FACT SHEET

AQUACULTURE NEEDS ASSESSMENT KILIFI COUNTY-KENYA

BACKGROUND

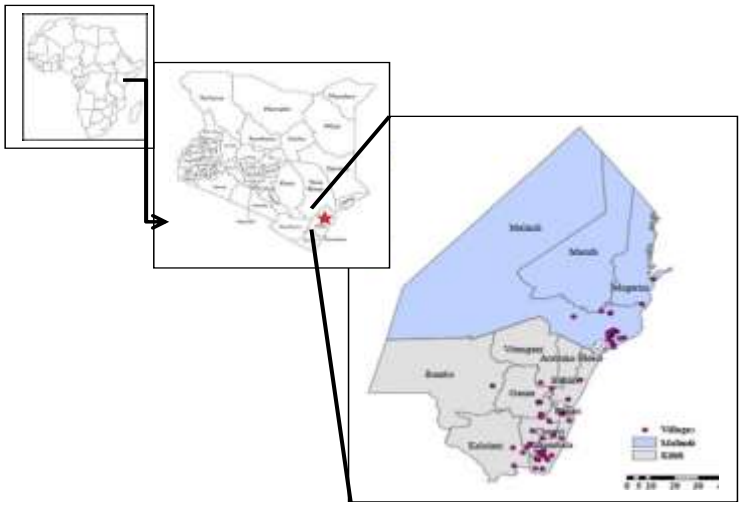
Aquaculture is the world's fastest growing animal producing industry. It is developing, expanding and intensifying as global population continues to increasing as fish production from capture fisheris continue to decline over the levelled off.

Despite the abundance fisheries resources and the relatively high consumption, Kenya's domestic output still falls short of demand especially at the coast region though potential exists for fish farming.

Periodic assessment of the views of fish farmers becomes very important as this is useful for the capacity development and extension services that support increased production. Therefore the purpose of this study was to identify and prioritize training needs of fish farmers' in Kilifi County as case study

OBJECTIVE

To evaluate the farmer's competency levels for farming in Kilifi County



Map of Kilifi County showing locality of fish farmers

RESULTS

Table2: Kilifi County Fish farmers' level of competency in aquaculture: Not competent (NC) (M=1.0-1.49), moderately competent (MC) (M=1.50-1.99) and competent © (M= 2.0-2.49)

No	Competency need	Mean	StdDev±
	Pond preparation		
i.	Systems of water depth and pond dyke measurement	1.73 **(MC)**	0.91
ii.	Knowledge in pond drainage needs	1.55 **(MC)**	0.82
iii.	Techniques in pond construction	1.36 **(NC)**	0.51
	Preparation for stocking		
iv.	Lime and disinfection of ponds	1.36 **(NC)**	0.67
v.	Fertilizers & manure use	1.46 **(NC)**	0.52
vi.	Techniques for checking phytoplankton and zooplankton	1.18 **(NC)**	0.41
	Selection of quality seed, species and their sto density		
vii.	Selection of species for polyculture	1.27 **(NC)**	0.47
viii.	Selection of diseases free fish fingerling	1.18 **(NC)**	0.41
ix.	Stocking density of fish species	1.27 **(NC)**	0.47
	Water quality management		
x.	Knowledge in increased nutrient level in ponds	1.46 **(NC)**	0.69
xi.	Knowledge in oxygen levels monitoring	1.18 **(NC)**	0.60
xii.	Knowledge in water quality management	1.27 **(NC)**	0.65
	Feed management		
xiii.	Fish nutrition & formulation	1.46 **(NC)**	0.82
xiv.	Way of feed application	1.55 **(MC)**	0.82
xv.	Proper time of feeding	1.73 **(MC)**	0.79
xvi.	Feeding dosage	1.27 **(MC)**	0.47
xvii.	Feed storage	1.46 **(NC)**	0.69
xviii.	Knowledge of polyculture	1.55 **(MC)**	0.69
xix.	Knowledge of integrated aquaculture	1.20 **(NC)**	0.42
xx.	Seed handling and transportation	1.09 **(NC)**	0.30
xxi.	Fish grading	1.18 **(NC)**	0.41
xxii.	Health care and disinfection of culture facilities	1.27 **(NC)**	0.47
xxiii.	Fish stress reduction	1.73 **(MC)**	0.91

Fish farmer's pond in Kilifi County

RESULTS

No	Competency need	Mean	StdDev±
	Harvesting, fish preservation and marketing of product		
i.	Time to harvest	1.73 **(MC)**	0.91
ii.	Methods of harvesting	1.64 **(MC)**	0.81
iii.	Post-harvest loss reductions	1.46 **(NC)**	0.82
iv.	knowledge value addition	1.09 **(NC)**	0.30
	Fish health management		
v.	Identification of diseased fish	1.18 **(NC)**	0.41
vi.	Preventive measures of some diseases	1.27 **(NC)**	0.65
vii.	Ways of predator & pest control	1.27 **(NC)**	0.65
	Staff welfare		
viii.	Knowledge on workers safety	1.18 **(NC)**	0.60
	Financial management		
ix.	Knowledge on how keep accurate records of all expenditure, revenue and practices	1.36 **(NC)**	0.81
x.	Knowledge on calculation of profitability & breakeven	1.36 **(NC)**	0.67

33 fish farming competency statements were scored

Only 9 competencies statements scored Moderately Competent (M=1.50-1.99) e.g.

66% feed application

41.7% proper time of feeding

55% harvesting methods

50% when to harvest

25 competencies statements scored Not Competent (M=1.0-1.49) e.g.

73% Fish feed nutrition & formulation

63.6% integrated aquaculture

72.7% Stocking density

81.8% water quality management

81.8% accurate record keeping

90.9% Seed handling and transportation

The study findings show that fish farming skill gaps amongst the famers are a major hindrance to the general aquaculture development in the county. The respondents agreed to lack competency in seed handling and transportation (M=1.09), Knowledge of integrated aquaculture (M=1.2), Stocking density (Mean=1.27), phytoplankton and zooplankton monitoring (M=1.18), water quality management (=1.27), liming and pond disinfection (1.36), Feeding dosage (1.27), Fish feed nutrition & formulation (M=1.45), accurate record keeping (M=1.36), calculation of profitability & breakeven (M=1.35) among others.

Recommendations

According to the findings of this study, fish, farmers' programs should focus on areas as ponited by farmers. These competencies should be addressed in either organised tranings session, through field outreach program to meet the needs of fish farmers and increased general aquaculture. The interst to undertake aquaculture as well as interest by consumer in farmed fish exist, therefore the is need to strenththen the extension and training to boost aquaculture production in the county

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