

Table 2. Profitability Analysis of Intercropping of Various Crops under Coconut with and without Leaf Pruning

Trial/ Treatment	NPV	BCR	IRR
1. Coffee			
- Coconut w/o LP	66,761.23	2.23	23%
- Coconut w/ LP	72,956.75	2.34	34%
2. Annuals			
A. Corn*			
- Coconut w/o LP	78,326.88	2.95	95%
- Coconut w/ LP	84,890.27	3.21	121%
B. Peanut*			
- Coconut w/o LP	43,301.02	2.90	-20%
- Coconut w/ LP	57,637.37	2.87	13%
3. Gmelina**			
- Coconut w/o LP	130,586.44	2.94	94%
- Coconut w/ LP	269,237.29	4.38	238%
4. Ubod **			
- Coconut w/o LP	212,431.02	2.47	47%
- Coconut w/ LP	261,959.58	2.79	79%
* 2 croppings/year			
** harvesting was done 3 years after planting			

References

- Magat, S.S., L.H. Canja and R.Z. Margate. 1994. Response of coconut to increasing levels of leaf pruning and its implications to farm productivity. *CORD-APCC*. 10(2): 16-32.
- Magat, S.S. and J.A. Habana. 1992. Effect of leaf pruning levels on the yield of coconut (A research note). *Philippine Journal of Coconut Studies*. 16 (1): 9-11.
- Annual Report. 1993-1997. Agricultural Research – PCA, Diliman, Quezon City.

Techno Guide on Sustainable Cropping System No. 01/2019



PHILIPPINE COCONUT AUTHORITY
DAVAO RESEARCH CENTER
 Bago Oshiro, Davao City 8000
 Tel. No. (082) 293-0113
 Fax No. (082) 293-0571
 E-mail: pca.drc2015@gmail.com

For more information, call, write, or visit

Agronomy, Soils and Farming Systems Division
 Philippine Coconut Authority
 Davao Research Center
 Bago Oshiro, Tugbok District,
 Davao City 8000
 Tel. (082) 293 0161
 E-mail: pcadrc.asd12@gmail.com



Coconut Leaf Pruning

TECHNOLOGY DESCRIPTION

Coconut Leaf Pruning (CLP) involves removal of coconut leaves at the lower crown supporting maturing bunches (from buko to harvestable nuts) to allow adequate sunlight for the normal development and high yield of perennial and annual crops especially sun loving crops. The technology has several implications on cultural and cropping systems as well as additional income from the sale of pruned leaves and their by-products.

ADVANTAGES OF THE TECHNOLOGY

- Generates additional income.
 - Provides wider choice of marketable annual and perennial crops to be underplanted
 - Obtains higher yields and better growth characters of the intercrops resulting in cropping system with higher efficiency and farm productivity
- Minimizes the adverse effects of drought on fruit set
- Serves as a mechanical control measure for damages caused by pests and diseases on lower and older leaves

PROCEDURE

1. Prune leaves of coconut trees from Leaf Rank (LR) No.19, i.e. supporting the tender "bukong" nuts

down to the oldest leaf at harvest time using a harvesting pole and scythe.

2. Prune from LR No. 23 or 24 (fronds supporting the harvestable bunches) if minimal reduction (10-15%) in nut yield is desired.
3. Maintain CLP every 45 days with about 18 younger leaves left on the upper crown region.
4. Allow about 0.75 m of leaf fronds attached to the trunk to support the maturing nut/bunches.

5. Plant selected intercrops.

SOCIO-ECONOMIC ANALYSIS

LIMITATION

CLP is not recommended on the following: a). for intercropped coconut trees ≥ 12 meters tall and ≥ 30 years old.

Table 1. Cost and Return Analysis of Intercropping of Various Crops under Coconut With and Without Leaf Pruning

Trial/ Treatment	Copra Yield (kg/ha)	Yield of Intercrops		Gross Income (P)	Total Variable Cost (P)	Net Benefit (P)
		Kg/ha	m ³ /ha			
1. Coffee		Bean Yield				
- Coconut w/o LP	4,052.80	436.3	-	142,848.20	88,070.67	54,777.53
- Coconut w/ LP	3,835.20	654.8	-	150,564.96	88,628.82	61,936.14
2. Annuals						
A. Corn*		Grain Yield				
- Coconut w/o LP	3,346.00	3,590.00	-	139,901.40	65,260.16	74,641.24
- Coconut w/ LP	2,994.00	4,830.00	-	145,404.60	62,178.85	83,225.75
B. Peanut*		Grain Yield				
- Coconut w/o LP	4,488.00	925.7	-	185,509.85	88,056.95	51,095.20
- Coconut w/ LP	3,142.00	1,340.50	-	173,295.56	82,882.92	68,012.10
3. Gmelina**		Pruned Branches	Trunk			
- Coconut w/o LP		513.6	31.8	233,580.00	10,994.73	222,585.27
- Coconut w/ LP		974.7	47.7	411,660.00	12,996.48	398,663.52
4. Ubod **		Ubod Yield				
- Coconut w/o LP		1,202.10	-	420,735.00	53,767.93	366,967.07
- Coconut w/ LP		983.8	-	482,062.00	54,679.51	427,382.49

* 2 croppings/year

** harvesting was done 3 years after planting