Organic Use Among Smallholder Farmers In The Rain Forest Of South-East Nigeria

By

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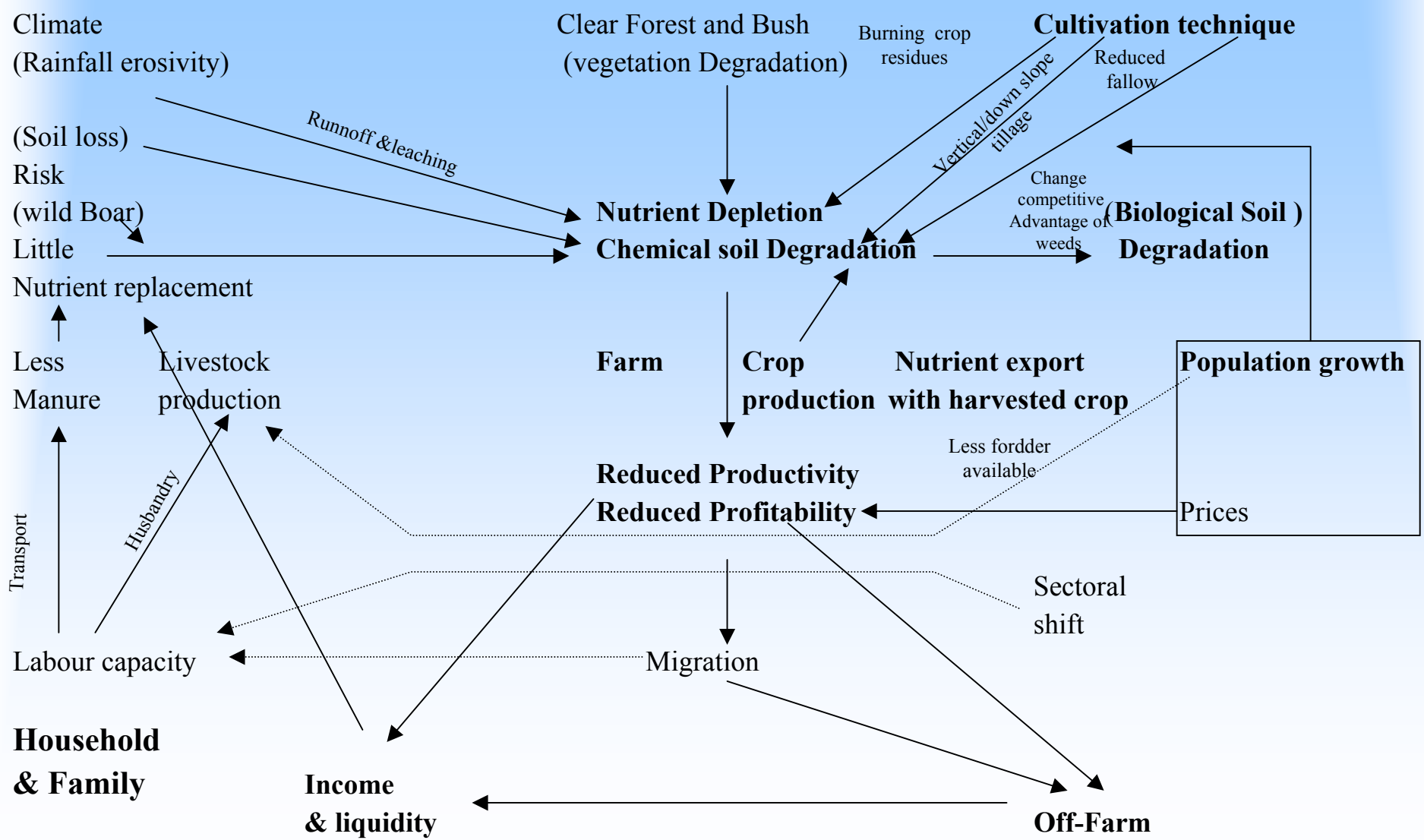
Problem Statement

- The damage to the soil and the scarcity of inorganic fertiliser have necessitated the use of alternative soil fertility regeneration strategy.

- The traditional soil fertility management practices are also no longer sustainable.

- This has an impact on resource productivity and poverty, thus farmers seek solution in organic based soil fertility regeneration.
- It is therefore necessary to examine the economic implications of organic manure use.

The Process of Chemical Degradation And Its Relation to Farming Families.



Research Method

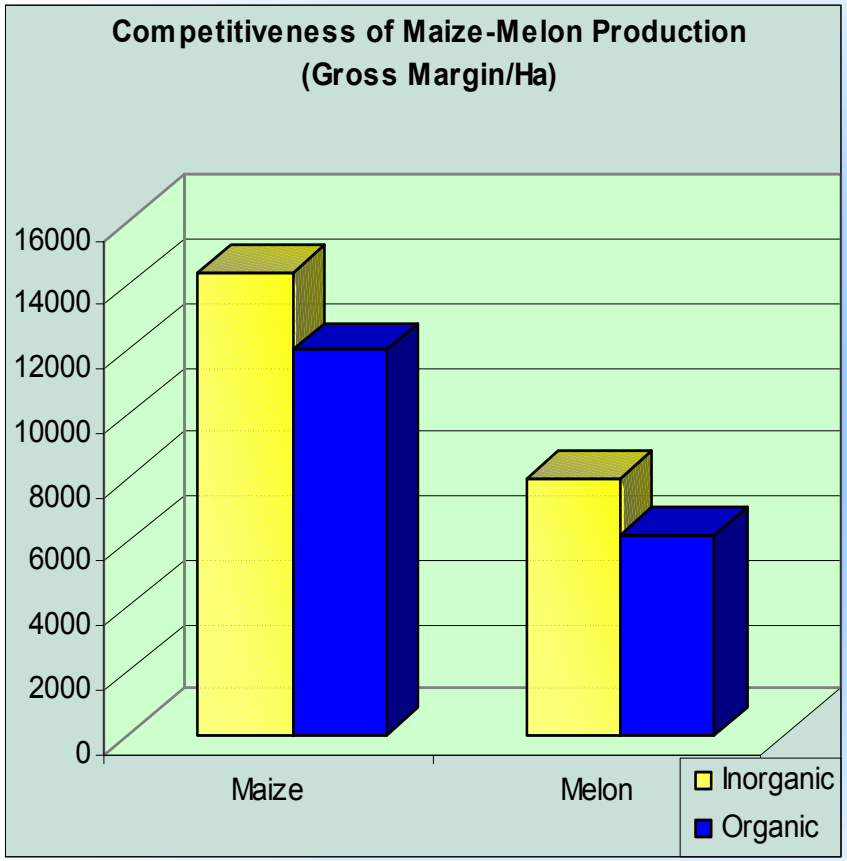
- Farmers who have both organic and inorganic fertiliser plots were identified in the crop based farming system of Abia state in South East Nigeria.

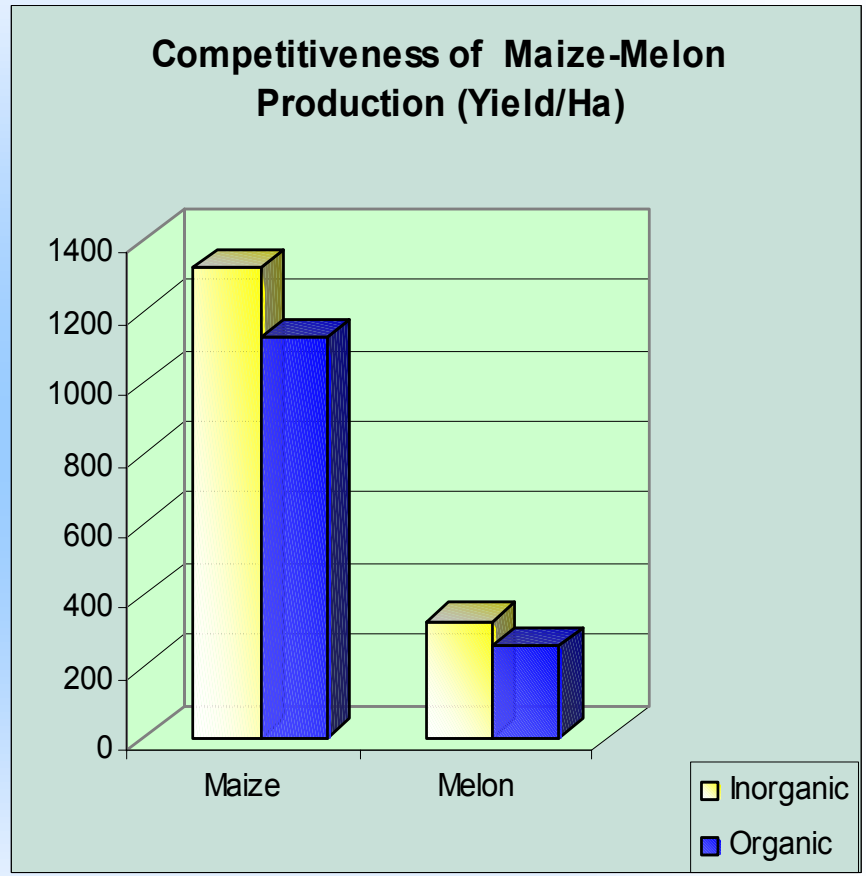
- The study period was for a cropping cycle for Maize (zea mais) and Melon (Cucumeropsis edulis) crop mixture. (March/April to June/July)

Results

Comparison of Gross Margin From Organic And Inorganic Maize – Melon Production

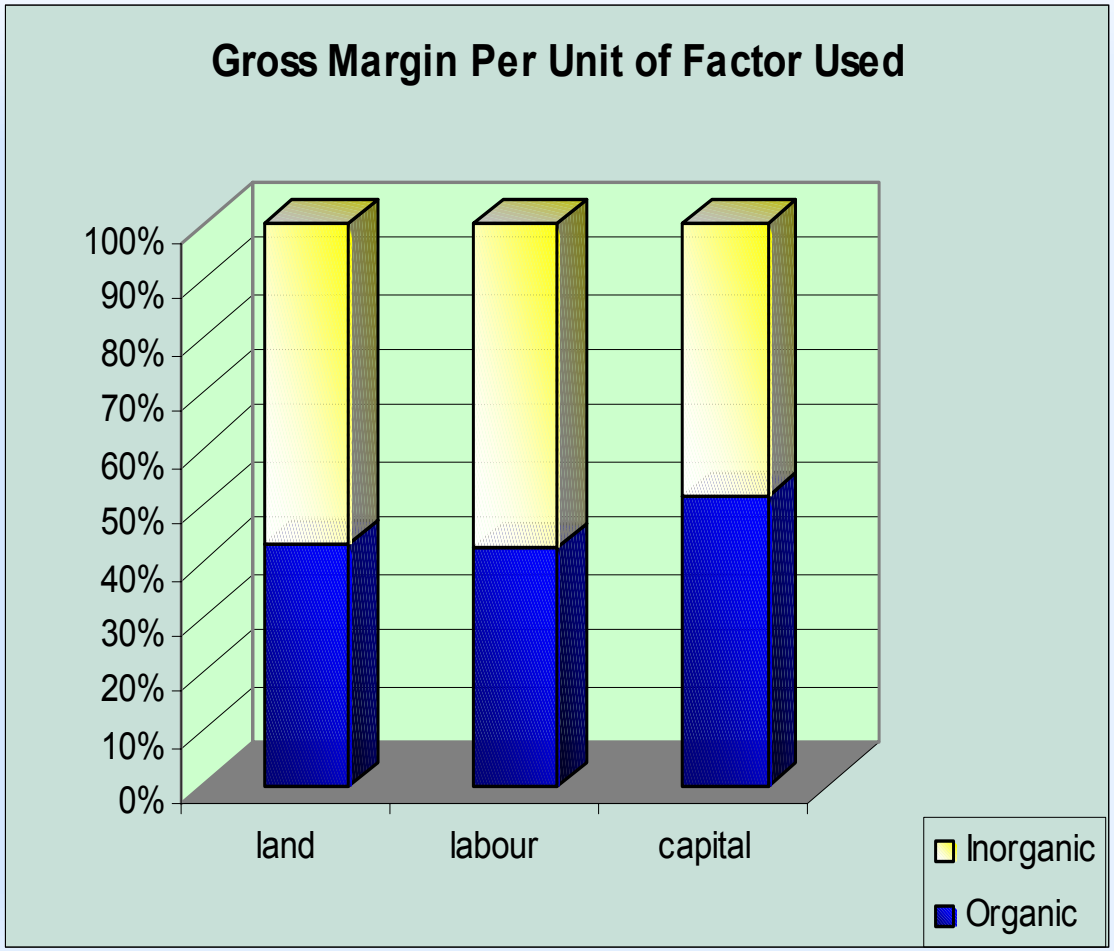
Item	Organic Farm (a)	Inorganic Farm (b)	% b/a
Yield (Kg/Ha)			
Maize	1,126	1,320	17.23
Melon	260	328	26.15
Value of Prdn (-N-)			
Maize	12,000	14,400	20.00
Melon	6,250	8,000	28.00
Tot. Value of Pdn (-N-)	18,250	22,400	17.26
Variable Cost	13,400	16,000	19.4
Gross Margin / Ha	**4,850**	**6,400**	**31.96**


Competitiveness of Maize-Melon Production (Gross Margin/Ha)
16000
14000
12000
10000
8000
6000
4000
2000
0
Maize
Melon
Inorganic
Organic


Competitiveness of Maize-Melon Production (Yield/Ha)
1400
1200
1000
800
600
400
200
0
Maize
Melon
Inorganic
Organic

Factor Productivity for Organic and Inorganic Maize-Melon Production

Item	Organic Farm (a)	Inorganic Farm (b)	% b/a
Gross Margin (-N-/Ha)	4,850	6,400	31.96
Land			
Area of Land(ha)	1	1	
GM per unit Land(-N-/ha)	4,850	4,400	31.96
Labour			
Labour use(Man day)	120.5	117.5	(2.5)
GM / Labour (-N-/md)	40.25	54.47	35.3
Capital			
Capital Expenditure (-N-)	2,254.5	3,132.5	38.9
GM per unit Capital (-N-)	2.15	2.04	(5.1)


Gross Margin Per Unit of Factor Used
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
land
labour
capital
Inorganic
Organic

Summary

- The use of inorganic fertiliser is more economic and attractive to farmers, though they found it very expensive and scarce at peak periods.

- On the other hand, organic fertiliser has the advantage of being relatively cheap and more regularly available but its non storable state is a constraint to its use.

- Organic fertiliser has the potential of maintaining or increasing land quality in the long run.

Conclusions

- Fertiliser use is still a major contributor to factor prodcutivity in the area.
- Further research on long-term trials of organic fertiliser use and none partial analysis is suggested.
- Research into the treatment and packaging of organic manure in order to make it storable, transportable and marketable is required.