

Project Coffee+

Integrated Farming Guide for Coffee Farmers

“Dagdag na tanim at kita sa kape”



About the Comics

The publication of this comics material is a way of Project Coffee+ to reach out to a wider audience of smallholder coffee farmers primarily in the project area in the provinces of Bukidnon and Sultan Kudarat ; as well as to coffee farmers in other parts of the country. This is part of the advocacy of the project to promote and encourage coffee farmers to maximize the use of their farmland and have a steady stream of cash flow throughout the year through integrated coffee-based farming system (with intercropping in coffee). We encourage farmers to plant suitable intercrops both as cash crop and of other tree crops as investment crops. Part of the advocacy is to plant short gestating crops as vegetables specifically timed for harvest and selling during the months when there is no cash income (money-in) from coffee.


We are likewise introducing in this comics, **Super Kape (SK)** who shall be the icon representation of the Project on the advocacy for improved coffee farming: farming as a business, good agricultural practices in coffee, Integrated farming and intercropping in coffee. **Super Kape** shall symbolize “**Dagdag tanim, at kita sa kape.**”





ne day, in a peaceful place called
Barangay Pagkakaisa...






How are you my friend? I heard that you have a bountiful harvest of your coffee farm from the last season.

Our harvest was good, but we have lots of expenses. It's only April but I don't have enough funds even just to buy the first fertilizer application for my coffee farm.

I also don't know where to get the tuition fees of my children this coming enrollment. How about you? Have you done the first fertilizer application for this season?



We also have big expenses, but I managed to keep some funds to purchase fertilizers to be used in the first application this season. Fertilization is important to maximize the yield of our coffee farm. It is so fortunate that Super Kape advised me after our Farm Business School (FBS) to intercrop other kinds of trees and vegetables in our coffee farm.

I have a total of 100 falcata trees as **INVESTMENT CROP** that can be harvested after 7 to 10 years just in time that my daughter will be sent to college.



I also have chayote, banana and ginger as **CASH CROPS** as another source of income to support the day to day needs of our household including the school expenses of my children.



CHAYOTE




BANANA




GINGER



A cartoon illustration of two women standing and talking. The woman on the left is wearing a pink and black plaid shirt and a pink headscarf. The woman on the right is wearing a purple patterned shirt and a purple headscarf. They are both looking at each other.

Wow! Good for you that you have prepared for this circumstances.

Let's go to Super Kape so that he could give you some advice on integrated farming including intercropping to increase the yield and income of your coffee farm.

A cartoon illustration of a rural scene. In the foreground, two women are standing on a green field. The woman on the left is wearing a purple patterned shirt and a purple headscarf, looking slightly concerned. The woman on the right is wearing a pink and black plaid shirt and a pink headscarf, waving her right hand. In the background, there is a thatched-roof hut and a man wearing a blue plaid shirt, blue pants, and a brown hat, waving his right hand. There are some small trees and hills in the distance.

Sure! Let's bring your husband too so both of you could learn together the new ideas on integrated farming.



Good morning Super Kape. I am with my friend and her husband. They have some problem with their cash flow, perhaps you could help them.

They have a bit of budget shortage from their previous coffee harvest that they do not even have fund for their first fertilizer application for this season.

Is that so. For your immediate financial needs, you can borrow from our cooperative. It is good that you managed to be a member. But for the coming years, it is good to increase coffee productivity through adoption of good agronomic practices, adding some crops and maximize use of our farmland.





INTERCROPPING increases crop production and efficiency of the land; and is a strategy to mitigate risk

Rationale of Intercropping for Coffee



Increase land productivity by optimizing land use, labor, fertility and inputs



Secure a more diversified and wider income base; provide more steady flow of household



Cushion risk of drastic financial loss due to sudden price fluctuation if dependent on a single crop

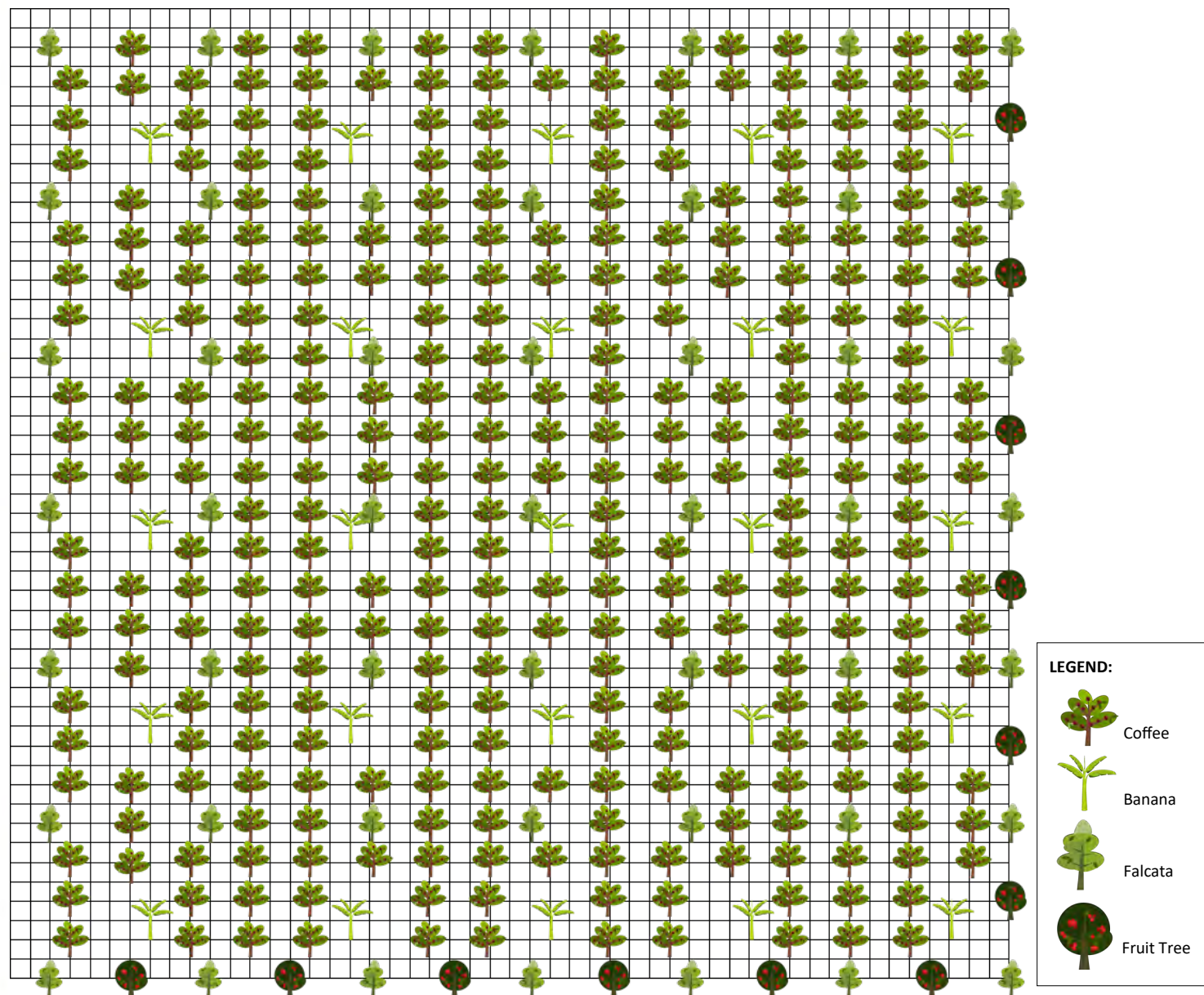


Climate adaptation to weather pattern variations – temperature and rainfall pattern changes



Supports, soil fertility, biodiversity and promotes responsible agroforestry practices

Coffee + Falcata + Fruit Tree + Banana Model**



Production

Crop	Spacing	No. of Trees / ha.	Production (kg/tree)	Production/ ha./yr.	Cost of Establishment /tree	Total Cost of Establishment
1. Coffee	2m. x 3m.	1,619	1	1,619	96	155,424
2. Banana						
Saba	10m. x 10m.	100 mats	160 kgs.	16,000	489/tree	48,900*
Lakatan	10m. x 10m.	100 mats	80 kgs.	8,000	489/tree	48,900*
3. Falcata	8m. x 8m.	196	2.5 cu.m. /tree*2	n.a.	289.--	56,644
4. Fruit tree*	8m. (perimeter)	48	100 kgs.	4,800	1,255.--	60,240
Total Establishment Cost of Model						321,208

Financials

	Yield	Gross Income		Production Cost		Net Income	ROI (%)	Payback Period
		Price/kg.	Sale	Cost/kg.	Total Cost			
1. Coffee	1,619	84	135,996	54.--	87,426	48,570	55	5 years
2. Banana								
Saba	16,000	10.--	160,000	2.30	36,800	124,000	187	2 years
Lakatan	8,000	19.--	152,000	2.30	18,400	133,600	147	2 years
3. Falcata	490 cu.m.	1,800/cu.m.	882,000	(n.a)	107,824	774,176	717	10 years
4. Fruit tree*	4,800	20.--	96,000	10,000	48,000	48,000	100	5 years
Net Income for Model						1,004,346		

There are a lot of crops and technologies available that can be introduced in the coffee farm or what we called intercropping. I can show you my farm where I planted Falcata, Banana and Rambutan.



Coffee



Falcata

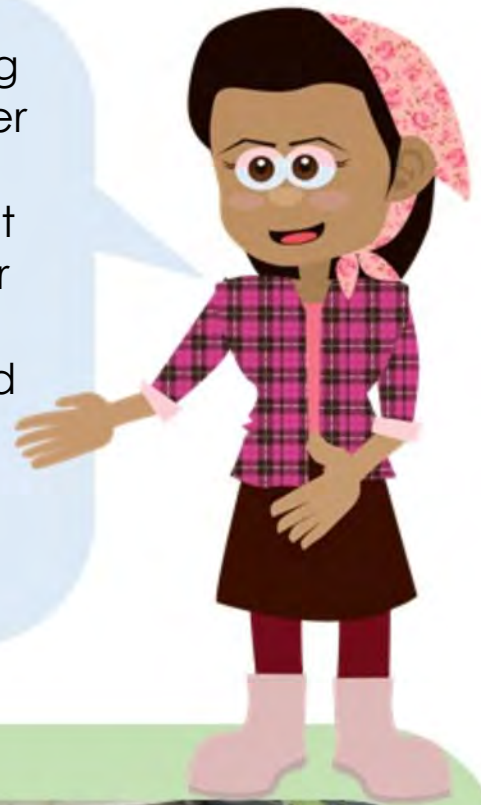


Rambutan



Banana

In my case, the good thing about planting Falcata trees is that you can harvest it after 7-10 years. This can provide additional funds to enroll our children to college. Just Apply the things that we learned from our **FARM BUSINESS SCHOOL (FBS)** and start intercropping. 7 years from now, I will send my eldest daughter to college. I will encourage her to go into agriculture so that she can take care of our coffee farming business.



Does it require a lot of money as capital?



You really need to invest in agriculture just like in any other business. However, you may develop your intercropping system in stages.



It is good that the Department of Agriculture and Land Bank of the Philippines offers loan package for high-value crops like coffee and its intercrop. There may also be free seedlings available from the Provincial Agriculture Office and Municipal Agriculture Office.



**Provincial
Agriculture
Office**

**Municipal
Agriculture
Office**



There are different combination of crops that are suitable for your coffee farm. But first, you need to understand the

BASIC CONSIDERATIONS FOR INTERCROPPING



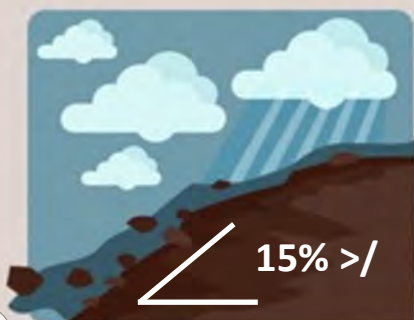
1. Crops should not compete for nutrients, space, and water with the coffee plants.



2. Crops should not harbor or be a host to coffee pests and parasites.



3. Crops use as intercrop should only provide 40-50% shading to lateral branches so that sunlight needed by coffee plants will be at optimum level



4. Considerations to erosion, particularly to areas with slopes beyond 15%.



5. A **planting plan** should be developed. **Adequate spacing** must be considered between coffee plant and choice of intercrop



6. Adoption of good agronomic practices and adequate fertilizer supplement for nutrients needs both of coffee and of the intercrop



7. The choice of intercrops should consider home consumption or availability of a ready market and of production technology.



8. Land tenure security should be considered, especially for long gestating intercrops (example: fruit trees).

Aside from me, several farmers from our cooperative has already started intercropping in their coffee farms.





Just like our friend and Coffee Ambassador **Leo Zambrano**. The combination of crops and livestock in his coffee farm are:

Zambrano Integrated Farm



Owner: Leo Zambrano

Location:

Brgy. Kaatuan, Lantapan, Bukdinon

Farm Area: 1.3 hectares

Intercropping model:

- Coffee + Banana + Chayote + gabi/taro+ Sweet Pepper
- Integrated with livestock
- (Native Pigs)



Coffee



Banana



Chayote



Gabi/Taro



Sweet Pepper



Native pig









Nestle also have different recommended combinations for intercropping. You can visit the Nestle- **Bukidnon Integrated Coffee Center (BICC)** in Brgy. Dalwangan, Malaybalay , Bukidnon



- 1 ha Coffee-based Farming System
- Elev.: 800m ASL
- Ave. Coffee Density: 1200 tree/ha
- 68% intercropped



Recommended Intercrops*:

		
Spring onion	Yam	Banana
		
Sweet corn	Peanut	Green pepper
		
Eggplant	Cassava	

* Based on Nestlé BICC Component Integration Framework

You can also add **LIVESTOCK** in your farm to further boost your income.



Recommended Livestock*:



Goat



Native pig



Native Chicken



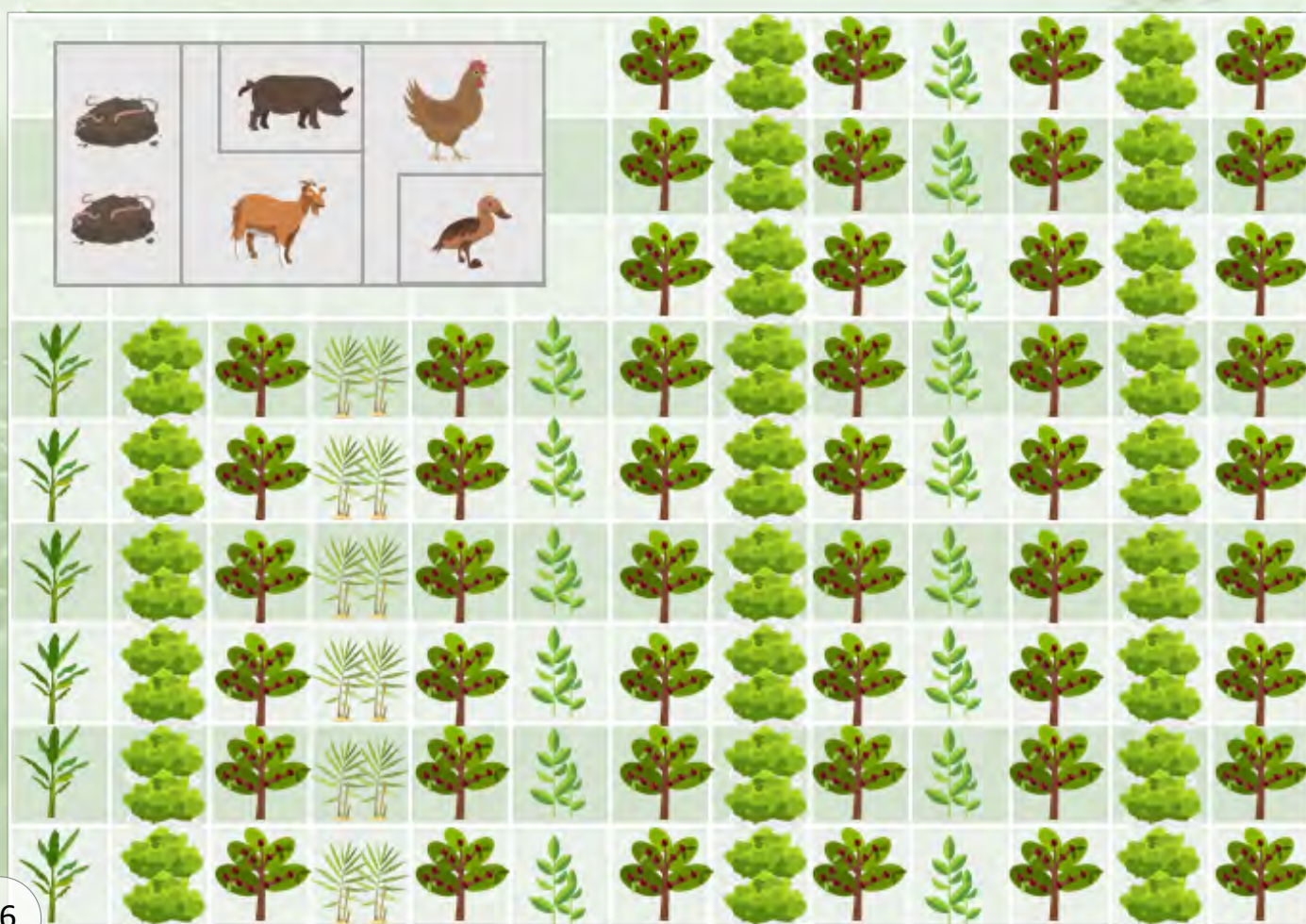
Duck



Vermicompost

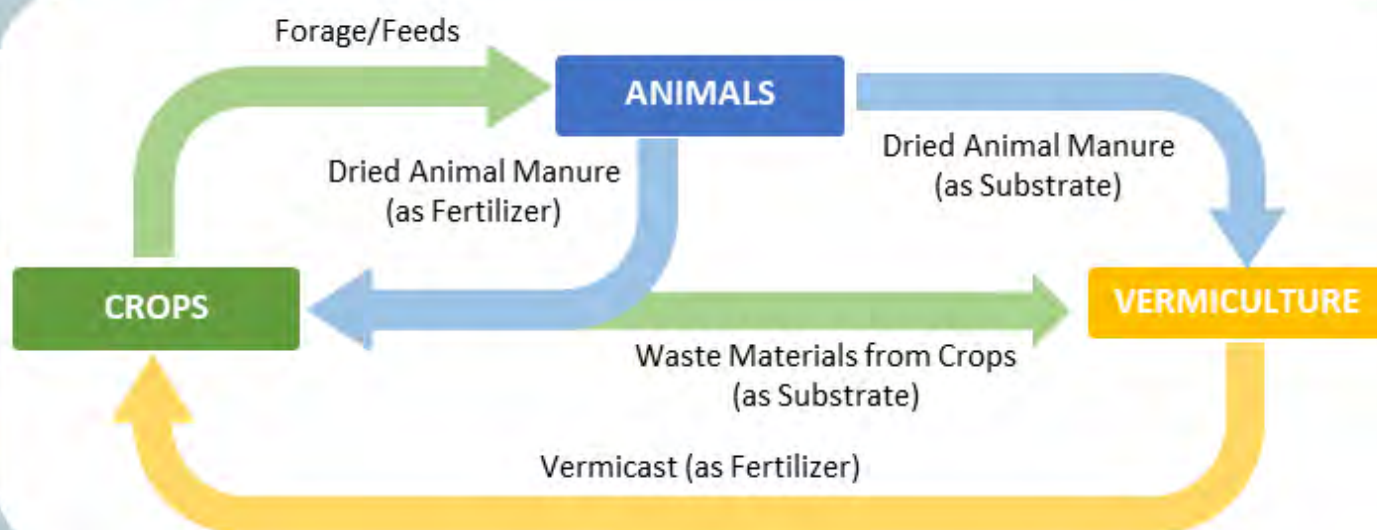
* Based on Nestlé BICC Component Integration Framework

Farm Layout





Here is Nestle's **COMPONENT INTEGRATION FRAMEWORK**



Summary of Economics:

Intercropping

	Coffee	Spring Onion	Eggplant	Yam	White Corn	Cassava	Banana
Yield	600.00	32.00	100.00	150.00	1,500.00	150.00	75.00
Price/Kg	90.00	30.00	30.00	12.00	20.00	7.00	15.00
Gross Sale	54,000.00	960.00	3,000.00	1,800.00	30,000.00	1,050.00	1,125.00

List of Expenses							
Planting Material	-	65.00	65.00	250.00	1,000.00	125.00	-
Fertilizer	-						
Labor	10,800.00	252.80	252.80	252.80	6,000.00	505.60	252.80
Hauling	1,800.00						
Milling	1,800.00						
Total Expenses	14,400.00	317.80	317.80	502.80	7,000.00	630.60	252.80

Net Profit	39,600.00	642.20	2,682.20	1,297.20	23,000.00	419.40	872.20
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Livestock Integration

	Goat	Chicken	Ducks	Pigs
Estimated Population	10	100	20	18
Price per head/kg	4000	200	200	2200
By Products (eggs)			1700	
Sales (Heads)	3	80.0		12
Gross Sale	12,000.00	16,000.00	11,050.00	26,400.00

List of Expenses				
Purchase		1,000.00	1,000.00	
Feeds/Vet Products	7,000.00	3,800.00	580.00	15,300.00
Housing	11,250.00	1,250.00	166.67	166.67
Total Expenses	18,250.00	6,050.00	1,746.67	15,466.67

Net Profit	(6,250.00)	9,950.00	9,303.33	10,933.33
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Wow! There really is additional income!





Farm planning and budgeting are crucial to our farms so we can see if our projected farm income can meet our financial requirement both for the farm operation and our daily needs. Diversifying through **integrated farm models** including **intercropping** is the answer. We can have enough income to meet our needs and save for times of emergencies.

Is that so? Let's go to the DA and LBP to know the requirements; so I can start with my integrated farming system. Let's not waste time and opportunity. Our children are growing up, we need to support their education and our daily needs.



Let us practice
INTEGRATED FARMING
in our Coffee Farms!



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Project Coffee + Team:

Nestle:

Arthur Baria
Ma. Angela Primitiva Bautista

GIZ:

Matthias Radek
Tomas Cabueños Jr.
Ibn Xavier Malilay
Cherie Shyrell Cañete-Wolter
Gretchen Bansag

For details and other concerns on Integrated Coffee Farming System and on Coffee Intercropping specifically for Bukidnon, please contact the **Nestle –GIZ Bukidnon Team:**

Nestle:

Jeremie Laurente
jeremie.laurente@ph.nestle.com
+63 927 404 8163

Jojo Samera
jojo.samera@ph.nestle.com
+63 917 771 0549

GIZ:

Randy Paler
randy.paler@GIZ.de
+63 917 853 4512

Fernie Tapay
fern timerie.tapay@GIZ.de
+63 919 065 9200

Ailyn Taboada
ailyn.taboada@GIZ.de
+63 928 504 0376

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10th floor Bank of Makati building, Ayala Avenue corner,
Metropolitan Avenue, 1209 Makati City
Philippines
www.giz.de

Matthias Radek

Chief Advisor
Development Partnership Projects in Agriculture
matthias.radek@giz.de
+63 2 651 5144

Tomas A. Cabuenos, Jr.

Senior Advisor
National Project Manager
Development Partnership Projects in Agriculture
tomas.cabuenos@giz.de
+63.917.8331513

Nestlé Center

31 Plaza Drive
Rockwell Center
1200 Makati City, Philippines
www.nestle.com.ph

Ma. Angela Primitiva Bautista

Corporate Affairs Executive
MaAngelaPrimitiva.Bautista@ph.nestle.com
+63 2 898 6192

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Ibn Xavier Malilay

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Nestlé
GIZ

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