were analyzed using descriptive statistics such as means, weighted means, rank, frequency, and percentage; and results were presented to the leaders of the Cooperative through Focus Group Discussion (FGD) for validation. Discussion of results was based on results of the survey as validated during the FGD.

Don Carlos is a first class, 19th municipality of the province of Bukidnon, Southern Philippines and ranked 7th in the province in terms of population. It is situated in the southern part of the province, 61 km south of Malaybalay City (the provincial capital), 161 km from Cagayan de Oro City, 180 km from Cotabato City, 160 km from Davao City and 1,575 km south of Manila. The terrain of the municipality is flat except for the mountain range in the eastern part with 0-8% slope covering 198.96 km² (93.09%) of its total land area. The highest elevation is 700 meters above sea level, and the lowest is 300 meters above sea level (Don Carlos Municipal Profile, 2012). Figure 1 shows the map of the municipality of Don Carlos in the province of Bukidnon.



Figure 1. The Map of Bukidnon Showing the Municipality of Don Carlos

Bismartz is the fifth largest of the 29 barangays situated in the outlying part of the Municipality of Don Carlos, Bukidnon with a total land area of 903 hectares and a population of 1,580 as of 2011. It is an agrarian reform community (ARC) having been established through the Comprehensive Agrarian Reform Program of the government (Bismarts Barangay Profile, 2012).

RESULTS AND DISCUSSION

Attributes of the BSFMP Cooperative and its Members

The Bismartz Small Farmers Multi-Purpose Cooperative has been operating as a cooperative in the village since 1993. In 2013, the Cooperative had a total of 175 members. Over the years, the Coop has engaged in several business operations such as sugarcane and crop production, lending, provision of postharvest services, trucking services, Botica sa Barangay and convenient store.

Table 1 indicates that the BSFMPC farmers are relatively young with a mean age of 49 years old. More than one-half (56%) of them are female and over three-fourths (79%) are married with a mean household size of five members. In terms of education, 40% of the farmers had attended secondary school, while only 15% had reached college. A majority of the farmers (96%) are migrants from Cebu (80%), the Queen City of the South. They belong to three (3) religious groups, with a majority of them being members of the Roman Catholic Church. They have been residing in Barangay Bismartz for four decades (40 years), are coop members for 31 years and have been engaged in sugarcane farming for 12 years. This could indicate that the BSFMPC is composed of long-time residents of the village who have moderate experience in sugarcane farming.

Table 1
Socio Profile of BSFMPC Members

Parameter	Frequency (N=112)	Percentage
Age		
Mean	48.89	
Sex		
Male	49	44
Female	63	56
Marital status		
Married	89	79
Single	8	7
Separated	1	1
Widow/er	14	13
Educational attainment		
Elementary level	17	15
Elementary graduate	27	24
High school level	14	13
High school graduate	31	27
College level	10	9
College graduate	7	6
Voc/tech diploma	2	2
Graduate studies	4	4
Household size		
Mean	4.79	
Ethnic group		
Bukidnon/IP	4	4
Cebuano	90	80
Ifugao	1	1
Ilocano	1	1
Ilongo/Hiligaynon	16	14
Religion		
Roman Catholic	110	98
Iglesia Ni Cristo	1	1
Baptist	1	1
Years of residence in Bismartz		
Mean	39.66	
Years of experience in sugarcane farming		
Mean	12	
Years of membership in BSFMPC		
Mean	31	

Table 2 shows the economic characteristics of the BSFMPC farmers. The farmers have multiple sources of income with farming (79%) as their primary source in addition to working in other farms (24%). Over three-fourths (76%) of them own the farm they till which covered a total of 203 hectares with a mean farm size of less than 2.5 hectares. Ironically, 21% of the farmers are tenants. The BSFMPC farmers personally finance their farm production activities (62%), while others are assisted financially by the Cooperative (26%) and banks (22%). They also personally manage their farms (40%) and hire farm workers (47%). They are informed about agriculture by the ARBO (29%), DAR development facilitators (26%), LGU extension workers (21%), and their church (21%).

Table 2
Economic Profile of BSFMPC Farmers

Parameter	Frequency (N=112)	Percentage		
Primary source of income*				
Farming	88	79		
Government employment	4	2		
Hired farm labor	27	24		
Hired non-farm labor	11	10		
Business	5	4		
Private employment	4	4		
Tenurial status*	In hectares			
Owner	203.4	76		
Lessee	22	15		
Tenant	40	21		
Source of capital*				
Self-financed	69	62		
Traders	10	9		
Bank loan	29	26		
Relatives/friends	8	7		
Government assistance	8	7		
ARBO/Coop	34	29		
Source of labor*				
Self	45	40		
Family	30	27		
Hired	53	47		
Hunglos/bayanihan	11	10		
Source of information on sugarcane production*				
DA/LGU extension	23	21		
TV	11	9		
Radio	9	5		
DAR development facilitator	29	26		
ARBO	33	29		
Other farmers /relatives	16	14		
Farmers' organization	13	11		
Church	24	21		
Crops	Total Farm Size	Average Production	Expenses/ha (Php)	Ave. Income (Php)
Sugarcane	196	72 tons/ha	50,239.80	23,428.57
Corn	70.4	132.23 sacks/ha	21,725.85	20,745.73
Rice	17.05	65.98 sacks/ha	30,263.93	32,961.87
Livestock	No. of Heads	No. of Heads Sold	Expenses/ha (Php)	Ave. Income (Php)
Pig	67	52	805.97	1,231.34
Cow	59	47	22,815.25	23,086.44
Chicken	224	172	37.72	54.02
Carabao	31	19	2,741.94	4,290.32
Goat	8	3	1,000.00	2,125.00

*multiple response

The BSFMPC farmers engage in diversified agriculture: producing sugarcane, corn, and rice. A greater part of their farm area is devoted to sugarcane farming (196 hectares) where they produce an average of 72 tons/ha and realize an average income of Php 23,428.57 per hectare which is higher compared to the national sugarcane productivity average for small farms. Aside from crop production, the farmers also engage in livestock production where they raise chicken, pig, cow, carabao, and goat as an additional source of income.

These attributes of the farmers in Don Carlos, Bukidnon echo the general attributes of Bukidnon farmers and their farming condition. These reflect the commonalities among Bukidnon farmers as influenced by the geographical and climatic features of the area. The diversified farming activities in the province, however, has aggravated the problem of the lack of the economies of scale confronting small farms. In 2016, Bukidnon was ranked 6th among the poorest provinces in the Philippines with 58.7% poverty incidence (ABS-CBN News, March 24, 2016).

Agricultural Capability of the BSFMPC Members

Table 3 reflects the agricultural practices adopted by the BSFMPC farmers in sugarcane farming. Over one-half (59%) of the farmers use a tractor, while 41% of them still utilize animal-drawn plow in land preparation. A thorough land preparation is essential to bring the soil to a fine tilth for proper germination of the sets and field emergence and root growth. They use different varieties of sugarcane, but most farmers plant var 80 by ratooning. They apply both inorganic and organic fertilizer (48%) to improve the fertility of the soil and use chemicals to manage pest and diseases (47%) in their crop. They harvest the canes by slashing/cutting (89%) or burning (11%).

Table 3
Farming Practices of BSFMPC Farmers

Parameter	Frequency (N=112)	Percentage
Crop Management Practices		
Land preparation practice*		
Tractor	86	59
Animal-drawn plow	60	41
Variety planted	80-13-66; 88; 90; 58	
Frequency of planting/ratooning per year		
Once	44	39
Twice	27	24
Thrice	41	37
Fertilization practices*		
Inorganic fertilizer only	38	29
Organic fertilizer only	20	15
Inorganic + organic fertilizer	64	48
No fertilizer application	9	8
Pest and disease management*		
Chemical	74	47
Biological	17	11
Organic	16	10
Physical (burning)	17	11
Manual	17	10
IPM	18	11
Harvesting practices		
Slashing/cutting	100	89
Burning/cutting	12	11
Postharvest Handling and Marketing Management & Practices		
Marketing practice		
Wholesaler	7	6
Suki	11	10
ARBO/coop	26	23
Local buyer	3	3
Sugar Milling Co.	62	55
Contract buyer	3	3
Mode of payment	63	56
Cash	27	24
Credit	17	15
Installment	5	4
Others		
Source of market information*	17	12
Buyer	9	6
Co-farmer	11	8
DAR-DF	6	4
Radio	72	51
Sugar Milling Company	13	9
DA/LGU extension worker	13	9
ARBO/coop		
Means of delivering produce to Sugar Milling Company		
Personal/owned hauler	8	7
Animal-drawn cart	15	13
Rented hauler	80	71
Others	9	8

*multiple response

After harvesting, the farmers market their sugarcane products using rented hauling trucks (71%) to the Sugar Milling Company (55%) where they are paid in cash (56%). The farmers get information on prices of outputs from the Sugarcane Milling Company (51%) and from the buyers (12%).

Figure 2 shows the length of adoption and usefulness of the adopted sugarcane practices. The BSFMPC farmers have long practiced animal traction (14 years), manual application of inorganic fertilizer (11 years) but use farm mechanization for land preparation quite recently (8 years). They find manual planting, weeding, and harvesting as very useful practices, but consider irrigation and drainage as less useful in sugarcane production. These findings imply that farmers find the traditional practices as still very relevant and helpful in present day sugarcane farming.

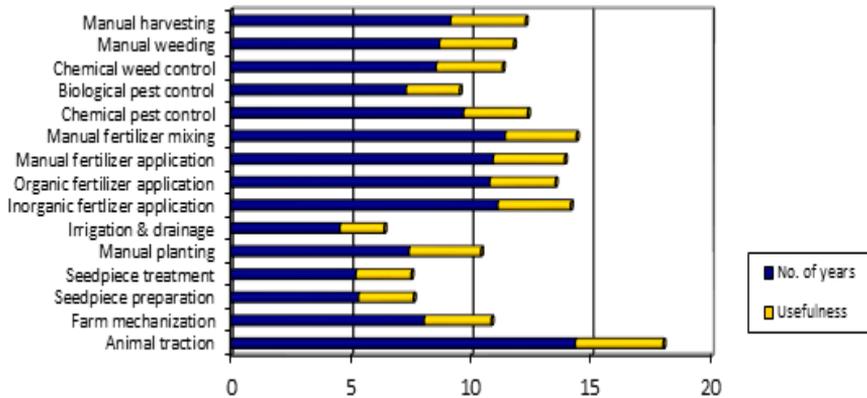


Figure 2. Adoption and Usefulness of Sugarcane Production & Practices among BSFMPC Farmers

Figure 3 reflects the gender participation in sugarcane production in Bismartz. A woman-leader heads the BSFMPC, and more than one-half (56%) of the BSFMPC members are women- farmers. In addition, women farmers are highly involved in fertilization, planting, and marketing of sugarcane products. Understandably, male farmers are highly engaged in strenuous activities like hauling and mixing of fertilizers and chemicals, weed control and land preparation. In general, women-farmers participate in the management of the organization as well as in sugarcane production and post-production practices. Accordingly, this indicates gender involvement in sugarcane farming as well as in enterprise management.

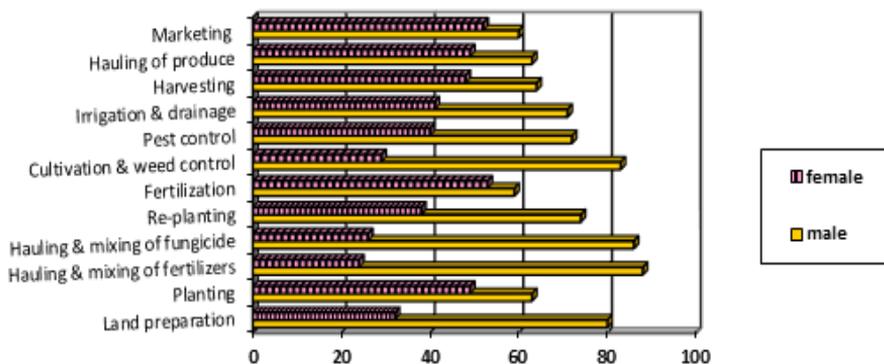


Figure 3. Gender Participation in Sugarcane Production in BSFMPC

Table 4 reveals the external problems faced by farmers in sugarcane production. BSFMPC farmers are confronted with problems about their physical health (31%), the drought (19%) as well as the low fertility of their soil (14%) for sugarcane production. The intensity of labor required in sugarcane farming has raised concerns of the farmers on their physical well-being. All of these problems and issues pose challenges to the Department of Agrarian Reform and other government agencies in their efforts to establish sugarcane block farm enterprise and promote the welfare of the sugarcane farmers in Bismarts.

Table 4
Externalities Affecting Sugarcane Production of BSFMPC

Externalities*	Percentage
Problem on physical health	31.0
Drought/ no available water	19.0
Poor soil condition	14.0
Unpredictable weather condition	7.0
Poor accessibility of the farm	6.0
Lack of time for the farm	6.0
Flooding/too much water	4.0
Less available water	4.0
Lack of interest for the farm	4.0
Thieves/robbery	4.0
Peace and order situation	1.0

*multiple response

Table 5 shows the information and technical inefficiencies as well as market deficiencies encountered by the BSFMPC farmers in sugarcane farming. Moreover, farmers lack technical knowledge (27%), farm equipment for land preparation (15%), financial capital (14%) and post-harvest facilities (10%) for sugarcane production. These problems could be aggravated by their lack of exposure to mass media (4%). This could imply that the facilities offered by the cooperative and the private merchants in the municipality may not be enough to support the establishment of a sugarcane block farm enterprise in the village.

Table 5
Information and Technology Inefficiencies in Sugarcane Production of BSFMPC

Information/ Technological Inefficiencies*	Percentage
Lack of technical knowledge	27.0
Lack of land preparation equipment	15.0
Lack of capital	14.0
Lack of post-harvest facilities	10.0
Lack of technology to be used	10.0
Low-quality product	9.0
Lack of exposure to mass media	4.0
Prevalence of insect pest and diseases	3.0
Other farmers not sharing info/tech	3.0
No contact with the extension agent	2.0
Low production	2.0
Not attended any seminar/training	1.0

*multiple response

Table 6 reveals the market and marketing inefficiencies in sugarcane production as perceived by the BSFMPC farmers. Farmers observe that sugarcane buyers and mills offer low price (35%) to their product. However, the cost of transporting their product to the market is high (32%). This could indicate that high cost of transportation, low price of output in addition to inadequate facilities and technical information could influence sugarcane production.

Table 6

Market and Marketing Inefficiencies in Sugarcane Production of BSFMPC

Market Inefficiencies*	Percentage
Low price of sugarcane product	35.0
High transportation cost	32.0
Inadequate transportation facilities	15.0
Inadequate market information	10.0
Fluctuating prices of inputs	8.0

*multiple response

The Sugarcane Roadmap 2020 of the Sugar Regulatory Administration (September 2015 version) reported the lack of economies of scale among small sugarcane farms and the financial incapability of the small farmers to procure the necessary farm inputs such as fertilizer and planting materials from cane high-yielding varieties. Poor farm practices also resulted in low yields in small sugarcane farms. In Bukidnon, which contributed 15% of the national production in 2013-2014, planters have identified various challenges including peace and order, poor road conditions, lack of equipment and shortage of labor as affecting prospects of sugarcane production in the province.

Organizational Capability of the BSFMPC

The organizational capability of the BSFMPC is assessed in terms of the presence of the six (6) dimensions of social capital which include groups and networks; trust and solidarity; information and communication; collective action and cooperation; social cohesion and inclusion, and empowerment and political action.

Groups and network

Table 7 reveals that members of the cooperative regularly attend meetings and help one another especially in times of need. People in the community are members of different groups and that membership in the cooperative has increased during the last three (3) years. This indicates that the BSFMPC has a high level of networking among its members.

Table 7

Presence of Groups and Network among Members of the BSFMPC

Indicator	Mean Score	Qualitative Description					
The members attend meetings regularly.	3.60	Very high					
Members in the organization are helping one another in times of need.	3.38	High					
The members get social benefit from the organization.	3.26	High					
The longer the members are with the group, the closer they become to one another.	3.10	High					
The membership in the organization has increased in the last 3 years.	3.08	High					
People in the organization are usually members of several groups.	3.07	High					
The group interacts with other groups of similar goals.	2.83	High					
Grand Mean	3.19	High					
3.51-4.0	Very high	2.51-3.50	High	1.51-2.50	Low	0.1-1.50	Not at all

Trust and Solidarity

Table 8 shows that members of the cooperative believe that the government, as well as their organization, will help them and their community. They are willing to contribute time and money to help the community, and there is an increasing trust among members and leaders of the cooperative. The findings manifest a high level of trust and solidarity between and among BSFMPC leaders and members.

Table 8

Presence of Trust and Solidarity among Members of the BSFMPC

Indicator	Mean Score	Qualitative Description
The members of the organization trusted the government to help improve the community.	3.42	High
Most members of the organization can be trusted.	3.38	High
Most members of the organization contributed money to community project for common good.	3.30	High
Most members of the organization are willing to help if need-ed.	3.29	High
Most members of the organization contributed time to com-munity project for common good.	3.28	High
The members trusted the organization to help improve the living conditions of the people in the community.	3.20	High
The members of the organization are more trusting with each other now than before.	3.15	High
Grand mean	3.28	High
3.51-4.0 Very high	2.51-3.50 High	1.51-2.50 Low
		0.1-150 Not at all

Information and Communication

Table 9 reflects that the BSFMPC members are well-informed of government programs; they attend seminars and training and use their mobile phone for communication. They read the newspaper and listen to radio. There is, however, a limited use of the Internet for communication and information among members of the cooperative. The findings indicate a high level of communication among members of the BSFMPC, through the use of mass media.

Table 9

Presence of Communication and Information among Members of BSFMPC

Indicator	Mean Score	Qualitative Description
Members are informed of government programs from community leaders, technicians, and friends.	3.43	High
Members attended seminars and training.	3.38	High
Members used a mobile phone to communicate with others.	3.04	High
Members listened to the radio.	2.88	High
Members read the newspaper, if available.	2.59	High
Members are internet users.	2.25	Low
Grand Mean	2.92	High

3.51-4.0	Very high	2.51-3.50	High	1.51-2.50	Low	0.1-1.50	Not at all
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Collective Action and Cooperation

Table 10 indicates that BSFMPC members highly participate in activities which benefited their community and other communities. Accordingly, they help other members and non-members of their organization. They believe that the spirit of bayanihan is highly present in the cooperative, which is reinforced by the practice of imposing a penalty for non-participation in group activities. These findings reveal a high level of collective action and cooperation among members of the BSFMPC.

Table 10

Presence of Collective Action and Cooperation among Members of the BSFMPC

Indicator	Mean Score	Qualitative Description
The organization participated in community activities.	3.49	High
Members of the organization worked with other mem-bers for the benefit of the community.	3.40	High
Members of the organization participated in community activities.	3.41	High
Members participated in outreach program of the or-ganization.	3.35	High
The spirit of bayanihan is present in the organization.	3.25	High
Members of the organization helped non-members who asked for assistance.	3.24	High
Members of the organization contributed time and money towards common development goals.	3.02	High
Members of the organization who do not participate in community activities are criticized or sanctioned by the organization.	2.66	High
Grand mean	3.23	High
3.51-4.0 Very high	2.51-3.50 High	1.51-2.50 Low
		0.1-150 Not at all

Social Cohesion and Inclusion

Table 11 reveals that the BSFMPC members have a very high feeling of togetherness and closeness with one another. They perceive their community as peaceful where they could walk safely even at night free from violence. Everybody is allowed to participate in the organization’s activities as well as attend family/ community festivities. The findings show a high level of shared values, common norms and common bonds within the BSFMPC.

Table 11
Presence of Social Cohesion and Inclusion among Members of BSFMPC

Indicator	Mean Score	Qualitative Description
There is a strong feeling of togetherness or closeness in the organization.	3.49	High
All members are allowed to participate in all activities of the organization.	3.40	High
Members felt safe when walking down the street alone after dark in the community.	3.41	High
The difference in socio-economic status, belief, education, etc among members do not cause problems in the organization.	3.35	High
Members felt safe from crime and violence when in their homes.	3.25	High
Members attended family/community festivals or ceremony (wedding, fiesta, funeral, etc.)	3.24	High
Members of the organization have not been a victim of violent crime in the last 12 months.	3.02	High
Compared to 5 years ago, the level of violence in the community has decreased.	2.66	High
Grand mean	3.23	High
3.51-4.0 Very high	2.51-3.50 High	1.51-2.50 Low
		0.1-1.50 Not at all

Empowerment and Political Action

Table 12 shows that members of the BSFMPC participate highly in barangay assemblies; express their opinions freely, exercise their right of suffrage and are considerate of the concerns of others when making a group decision. In general, the BSFMPC members have a high level of empowerment and political involvement.

Table 12
Presence of Empowerment and Political Action among Members of the BSFMPC

Indicator	Mean Score	Qualitative Description
Members participated in barangay meetings, public hearing or public discussion during the last 3 years.	3.67	Very high
Members can express their opinions about the organization without the fear of being punished.	3.55	Very high
Members of the organization participated in the last 3 local/national elections.	3.52	Very high
Officers of the organization considered the concerns of the members in making decisions.	3.52	Very high
Individual members felt much control in decision-making affecting their everyday activities.	3.38	High
Individual members felt they can make a big impact in making the community a better place to live.	3.36	High
Individual members alerted local authorities about local problems in the last three years.	3.34	High
Individual members felt that they have the power to make important decisions to course of their life	3.21	High
Grand Mean	3.44	High
3.51-4.0 Very high	2.51-3.50 High	1.51-2.50 Low
		0.1-1.50 Not at all

Figure 4 shows that the BSFPMC members are highly empowered and politically active, but with relatively weaker information and communication networks. This may imply the need of the Cooperative to increase the use of different communication networks including the social media which are essential in managing a sugarcane block farm enterprise.

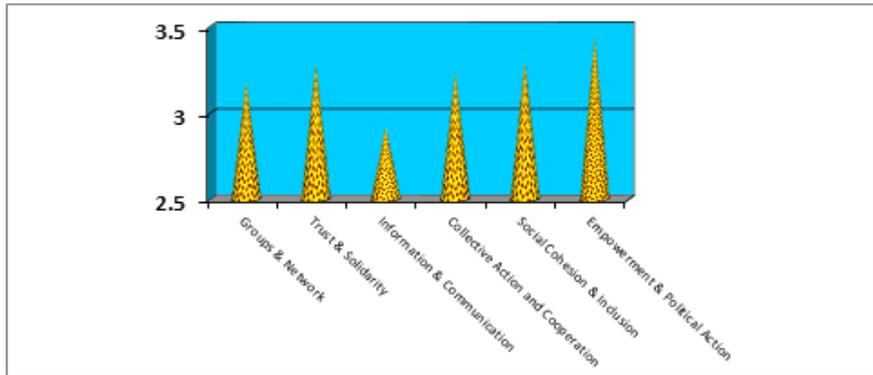


Figure 4. Social Capital of the BSFPMC

The findings show a high level of social capital in BSMFPC. van Deth (2001) found in his study a high correlation between civic participation of people and their political engagement in the community. People showed an increased participation in village assemblies as well as on the frequency by which local officials meet with residents. Consequently, increasing the levels of social capital, especially trust, has reduced the levels of fears for safety in the community (Green et al., 2000). Solawetz and Borlaug-Ruan (2013) observed that positive reciprocity between farmers and project management promotes a positive attitude and community cooperation which could facilitate project implementation. Similarly, Amparo et al., (2011) reported that social capital encourages access to community data and key persons as well as boosts ownership of the assessment findings among local stakeholders. This has also helped in the mobilizing the people to plan for interventions regarding community issues. In terms of gender, Godquin and Quisumbing (2008) found differences between men and women in their propensity to join groups but found no gender differences in the types of group men and women affiliated with.

Technical and Entrepreneurial Needs of BSFMPC

Table 13 reveals the required technical and entrepreneurial interventions in order to develop the capabilities of the BSFMPC to operate a sugarcane block farm agro-industrial enterprise.

Provision of Business Development Trainings

Table 13 shows that the BSFMPC needs training on production, post-production, and marketing of sugarcane. Specifically, Table 13 depicts the various technical and entrepreneurial needs of the cooperative in managing a sustainable sugarcane block farm agro-industrial enterprise. Also, members need training on sustainable crop production practices inclusive of varietal selection; seed piece handling; pest and water management; fertigation and farm mechanization. After harvest, BSFMPC members need training on pest and diseases of harvested products together with market information in terms of prices as influenced by supply and demand.

In addition, the BSFMPC needs to develop managerial competency in running an agro-industrial enterprise along human resource development, leadership, project management as well as project development, bookkeeping, networking and gender development. It is imperative for farm managers to be aware of the creative and dynamic process in establishing and maintaining an environment in which the BSFMPC members can work together to accomplish the objectives of the enterprise.

Table 13

Technical and Entrepreneurial Needs of the BSFMPC in Bismartz, Don Carlos, Bukidnon

Indicator	Mean Score	Qualitative Description
Production		
Crop Protection	2.62	Very necessary
Sustainable Agriculture Practices	2.48	Very necessary
Varietal Selection	2.43	Very necessary
Integrated Pest Management	2.22	Very necessary
Seed piece handling & treatment	2.14	Very necessary
Water management	2.09	Very necessary
Farm Mechanization	1.98	Necessary/ very necessary*
Soil Fertility Management	1.95	Necessary
Mechanical harvesting	0.18	Not needed
Overall mean score	2.01	Very necessary
Post harvest		
Disease and pest control	2.15	Very necessary
Processing of sugarcane by-products	1.94	Necessary
Handling/ Storage	1.80	Necessary
Overall mean	2.05	Very necessary
Marketing		
Market Information	2.47	Very necessary
Supply/value chain	1.90	Necessary
Supply & demand	1.82	Necessary/Very necessary*
Overall mean	2.06	Very necessary
Enterprise Development		
Human Resource Management	2.43	Very necessary
Leadership	2.42	Very necessary
Project Management	2.32	Very necessary
Feasibility study	2.32	Very necessary
Bookkeeping/ Accounting	2.22	Very necessary
Linkage/networking	2.19	Very necessary
Gender & development	2.17	Very necessary
Overall Mean	2.30	Very necessary

* re-rated by the officers

Legend:

2.1-3.0 Very necessary 1.1-2.0 Necessary 0.1-1.0 Not necessary

In general, establishing a sugarcane block farm agro-industrial enterprise in Brgy. Bismartz requires knowledge on enterprise development, marketing, and postharvest technology. This indicates that BSFMPC needs technical information on sugarcane production as well as human resource development to manage people in the enterprise (Figure 5).

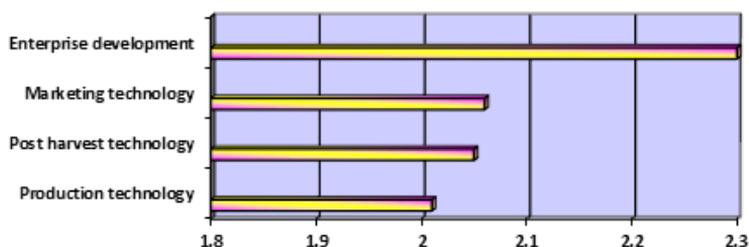


Figure 5. Business Development Needs of BSFMPC Farmers for Sugarcane Block Farm Agro-Industrial Enterprise

Provision of Common Service Facilities

Table 14 reflects the establishment of a sugarcane block farm agro-industrial enterprise requires equipment as well as materials for production, post-production, and marketing operations. In particular, the cooperative needs a unit of a tractor, harrow, mull board and furrower for land preparation and cultivation. These pieces of equipment could enhance growth performance of the crop and ensure high yield and income. Tillage, the physical manipulation of the soil to loosen the surface soil layer, needs appropriate farm implements. Providing optimum soil environment is an essential pre-requisite for higher sugarcane yields especially when farmers practice ratooning. Poor soil conditions and improper land preparation will affect bud sprouting, germination, and crop emergence.

Table 14

Equipment Need of the BSFMPC Farmers for Sugarcane Production

Equipment	No. of Units	Brand/quality	Percentage
Tractor	1	New Holland	94
Harrow	1	Locally fabricated	94
Hauling truck	1	Giga	94
Mull board	1	Locally fabricated	92
Planting machine	1		86
Trash rake	1		84
Cultivator with fertilizer applicator	6		84
Furrower	1		84
Stubble shaver	1		75
Cut away	1		75

Table 15 shows that the BSFMPC needs a hauler truck, farm shed, tester, calculator, storing materials, and sugar mill for processing as part of the postharvest operation and marketing. The cooperative plans to engage in the processing of 'kinugay' (brown sugar).

Table 15

Post-harvest Facility Needs of BSFMPC

Needs	Percentage
Hauler truck	91
Farm shed	88
Tester	54
Calculator	88
Storing materials (sack, sewing machine, sealer)	44
Sugar mill	33

CONCLUSIONS

Based on the findings, the following significant conclusions are drawn:

The municipality of Don Carlos offers biophysical and socio-economic condition suitable for the establishment of a sugarcane block-farm enterprise. Aside from the favorable biophysical condition of the municipality, there are existing facilities/equipment supportive of sugarcane production. Besides, the members of the BSFMPC have gained farm experiences and attended training/seminars on sugarcane production.

As an organization, the BSFMPC has good potentials in managing an agro-industrial enterprise. The cooperative has a long organizational history spanning for more than three (3) decades. It has previous business experiences in managing small-scale enterprises like corn shelling, solar drying, truck hauling, tractor operation, and a small savings/ lending facility.

The cooperative has an increasing population of participative members and active leaders with abundant social capital: high empowerment and political involvement, trust and solidarity, and social cohesiveness among its members. Members are however less active in using other communication networks like the social media.

However, the BSFMPC is challenged with various information, technical, and market inefficiencies that could affect the development of a sugarcane block-farm enterprise in the village. To establish a sustainable sugarcane block farm agro-industrial enterprise, the cooperative needs interventions on capability development in terms of training on sugarcane production management /practices, post-harvest production, and marketing. Similarly, the BSFMPC needs common services facility particularly the provision of pre and post-harvest equipment. In terms of project management, the BSFMPC needs technical training on Enterprise Development.

RECOMMENDATION

The consolidation of small sugarcane farms into Sugarcane Block-Farm Enterprise is viable given the organizational capacity of the Bismartz Small Farmers Multi-Purpose Cooperative. It is, however, important that managerial skills of leaders along enterprise development coupled with a supportive attitude should be enhanced through massive capability building programs. Similarly, human resource development should be coupled with infrastructure and other support services to facilitate the development of a sustainable and profitable Sugarcane Block-Farm Enterprise.

The rich social capital of the BSFMPC could be tapped to promote greater harmony within the organization as well as in establishing linkages. Besides, project implementers could utilize the social capital of the organization in mitigating risk associated with adoption of new farm practices through social interaction and community participation.

The Department of Agrarian Reform could draw information from the findings of this study to alleviate poverty among small sugarcane farmers in Bukidnon. Further research could be conducted on the willingness of the small sugarcane farmers including the issues on tenurial status, labor, and income-sharing in Sugarcane Block-Farm Enterprise could facilitate successful blocking of farms for sugarcane production.

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