

Planning and Record Book

Chilli Production (Conventional)

Name of Producer:

Name of Plot Recorded in this Book:

Use one Book per Plot!



Ministry of
Food & Agriculture



Ghanaian-German
Development Co-operation



**Market-Oriented
Agriculture Programme**

Calendar of Chilli Pepper Farm Activities (major season, best practice; variations might occur according to local conditions and varieties)

Farm Activities	Months												Remarks
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Land preparation		■	■										8 weeks before transplanting
Nursery operations			■										6 weeks before transplanting
Fungicide spraying			■										
Herbicide spraying			■										
Transplanting				■									Plant entire plot in one go, group seedlings by size!
Refilling				■									Within 2 weeks after transplanting
Scouting and monitoring				■	■	■	■	■	■	■	■	■	At least once a week!
Weeding				■	■	■	■	■	■	■	■	■	Regularly!
Foliar fertilizer: spraying				■	■	■	■	■	■	■	■	■	Every 2 weeks (more effective than ground application)
Fungicide spraying				■	■	■	■	■	■	■	■	■	
Insecticide spraying				■	■	■	■	■	■	■	■	■	
Fertilizer ground application					■	■							Less effective and more expensive than foliar fertilizer!
Harvesting and Carting							■	■	■	■	■	■	Every week from July
Post harvest handling							■	■	■	■	■	■	To be done after each harvest
Fire belt											■		

Your Farm:**Your Chilli Plot:**

Name of owner of the farm:		Plot name:	
Name of farm manager/instructor:		Variety:	
Period of record keeping: from - to		Date of planting at the nursery:	
Association name:		Date of transplanting:	
Region:		Total number of plants in this plot:	
District:		Plot size (acres):	
Village or town:		Number of plants per acre:	
Location of chilli farm:		Planting distance:	
Total size of planted chilli farm (acres):			
Potentially available land for further future chilli production (acres):		Certification:	
Total number of different plots:		Certification type:	
Name of plot recorded in this book:		Certification number:	
Amount of dues you have paid to your association this year (GH¢):		First certification date:	
Amount of dues you have paid to your association last year (GH¢):		Last certification renewal date:	

Record-Keeping: Harvesting Dates, Volumes and Gross Revenue Calculation of Plot:

Harvesting Date	Buyer (Name); Specify: Market Women, Processor, Exporter...	Green / Ripe? Fresh / Dry?	Unit (kg or bag)	Quantity of Units Sold	Price per Unit (GH¢)	Amount (GH¢) = Quantity of Units Sold x Price per Unit	Conversion Factor (CF): What is the Weight (kg) of one Unit?	Quantity Sold (kg) = Quantity of Units Sold x CF
				Actual Gross Revenue (GH¢):			Total Quantity Sold (kg):	

Record-Keeping: Farm Activities, Costs of Inputs and Labour

Farm Activity		Date(s)	Costs of Inputs					Family and Hired Labour				
No.	Description and Operator		Input Active Ingredient and Pest/Disease Targeted	Unit	Quantity	Price per Unit (GH¢)	Amount (GH¢)		Unit	Quantity	Value per Unit (GH¢)	Amount (GH¢)
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
								Hired Labour or Services				
								Family Labour	Person-days			
						Total Inputs (GH¢):		Hired Labour or Services	Total (PD):		Total (GH¢):	
								Family Labour	Total (PD):		Total (GH¢):	

1 PD (Person-day)
= 5 hours of work

Gross Margin Calculation of Plot representing acre(s)

Planned Gross Margin (Data from Planning)

PLANNED GROSS REVENUE	
A. Planned Gross Revenue (GH¢) = (from page 4)	
PLANNED VARIABLE COSTS	
B. Total Planned Costs of Inputs (GH¢) =	
C. Total Planned Costs of Hired Labour or Services (GH¢) =	
D. Total Planned Value of Family Labour (GH¢) =	
E. Total Planned Variable Costs (GH¢) = B + C + D =	
PLANNED GROSS MARGIN	
F. Planned Gross Margin (GH¢) = A – E =	
G. Planned Gross Margin per Acre (GH¢) = F / size of plot =	
H. Planned Gross Margin per Own Working Day (GH¢) = (A – B – C) / PD Family Labour	

Actual Gross Margin (Data from Record-Keeping)

ACTUAL GROSS REVENUE	
A. Actual Gross Revenue (GH¢) = (from page 5)	
ACTUAL VARIABLE COSTS	
B. Total Actual Costs of Inputs (GH¢) =	
C. Total Actual Costs of Hired Labour or Services (GH¢) =	
D. Total Actual Value of Family Labour (GH¢) =	
E. Total Actual Variable Costs (GH¢) = B + C + D =	
ACTUAL GROSS MARGIN	
F. Actual Gross Margin (GH¢) = A – E =	
G. Actual Gross Margin per Acre (GH¢) = F / size of plot =	
H. Actual Gross Margin per Own Working Day (GH¢) = (A – B – C) / PD Family Labour	

Fixed Costs Calculation

PLANNED FIXED COSTS

A. Total Depreciations for the Plot (GH¢) = (from page 28)	
B. Total Planned Certification Costs for the Plot (GH¢) =	
C. Total Planned Consulting Fees for the Plot (GH¢) =	
D. Lease of Land for the Plot (GH¢) =	
E. Interest Rates on Loan for the Plot (GH¢) =	
F. Other Fixed Cost for the Plot (GH¢) =	
G. Other Fixed Cost for the Plot (GH¢) =	
H. Total Planned Fixed Costs for the plot (GH¢) = A+B+C+D+E+F+G =	

ACTUAL FIXED COSTS

A. Total Depreciations for the Plot (GH¢) = (from page 28)	
B. Total Actual Certification Costs for the Plot (GH¢) =	
C. Total Actual Consulting Fees for the Plot (GH¢) =	
D. Lease of Land for the Plot (GH¢) =	
E. Interest Rates on Loan for the Plot (GH¢) =	
F. Other Fixed Cost for the Plot (GH¢) =	
G. Other Fixed Cost for the Plot (GH¢) =	
H. Total Planned Fixed Costs for the plot (GH¢) = A+B+C+D+E+F+G =	

Net Income Calculation of Plot representing acre(s)

Planned Net Income (Data from Planning)

PLANNED GROSS REVENUE

A. Planned Gross Revenue (GH¢) = (from page 4)	
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TOTAL PLANNED COSTS

B. Total Planned Variable Costs (GH¢) = (from page 27)	
C. Total Planned Fixed Costs for the Plot (GH¢) = (from page 29)	
D. Total Planned Costs (GH¢) = B + C =	

PLANNED NET INCOME

E. Planned Net Income (GH¢) = A - D =	
F. Planned Net Income per Acre (GH¢) = E / Size of Plot =	

Actual Net Income (Data from Record-Keeping)

ACTUAL GROSS REVENUE

A. Actual Gross Revenue (GH¢) = (from page 5)	
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TOTAL ACTUAL COSTS

B. Total Actual Variable Costs (GH¢) = (from page 27)	
C. Total Actual Fixed Costs for the Plot (GH¢) = (from page 29)	
D. Total Actual Costs (GH¢) = B + C =	

ACTUAL NET INCOME

E. Actual Net Income (GH¢) = A - D =	
F. Actual Net Income per Acre (GH¢) = E / Size of Plot =	

Auto-Evaluation and Lessons Learnt

Have you achieved your expected gross margin? If not, why?	
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Production:

Have you achieved your expected yield? If no, why?	
With which farm activities were you late? Why? How to improve on it?	
What pests or diseases have affected your farm? What did you do against it? How did it work? How to improve on it?	
What other problems have affected your production? What did you do? How to improve on it?	
How could you reduce the costs of inputs?	

Training:

Which training or technical support do you need?	
Which training do your workers need?	

Marketing:

To whom did you sell?	For what market/what use? (e.g. export, fresh cuts)	Where did you sell? (Farm gate, factory gate...)	What kind of contract did you have with the buyer?

How would you qualify the relation with the buyer? (From very good to very bad)	
How did you agree on the sales price? Did you stick to it? Did the buyer stick to it?	
How could you get a higher price for your produce?	
If there have been any problems with the buyer, what were they? How to improve on them?	

☞ Checklist: Did you ...?

- Do stumping
- Do ploughing
- Do harrowing
- Do lining and pegging
- Scout regularly
- Do refilling
- Water as needed
- Do weed control
- Do fertilizer ground application
- Spray foliar fertilizer
- Spray fungicides
- Spray insecticide
- Do fire belts
- Sort the produce
- Wash the produce
- Dry the produce properly
- Do group purchasing of inputs
- Do group selling
- Respect the contract with the buyer

☞ What needs to be improved next year?

- Do stumping
- Do ploughing
- Do harrowing
- Do lining and pegging
- Scout regularly
- Do refilling
- Water as needed
- Do weed control
- Do fertilizer ground application
- Spray foliar fertilizer
- Spray fungicides
- Spray insecticide
- Do fire belts
- Sort the produce
- Wash the produce
- Dry the produce properly
- Do group purchasing of inputs
- Do group selling
- Respect the contract with the buyer

What are the 3 key points to improve on?

1.

2.

3.

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Photos of Chilli Pests and Diseases

(From Good Life of Chilli by former USAID / TIPSEE project. Get a copy of the poster at MOAP!)

Pest



Mites → Fruit affected by mites → **Topcop**



Fruit fly, Fruit borer, Leaf miner, Aphids, Jassids → **Deltamethrin, Imidacloprid, Lambdacyhalothrin**



Thrips, White fly, Crickets, Grasshoppers → **Nematicide**



Roots affected by nematodes → Crop rotation (avoid planting chili family on the same land)

For all insects → Neem seed extract



Pound 1 koko bowl of neem seeds with a piece of soap



Add 8 koko bowls (15L) of water



Leave it overnight



Sieve with a mesh



Put solution in a knapsack and spray

Fungus



Anthracnose → **Mancozeb + Chlorothalonil**



Phytophthora → **Metalaxyl OR Mancozeb + Copper**



Leaf spots → **Copper oxychloride OR Topcop**



Nursery infested by dumping off → **Copper oxychloride OR Merpan**



Fusarium wilt → **Copper**

Virus



Cucumber Mosaic Virus



Tabacco Mosaic Virus



Chilli Veinal Mottle Virus (transmitted by Aphids)



Chilli Leaf Curl Virus (transmitted by White fly)

- Spray insecticide against aphids and white fly
- Weed control
- Protect young seedlings at the nursery with nets
- Uproot the infested plants and burn them

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**Market-Oriented Agriculture Programme
Component 3, implemented by AFC Consultants International
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