



Making Climate Action Self-Financing Through Viable EbA/NbS Livelihood & Green Business



Blending the 'ecos': driving ecosystem action through economic imperatives – working out cost of production of geoengineering services

PRESENTED BY:

ATAUL ALI-KAJIM

CONSULTANT

22ND APRIL 2024

AGENDA

- ❖ Definitions
- ❖ Structure of the CoP Model
- ❖ Development Process
- ❖ Costing of Vetiver Installation

COST OF PRODUCTION MODELS

DEFINITION:

The Cost of Production Model (COP) is a PLANNING TOOL, used as a GUIDE to estimate the cost to produce a particular commodity/ activity over a production cycle.

Cost/Price information is static i.e. taken at a particular time and therefore has to be adjusted to reflect the specific conditions that exist on the project and based on information obtained from the client during the interview & site visit.

PURPOSE

The Cost Of Production Model can be used:

To help customers in planning and budgeting for their projects.

To build awareness and provide information on what is required to establish & maintain the particular commodity/activity.

STRUCTURE OF THE COP MODEL

STRUCTURE OF THE COP MODEL

The COP Model is made up of three (3) main sections:

Section 1: Assumptions

Section 2: Estimated Costs, Production and Returns

Section 3: Notes

STRUCTURE (continued)

Section 1 - Assumptions

Details all the assumptions used in the model inclusive of acceptable production coefficients (factors which measure a particular property e.g. plant density, yield per plant/ha, crop duration, male:female ratio, feed conversion ratio, gestation period).

These assumptions are developed through literature research and discussion with professionals and experienced farmers in the field.

STRUCTURE (continued)

Section 2: Estimated Costs, Production and Returns

Details all the activities required to produce and maintain the commodity, as well as the expected production output and returns

Costs are assigned to the activities.

Section 3: Notes Details important information about the commodity which is aimed at increasing knowledge about the commodity

THE DEVELOPMENT PROCESS

THE DEVELOPMENT PROCESS

1. Research the commodity

This is done using production manuals, journals & publications (local, regional, international). Crop Agronomy or Livestock Husbandry : best management practices, requirements for growth, potential yields based on the variety of crop or breed of animal, production coefficients etc.

2. List the production & maintenance activities

3. List inputs required / recommended (quantity, types)– labour, fertilizers, pesticides, equipment, feed, medication etc

THE DEVELOPMENT PROCESS

(continued)

4. Request and obtain prices of inputs and market prices (this is done at the beginning of each year using selected input suppliers & service providers).
5. Compile prices and calculate averages for use in the models
6. Construct the Model (draft) –

Note: For livestock models, stock inventories are developed assuming new project start up and based on recommended viable unit sizes.

For existing projects this inventory must be done using existing stock and projected target unit size.

THE DEVELOPMENT PROCESS

(continued)

7. Verify the information and assumptions used in the models. For this, input is sought from other professionals in the field and experienced farmers.
8. Adjust the Model if necessary and complete.

Costing of Vetiver Grass Installation

Vetiver Grass Installation

Assumptions

60m/ 200ft Hedgerow (0.2ha/ 0.5ac)

15cm spacing @ 4 rows

Price per slip @ \$4

Labour cost @ \$300/day

\$7,200 TTD

Site Assessment mandatory – Geo Engineering/
Drainage

Maintenance Cost minimal once established

Establishment time – 9-12 months

NB: This pricing assumes no site works or hiring of
speciality equipment



Hardscape – Retaining Wall



Hardscape – Retaining Wall- continued

60 m (l) * 1.2m (h) * 0.3m (w)

Piling 3m (h) * 0.125m (R) @ 3m intervals

Concrete Volume ~ 68 m³

68m³ @ \$1,000/ m³

\$68,000 TTD (Cost for steel bars, concrete forms, site preparation, labour & other contingencies was **not** considered!)

Design of Retaining Wall is done to Geo-Technical reports = Success

Immediate results.

Tools – FarmVue App

The image displays four screenshots of the FarmVue app's 'Cost of Production' interface. Each screenshot shows a different crop's production costs, with a common sidebar on the left.

Common Sidebar (Left):

- My Crops:** Includes a 'Locati' button and a '+ My Crops' button.
- Production Insights:** Includes 'Harvest', 'Post-Harvest', and 'Packing Facility' buttons.
- Production Costs:** Includes 'Buyer/Sales', 'Production Costs', and 'Digital Tools' buttons.
- Feedback and Training:** Includes 'Feedback' and 'Training' buttons.

Screenshot 1: Insecticide/Fungicide/Bio-Stimulant

- Categories:** Insecticide, Fungicide, Bio-Stimulant, Harvest, Post-Harvest Handling, Transportation.
- Fertilizer and other agro inputs:**

Unit	Cost/Unit	No. of Units	Total Cost
trip	1.50	250.00	375.00
- Summary:**
 - Total variable cost: 9566.50
 - Unit Cost of Production: --
 - Revenue: \$0.00
 - Profit/Loss: \$-9566.50 (loss)

Screenshot 2: Planting/Transplanting

- Actions:** Add Seedling purchase, Add Seeds purchased, Add Cuttings purchased, Add Stakes, Add Twine.
- Slips purchased:**

Unit	Cost/Unit	No. of Units	Total Cost
bundle	1.00	6667.00	6667.00
- Labour:**

Unit	Cost/Unit	No. of Units	Total Cost
man days	1.88	200.00	375.00

Screenshot 3: Land Preparation

- Item:** Brush cut (240422-002) test Vetiver
- Table:**

Unit	Cost/Unit	No. of Units	Total Cost
acre	1.88	200.00	375.00
- Actions:** Add Rotavate, Add Drain formation & Edging, Add Bed preparation, Add Limestone, Add Labour, Add Manure.

Screenshot 4: Fertilizer/Herbicide

- Item:** Triple Super Phosphate (TSP)
- Table:**

Date Applied	Usage	Rate Applied
2024-04-22	00:00:00.00	22.50 lbs/acre
0	00:00:00.00	25.50 kg
- Labour:**

Unit	Cost/Unit	No. of Units	Total Cost
man days	3.00	200.00	600.00
- Item:** Herbicide (contac and pre)
- Table:**

Date Applied	Usage	Rate Applied
2024-04-22	00:00:00.00	1.20 litres/acre
0	00:00:00.00	1.20 litres
- Labour:**

Unit	Cost/Unit	No. of Units	Total Cost
man days	1.88	200.00	375.00

Thank You!
