Comparative Study of Fatty Acid Characterisation of Cage Cultured & Captured Catfish (*Clarias gariepinus*) in Brackish Water

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African Women in Agricultural Research and Development

Introduction

Fish is an important food

Catfish has gained grounds in Africa and especially Nigeria

Catfish like any other fish is desired for essential and poly-unsaturated fatty acids

Some recent reports says catfish especially the cultured ones have bad fat

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Introduction Continued

- Information of the fatty acid profiles of fish is therefore important to farmers, processors, dieticians and consumers to determine the suitability

  - of fish oils for processing
  - of fishmeal as protein supplement in animal feeds and
  - Lastly, to give a confirmed information for proper guidance of the general populace

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Objectives

- To determine the fatty acid composition in cage cultured catfish
- To determine the fatty acid composition in captured catfish
- To evaluate comparatively the fatty acids of cage cultured and captured catfish

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Methodology
Description of Study Area

- The samples were collected from
- Epe 6°27′18″N 3°23′03″E/6.455027°N 3.384082°E/6.455027; 3.384082 Coordinates and
- Ise which lies between the Latitude of 6°27’ 2.977” and Latitude of 4°2’ 58.636 in Lagos State, Nigeria

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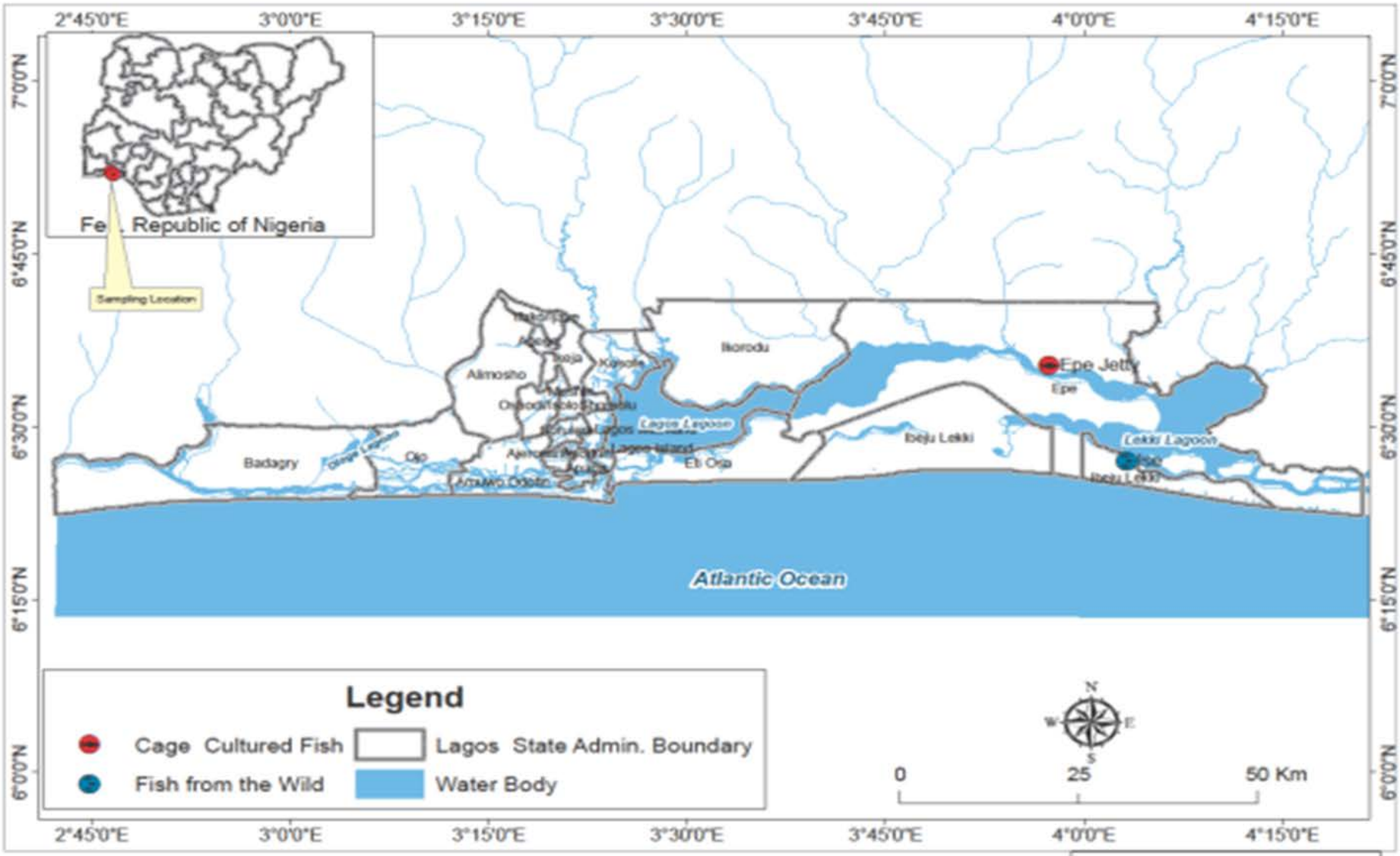
2°45'0"E
3°0'0"E
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3°30'0"E
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4°0'0"E
4°15'0"E
7°0'0"N
6°45'0"N
6°30'0"N
6°15'0"N
6°0'0"N
Republic of Nigeria
Sampling Location
Ilorodu
Epe Jetty
Epe
Lagos Lagoon
Ibeju Lekki
Lekki Lagoon
Badagry
Ojo
Eti Oga
Atlantic Ocean
Legend
Cage Cultured Fish
Fish from the Wild
Lagos State Admin. Boundary
Water Body
N
W
E
S
0
25
50 Km

Methodology

- The fishes were cleaned and filleted
- Extraction of homogenized lipids
- Preparation of extracted oil for fatty acid profile analysis
- Fatty acid analysis. All by standard AOAC, 2012 method at Nigerian Institute for Oceanography and Marine Research Central laboratory

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Results and Discussion

- A total of 14 fatty acid were identified in the species from the wild while the cage cultured species had 17 fatty acids

- There was significant difference between the fatty acid composition of *Clarias gariepinus* from the wild and that from cage culture

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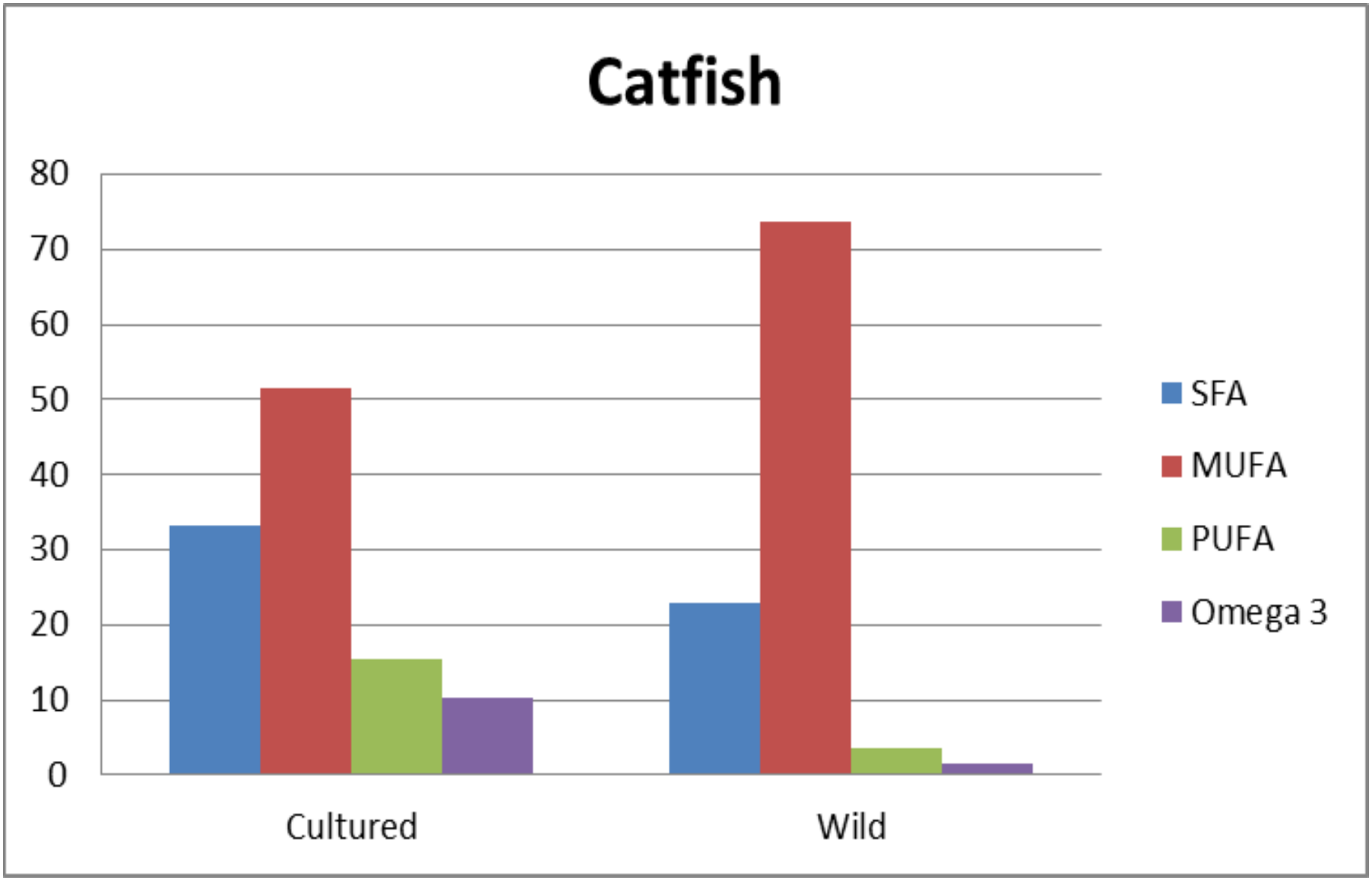

Figure 2: Indicating the fatty acid profile of cage cultured and captured *Clarias gariepinus*

Discussion

- From fig. 2 above, *C. gariepinus* is a good source of high density lipoproteins (HDLP) fats and PUFAs

- Omega 3 fatty acid part of the estimated PUFA (Fig.2) above was more abundant in the species from the cage culture than that from the wild (10.32% and 2.81%) respectively thus negating Anisulowo, 2012 that says cultured catfish has bad fats

Conclusion

In conclusion, Catfish especially the cultured ones are rich sources of good fats and its consumption is therefore encouraged to promote health.

- Knowledge is power. Information is liberating. Education is the premise of progress in every society and family ––– Kofi Annan

Thank you for your time

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