

28 southern parts of African. Moringa plant species initially originated from the northern parts of
29 India as far back as 500 years ago (1) (umbertor, 2000), it later moved into the southern parts of
30 the country where it is known as “Munugalkeeran” meaning Moringa leaves.

31 MoringaOlefera is the most widely Known of about 13 species of Moringatrees in the family
32 Moringaceae (2) (price 2000). It is a multipurpose plant cultivated for medical applications and
33 used as food and feed (3) (Manh 2005).

34 Moringa is draught resistant growing best with rainfalls of 25-1500mm per annum. It requires a
35 temperature of about 25-35c although it can tolerate 48^{0c} for a short time. It prefers well drained
36 sandy or loam soil and can be grown on a clay soil but not water logged (4) (price 2000).

37 Moringa has numerous uses: as a plant based mineral supplement in animal and human nutrition.
38 it is rich in proteins, minerals, Vitamins, bata Carotene and trace elements (4) (Anjorin, 2010).
39 Among rural dwellers it has been found useful in the treatment of diverse medical conditions (5)
40 (Kasolo, 2010) and it is currently being considered as an immune stimulant for HIV people (6)
41 (Burger 2012). Moringa extracts in 80% ethanol serves as an effective plant growth hormone (7)
42 (Foildl 2001). Capable of increasing yields by 25-30% in several crops like maize, soya,
43 sorghum, tea and melon (8) (RehmanBasra 2010) the seed which is about 40% oil with excellent
44 quality (73% oleic acid) for cooking, contains approximately 13% saturated fatty acid and 82%
45 unsaturated fatty acids (9) (Price, 2000; 2001) it goes to show therefore, that Moringa has the
46 potential to significantly add to household income and improve quality of life in Nigeria (10)
47 (Adikure, 2011). if it is grown and utilized for industrial development. This requires creation of
48 Moringa value chain involving production, processing, marketing and investment.

49 MoringaOleifera is one of the most useful multipurpose plants known to man. Virtually every
50 part of the tree is beneficial in some way and both rural and urban people depend on it for their
51 lively hood. Although the Moringa tree is widespread throughout the tropics, around farms and
52 compounds and often used as fence especially in Northern Nigeria, not much has been done to
53 enhance its large scale production, processing, marketing and investment as an industrial raw
54 material in Nigeria.

55 Moringa is known worldwide for its multiple nutritional and an excellent source of many
56 vitamins and minerals (13) (Asaolu MF, and Omatayo F. O, 2007).

57 Moringa has the following health benefits

- 58 1. Boosting of stamina
- 59 2. Control of Diabetes
- 60 3. Inclusion in livestock and fish feeds
- 61 4. Anti oxidants
- 62 5. Lowers cholesterol
- 63 6. Controls blood pressure
- 64 7. Detoxifier
- 65 8. Treat depression
- 66 9. Organic nature
- 67 10. Satisfies iron needs
- 68 11. Delays ageing process
- 69 12. Face and skin glowing
- 70 13. Heals wound
- 71 14. Hair growth

72 15. Keratin formation

73 16. Blood sugar level

74 **METHODOLOGY**

75 The study area is Enugu Metropolis. Enugu has an area of about 455,701km. national population
76 Council (NPC 1991). It comprises of three Local Government Area Namely Enugu East, Enugu
77 south and Enugu North. Enugu East is bounded by Nkanu East Local Government Area. Enugu
78 North is bounded by Isi-Uzo Local Government Area while Enugu South is bounded by Nkanu
79 West Local Government Area. The major markets in the study area are oyeemene, Abakpa,
80 Nkwo Nike Mami, Gariki, Kenyeta, Ogbete, Artizanmarkets etc.

81 The study area is located between longitude $6^{\circ}21^{0E}$ and $6^{\circ}31^{0E}$ and latitude $7^{\circ}26^1 N$ and $7^{\circ}3^1 N$. Enugu Metropolis was selected because moringa marketing is practiced in the area
82 purposive sampling technique was employed to ensure a good spread of respondents for the
83 study. The two LGA in Enugu metropolis were selected followed by selection of two districts
84 (where Moringaproducts are marketed) from each of the local government areas making it 4
85 districts for the research. It was followed by the selection of the respondents with purposive
86 sampling techniques. From the selected districts, 20 respondents were selected from each of the
87 districts. This gives a total of eighty (80) respondents. Primary data was collected using
88 interview methods and well structured questionnaire. The data collected were on Scio economic
89 characteristics, channels of distribution, forms in which the products are marketed, cost and
90 returns and constraints faced by the marketers. Secondary data were collected from past works
91 relevant to the study. Data that were collected were analyzed using relevant economic and other
92 statistical tools in other to achieve specific objectives.

94 **RESULT**

95 **Table 1: Cost-returns analysis of moringa marketing (monthly).**

| Items | Quantity | Unit cost | Total cost | Life span | Annual Depreciation |
|---------|----------|-----------|------------|-----------|---------------------|
| Blender | 1 | 10,000 | 10000 | 4years | 2500 |
| Spoon | 2 | 500 | 1000 | 2years | 500 |
| Scale | 1 | 3000 | 3000 | 5 years | 600 |
| Sieve | 2 | 1500 | 3000 | 2years | 1500 |
| Basin | 2 | 3000 | 6000 | 2years | 3000 |

| | | | | | |
|-------------------|---|-------|-------|---------|----------|
| Spreading sheet | 1 | 1000 | 1000 | 1year | 1000 |
| Fan | 1 | 6000 | 6000 | 4years | 1500 |
| Generator | 1 | 30000 | 30000 | 3 years | 10000 |
| Total fixed cased | | | | | N 20,600 |

96

97 **Average Variable Cost**

| Items | Unit | Unit price ₦ | Quantity | Amount ₦ |
|----------------------------|---------|--------------|----------|------------------|
| Moringa leaves bought | 20kg | 5000 | 3 | 1500 |
| Moringa seeds bought | 20kg | 10000 | 1 | 10000 |
| Moringa oil | 1000ml | 33,300 | 2 | 66,600 |
| Labeling cost | - | 10 | 300 | 3000 |
| Containers for seeds | 40g | 40 | 80 | 3200 |
| Containers for powder | 40g | 40 | 100 | 4000 |
| Containers for powder | 500g | 200 | 10 | 2000 |
| Containers for oil | 30ml | 66 | 100 | 6,600 |
| Transportation fee | - | 5000 | - | 5000 |
| Marketing fee | Monthly | 200 | - | 5,400 |
| Total Variable cost | | | | ₦ 120,800 |

98

99 **Average revenue**

| Items | Unit | Unit price ₦ | Quantity | Amount ₦ |
|----------------------|------|--------------|----------|-----------------|
| Moringa powder | 40g | 300 | 100 | 30000 |
| Moringa powder | 500g | 3500 | 10 | 35000 |
| Moringa seeds | 40g | 250 | 80 | 20000 |
| Moringa oil | 30ml | 1200 | 66 | 79200 |
| Total revenue | | | | ₦164,200 |

100

101 **Cost of distribution(moringa marketing)**

102 Cost is defined as expenses incurred in organizing and carrying out marketing processes. Cost
 103 involves variable cost and fixed costs. Variable costs are cost associated with factor input whose
 104 quantity varies or changes in the short run within the marketing cycles. While fixed costs are
 105 those cost corresponding to factor input whose quantities do not change throughout the
 106 marketing cycle. They are cost associated with assets.

107 Total cost (TC)= Total variable cost(TVC)+Total fixed cost(TFC)

108 TVC= ₦120800

109 TFC= ~~₦~~20600

110 Total cost = ~~₦~~14 1400

111 Total revenue = ~~₦~~164200

112 Gross margin = Total revenue (TR) — Total variable cost(TVC)

113 Gross margin = ~~₦~~164200 — ~~₦~~120800

114 = ~~₦~~43400

115 Net profit = Total revenue — Total cost

116 Net profit = ~~₦~~164200 — ~~₦~~14 1400

117 ~~₦~~22800(monthly)

118 Benefit cost ratio (BCR) = TR/TC

119 BCR = ~~₦~~164200/ ~~₦~~141400

120 =1.16

121 Therefore the marketing of moringa leaves seeds and oil are profitable in Enugu metropolis.

122

123 CONCLUSION

124 This study examined the performance and structure of moringa marketing in Enugu metropolis
125 with a view to bringing out the inefficiencies in the marketing system, which further reduce the
126 money earned by traders. These shortcomings in return are caused by the problems facing the
127 traders such as inadequate capital, transportation problems, low demand as a result of lack of

128 awareness of its benefits. If these problems are tackled holistically, moringa production
129 marketing in Enugu metropolis will be much more profitable and the producer will earn higher
130 returns for their production.

131 It is therefore recommended that Government at all levels should give attention to moringa
132 production, processing and marketing. The extension agent should also create good awareness of
133 the numerous benefits of moringa. Government and non governmental agencies should give the
134 financial assistance which the processing and marketing of this product deserves. The marketers
135 and processors should form cooperatives. Change agents, should also enlighten the moringa
136 marketers on record keeping. so that problems and solutions can be traced easily.

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