

COST CUTTING

Special tree helps farmer to slice cost of fish feeds

Kefri expert confirms that Calliandra tree is cheap and one of the best trees for formulating fish feed

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When Maxwell Ochoo first ventured into fish farming at his farm in Odiere village Homa Bay County, he almost abandoned his project half-way due to high cost of commercial fish feeds.

He says for almost three months after acquiring fingerlings, all the savings dried up because of meeting this cost. Yet, he still had at least five months to feed till his tilapia matures and are ready for harvest.

"I had no idea fish farming was such an expensive venture thanks to the expensive feeds. Buying feeds for the fingerlings was such a big expense, the business was barely surviving," begins Ochoo. But the he saw the light.

While he was searching for answers, he was linked to World Vision officials who armed him with knowledge on agroforestry.

Agroforestry

Charles odhiambo, Regreening project manager, World Vision Kenya explains that since the organisation was promoting planting of various trees, they advised them to plant special trees like calliandra and Sesbania that acts as fodder for fish and livestock.

When they the Calliandra and Sesbania matured, he cut the leaves and tried to test which of the two would attract the fish.

"I fed my fish with Sesbania and Calliandra but discovered they loved Calliandra. Whenever I gave them Sesbania leaves they would only eat a few, but devour the whole of Calliandra leaves. I started cultivating more Calliandra," explains Ochoo.

Since then, Ochoo and other farmers embarked on production of more Calliandra trees for fish feed formulation.

Odiambo explains: "For the feeds first, you dry them for two to three days under shade to retain the green colour, and that is how you get maximum utility out of the calliandra leaves."

He warns that when you dry Calliandra under direct sun, there are minerals that are lost. After several attempts, he has now perfected the art.

"After drying the Calliandra leaves, I mix them with commercial feeds and give them to



Maxwell Ochoo at his fish farm in Ochieng Odiere village, Suba North Sub County in Homa Bay County. [Nanjinia Wamuswa, Standard]

ABOUT CALLIANDRA TREE

Dr Casianes Olilo, a researcher at Kenya Marine and Fisheries Research Institute says Calliandra is a tropical leguminous plant, in the species, of Calliandra calothyrsus.

Calliandra is planted through direct seeding which involves broadcasting of seeds after they are isolated from the pods. It can also be planted through nursery practice, where seed are planted in polythene bags. Propagation trials have failed in calliandra.

Climate conditions: It requires humid tropical climate with rainfall ranging from 1,000 mm to 4,000 mm per year. It does not grow on arid or temperate climate.



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Dr Casianes Olilo, a researcher at Kenya Marine and Fisheries Research Institute

the fish. I have cut my production costs by half," he says.

He explains the Sesbania trees also act as windbreaker around the fish farm. He harvests his fish after every eight months.

But how good is Calliandra in fish feeds for-

mulation?

Dr Casianes Olilo, a researcher at Kenya Marine and Fisheries Research Institute, Turkana says farmers need capacity building to understand the concept of formulating feeds using locally available material and ingredients like tree feeds.

"Calliandra tree is one of the best trees for formulating fish feeds. Calliandra tree is cheap because it is locally available source of feed, depending on location of the fish farmer," he explains.

He says farmers need to formulate fish feed that has high value nutrients including protein, vitamins and minerals. And, use locally available ingredients in fish feeds whenever possible.

He warns, "Do not use limited proportions of nutrients in fish feed that may lead to feed wastage, poor fish growth and occurrence of deformities and nutritional diseases."

Other trees useful in formulating feeds include Moringa for proteins, cassava leaves and leguminous shrubs.

To make a balanced fish meal from Calliandra, Dr Olilo advises farmers to mix them with brewers waste, rice, wheat, maize, seed cakes, slaughter waste, offal waste and blood.

On value addition, Dr Olilo says Nile perch skin can be tanned into leather to make shoes and hand bags. Fish bladder can be used to make membranes that are applied on hospital facilities, and material. Fish bones can be used in making buttons. He advises farmers to use quality fingerlings that is pure breeds and not cross breeding.

"Quality fingerlings have higher survival rates, high yields, grow faster. Use fish feeds efficiently and reduce wastage of resources in the farm," he advises.

He advises farmers to keep fish ponds clean and avoid overcrowding.

"Still, the demand is high, and with cost of feeds reduced, I make good money," shares Ochoo.

CLIMATE CORNER

CLIMATE CHANGE IS HERE AND NOBODY IS REALLY SAFE



"Climate change is a problem that is here, now. Nobody is safe. And it is getting worse faster." That is the resounding warning issued by Inger Andersen, executive director of the United Nations Environment Programme ahead of 26th UN Climate Change Conference of Parties (COP26) in Glasgow in

November.

In a statement ahead of the high level summit in the UK where nations will take stock of progress made in climate action, Andersen noted that climate crisis is a real threat and the world must act now.

He challenged the world to treat climate change as an immediate threat, like other immediate threats like crises of nature and biodiversity loss, and pollution and waste.

He noted that reducing greenhouse gas emissions will not only slow climate change, but also improve air quality because they are all connected.

"It's time to get serious because every tonne of carbon dioxide emission adds to global warming," he warned.

As the UN Framework Convention on Climate Convention (UNFCCC) noted last week, just 110 of 191 Parties to the Convention have submitted new or updated Nationally Determined Contributions (NDCs) ahead the next climate COP.

Time running out

He emphasised that governments need to make their net-zero plans an integral part of their Paris commitments.

Leaders have noted that developed nations must finance and support developing countries to adapt to climate change, as promised in the Paris Agreement.

"They must de-carbonise faster. Restore natural systems that draw down carbon. Cut out methane and other greenhouse gases faster. Get behind the Kigali Amendment to the Montreal Protocol to cut the climate impact of the cooling industry. And every business, every investor, every citizen needs to play their part," the UNEP boss noted.

He added: "We can't undo the mistakes of the past. But this generation of political and business leaders, this generation of conscious citizens, can make things right. This generation can make the systemic changes that will stop the planet warming, help everyone adapt to the new conditions and create a world of peace, prosperity and equity. And if we don't act, who will?" he challenged.

Other global leaders have also added their voice to the climate talk ahead of the summit.

Climate tsar Alok Sharma, president of the forthcoming Cop26 conference, has warned that the cost of not acting on climate change could be 'far greater' than the expense of transition.

UK PM Boris Johnson has warned that tackling climate change will cost families more, but not acting will cost even more in the long term.

UNEP notes that reducing carbon emissions is no longer enough to halt the impacts of climate change. Many countries are realising it's time to start adapting to a warming world.

[Hellen Miseda is an Editor at The Standard and is passionate about climate change awareness]