

Livestock & Fisheries Unit

NGF has been implementing diversified fisheries and livestock activities under this unit since 2013 with the effective partnership of Palli Karma-Sahayak Foundation (PKSF). At 182th meeting on 29/06/2013 managing committee decided to form 'Agriculture Unit and Livestock Unit' and recently introduce "Fisheries and Livestock Unit" as a separate wing of PKSF as well as NGF; aiming to promote new technology, extension services and financial support to the farmers who are member of microfinance program activities. Fisheries and Livestock Unit take several initiatives to develop coastal fisheries and livestock sector through increasing productivity with sustainable fisheries and livestock technologies.

As a PKSF partner organization, Nowabenki Gonomukhi Foundation (NGF) has been implementing fisheries and livestock activities in four branches (Shankarkathi, Kadamtala, Krishnonagar, Ratonpur) under Shyamagar and Kaligonj upazila of Satkhira district. Fish is the second most valuable agricultural crop in Bangladesh and its production contributes to the livelihoods and employment of millions of people. There is a proverb "Mache Bhate Bangali" exists in Bangladesh. Fisheries are playing an important role in the development of Bangladesh and through better management this contribution can be increased much. Still fisheries sector contributing 4.92 % to GDP and 23 % of total agricultural production of Bangladesh. 63% animal protein is obtained from fishes. The target people of the programme who are the member of microcredit program, micro enterprise, seasonal and agriculture microcredit loan program and actively dependent on fisheries and livestock activities. The main objectives of the project is to create self-employment opportunities; poverty alleviation; enhancing food and nutritional security through financial Service; modern technology and information dissemination; capacity building; value chain development and market Linkages.

Demonstration:

In fisheries sector there are total 4 sub-sector technologies which successfully implementation of 70 demonstration.

Sl. No	Name of Demonstration	No. of Demonstration	Beneficiaries
1	Crab fattening	10	10
2	Kuchia fattening	25	25
3	Polyculture (Carp-Golda/Carp-Mola/Carp-Shing & Magur	30	30
4	Mono Culture (Vietnams Koi)	5	5
Total		70	70

Crab fattening:

Crab fattening is a profitable adaptive livelihoods option in coastal areas of Bangladesh as it is both low in cost and easily available. There is a good market for crab in South East Asian and European countries. Some are also purchased by restaurants in metropolitan cities serving Chinese, Japanese, Korean or other western foods. The fattened crab is sold at a very high price and is 2-3 times more profitable than shrimp cultivation. The mud crab (*Scylla serrata*) generally locally called as "Habba kakra", "Silla kakra" or "Kankra" is one of the most important coastal aquatic species after the tiger shrimp in Bangladesh due to its high demand and price in the international market.

The mud crab fishery is absolutely based on wild catch mainly from the swamps of the Sundarbans and vast areas of the traditional shrimp ghers along the coastal region of Bangladesh. Its actual culture technique of mud crab has not yet been developed in our country. People of the coastal region follow traditional fattening process to grow crab. But now country southern part of Bangladesh specially shyamnagar, kaligong and others upazila peoples practices crab fattening by scientifically with the help of NGF personnel and upazila fisheries department. Small and large point/gher or box system is used in respective working areas for crab fattening. This point/gher is fenced by bamboo sticks locally known as "Pata" to prevent escaping of crab. Fattening usually requires 2-4 weeks to complete. Within this time, premature crabs are well fed to develop their gonad fully. It could be done many times by a farmer and can be continued for almost throughout the year.

Poor fishers/farmers can get a significant financial return from crab fattening on a sustainable basis and can break out of the poverty trap within a reasonable time frame. In last



Photo: Crab Fattening under Fisheries Unit



Photo: Soft sale crab demo under Fisheries Unit

fiscal year 10 crab fattening farm has been demonstrated in the project area among which 5 in point method and 5 in box method.

Cuchia Fattening:

In our country *Monopterusuchia* generally known as cuche/cuchia/mud Eel. The freshwater mud eel is a tasteful, nutritionally rich and medicinally valuable fish with high export demands which can play a unique role for socio-economic welfare of the area. Mud eel found in plenty commonly in stagnant waters in mud-holes in shallow beels and boro-paddy fields with low oxygen content throughout the country of Bangladesh. The population of the freshwater eel are declining at an alarming rate from the natural water bodies due to several reasons specially for overfishing, climate change, drought, made upland sluice gate, flood control barrier making, water body convert into agricultural land, frequently use of pesticide and insecticide. Now the government of Bangladesh and different NGOs implement



cuchia related different projects to conserve and existing available in nature by culture. Our working area is more suitable for culture freshwater and saline water mud eel specially shyamnagar and kaligonj upazila under satkhira district. NGF has implemented cuchia culture and fattening in Agriculture unit related working area to create employment opportunity as well as conserve the species from extinct. In last fiscal year 25 cuchia fattening farm has been demonstrated in the project area among which all were cemented house method.



Photo:

Cuchia fattening activities visited by PKSF official at Gele Para under Kaliganj Branch.

Poly Culture (Carp-Golda/carp-mola/carp-shing and magur):

Bangladesh is one of the world's leading inland fisheries producers and has a huge water resource all over the country in the form of small ponds, ditches, lakes, canals, small and large rivers, and estuaries covering about 4.34 million hectares. Polyculture is the practice of culturing more than one species of aquatic organism in the same pond. The motivating principle is that fish production in ponds may be maximized by raising a combination of species having different food habits. The concept of polyculture of fish is based on the concept of total utilization of different trophic and spatial niches of a pond in order to obtain maximum fish production per unit area. The mixture of fish gives better utilization of available natural food produced in a pond. The compatible fish species having complimentary feeding habits are stocked so that all the ecological niches of pond ecosystem are effectively utilised. The possibility of increasing fish production per unit area, through polyculture, is considerable, when compared with monoculture system of fish. Different species combination in polyculture system effectively contributes also to improve the pond environment. In last fiscal year 30 carp-golda polyculture ponds has been demonstrated in the project area.



Mono Culture

(Vietnam's Koi):

Mono culture is a profitable income generating activities for the poor people in our country as well as our working area. Our working areas are more suitable for fish culture,

especially Vietnam's koi species for mono culture to get more profit and good return within very short time. Mono culture is an effective way to maximize benefit from available natural food in a pond. Pond management becomes easier than polyculture. In last fiscal year 30 carp-golda polyculture ponds has been demonstrated in the project area.



9. Skill Development Training:

Training refers to the teaching and learning activities carried on for the primary purpose of helping members of an organization acquire and apply the knowledge, skills, abilities, and attitudes needed by a particular job and organization. The wing conducted training and the training has specific goals of improving one's capability, capacity, productivity and performance. In the fiscal year "2015-2016" NGF has implemented different fisheries related training under agriculture Unit (Fisheries sector) such as capacity building and entrepreneur development training on Carp-prawn mixed culture, crab and kuchia culture and fattening. Among of them 3 batches (75) beneficiaries received non residential two days long capacity building training where as all participants were female and 2 batches (50) beneficiaries received residential two days long entrepreneur development training where as all participants were male.

Sl. No	Name of Training	Batches	Beneficiaries
1	Mixed fish culture	2	50
2	Crab fattening	1	25
3	Modern techniques of Crab & kuchia fattening and their management	2	50
	Total	5	125

Exposure Visit

The Unit has been organize exposure visit at different location. At first select fish farmers whose are showing more interest to implement new technology in our working areas in respective branch to visit where fisheries activities run well and updated technology used.

- To explore the possibility of replicating various sustainable IGAs in our working area.
- To improve community management system using the lessons learned by visit successful farmer pond/gher/point.
- To increase skill and capacity for pond/gher management by exposure visit to produce more production and earn more income.
- Focus on new technology, new IGAs, new culture system and management to implement by using visit learning.



Fry Release Program in Canal:

There is a proverb "Mache Bhate Bangali" exists in Bangladesh. There was a time when natural water bodies of the country were full of fishes and other fisheries items but situation has changed now and our open water loosing their resources and some of fish species has extinct and red listed. Nowabenki Gonomukhi Foundation (NGF) has initiatives to protect fish sanctuaries and red listed fish by fish fry release programmed under Agriculture Unit (Fisheries) with the financial and technical help of Palli Karmo sohayak Foundation (PKSF). With consultation Uno,upazila fisheries officer and burigualini up chairman under shyamnagar upazila.



Finally select arpangasia canal under burigualini up parishad and form of farmers group near about 60 members to management and monitoring this canal for better production. Shyamnagar upazila nirbahi officer innaugurated the fry release programme on the arpangasia canal under burigualini union. Executive Director of NGF,UNO,Upazila fisheries officer,UP chairman and NGF personnel were present during the event. Later, around 75 kilograms of rui, katla, mrigel,silver carp,mono sex tilapia,sarputi,deshi koi,shing,magur and mola fishes were released into arpangasia canal.



Fisheries & Livestock Unit

Demonstration:

In livestock unit there are total 11 sub-sector livestock technologies which successfully implementation of 495 demonstration which covered by 495 beneficiaries.

Sl. No	Name of Demonstration	No. of Demonstration	Beneficiaries
1	Goat Rearing (Ultra-poor)	50	50
2	Goat Rearing (Poor)	30	30
3	Cow Rearing	20	20
4	Beef fattening	12	12
5	Layer farming	12	12
6	Broiler farming	14	14
7	Vermi-compost	326	326
8	Broiler processing unit	1	1
9	Buck center	10	10
10	Duck rearing	8	8
11	Quail rearing	12	12
	Total	495	495

Goat Rearing (Ultra-poor)

Goat rearing is a profitable income generating activities with short time and space, least effort and investment. The demand of goat meat is very high for its nutritious value and taste. Maintenance of goat rearing is very easy even a child can rear several goats. Disease resistance is better than any other livestock. Again the weather of our country is optimum for goat rearing. Beside the leather of Black Bengal goat is reputed and having high demand in the world market. Considering these merits we demonstrated 50 farms for ultra poor beneficiaries. Everybody has gotten one shelter house and two does.



Goat Rearing (Poor)

There are thirty demonstration has been implemented on goat rearing for poor beneficiaries under livestock unit in the fiscal year 2015-2016.



Cow Rearing

Cow rearing is another successful income generating activities in the project area. Milk is an ideal food for all aged people so its demand is high all the year round. Bangladesh has been imported huge amount mild powder by spending dollars only for the babies. Although cow rearing is primary source of milk but it also has a great contribution in diet by supplying animal protein. To meet up the demand of animal protein cow rearing is a potential IGA. There are 20 demonstration has been implemented on cow rearing under livestock unit in the fiscal year 2015-2015.



Beef Fattening

Beef fattening is a traditional idea. But the proper management of the beef for 3-4 months is very profitable IGA in our country. India is the biggest exporter of beef in our country as we have the high demand on this. Beef is the popular food menu in our diet. To ensure the access of beef for the general people of Bangladesh beef fattening is potential and profitable IGA. Considering the agricultural environment, we demonstrate 12 IGAs on beef fattening in the project area.



Layer Farming:

Layer poultry rearing is another profitable income generating activities (IGA) and promising poultry sector in our country. Layer farming means raising egg laying poultry birds



for the purpose of commercial egg production. Layer chickens are such a special species of hens, which need to be raised from when they are one day old. They start laying eggs commercially from 18-19 weeks of age. They remain laying eggs continuously till their 72-78 weeks of age. They can produce about one kg of eggs by consuming about 2.25 kg of food during their egg laying period. For the purpose of producing hybrid eggs layer, consider the various characteristics of cock and hen before breeding. There are 12 demonstration has been implemented on layer farming under livestock unit in the fiscal year 2015-2016.



Broiler Farming:

Poultry is a part of agricultural farming system in Bangladesh and broiler is one of the main products of poultry farming. Even though raising poultry birds is mostly a subsistence practice in Bangladesh, broiler is mainly commercially produced in Bangladesh. The contribution of broiler production is vital to the national economy in case of generating employment opportunity, additional income for households and improving the nutritional level of the people.

The poultry sector has emerged as a flourishing and promising commercial sector in Bangladesh during the recent years. It is one

of the fastest growing sectors with bright future and plays a crucial role in supplying nutritious food and generating income. There are 14 demonstration has been implemented on broiler farming under livestock unit in the fiscal year 2015-2016.

Vermi-Compost:

Vermi-compost is the product or process of composting through the utilization of various species of worms, usually red wigglers, white worms, and earthworms, to create a heterogeneous mixture of cow dung, poultry manure etc. Vermi-compost, also known as worm castings, worm humus or worm manure, is the product of the breakdown of



organic matter by species of earthworm. Vermi-compost is a nutrient-rich organic fertilizer and soil conditioner in a form that is relatively easy for plants to absorb. Worm castings are sometime used as an organic fertilizer. Because the earth worms grind and uniformly mix minerals in simple forms, plants need only minimal effort to obtain them. The worms' digestive systems also add beneficial microbes to help create a "living" soil environment for plants. 326 Vermi-compost plants have been demonstrated during last fiscal year.



Broiler Processing Unit:

A centralized poultry processing unit of any scale of operation is to produce material at a price which customers can afford, which is hygienic, wholesome, attractive and saleable, of consistent appearance and quality, and with a realistic shelf life. In the last fiscal year 1 broiler processing unit has been demonstrated in working area

Buck Center:

In the livestock sector Black Bengal goat is the only recognized breed amongst the domestic species available in Bangladesh. Black Bengal goat is a dwarf breed and famous for high fertility, prolificacy, superior chevron quality, best quality skin, early sexual maturity, resistance against common diseases, seasonality, low kidding interval and very good adaptability. For the better propagation of the species of goat, there should have good breeding buck. For breeding purpose 8 buck center have been demonstrated during the last fiscal year.



Duck Rearing:

Duck rearing is very popular and absolutely a lucrative business. Ducks are highly available around the world. There are numerous meat and egg productive duck breeds available throughout the world. All the present domestic ducks around the globe come from the wild birds. Those wild birds wander around the world and some of them have been domesticated as a good source of food. Some people think that; duck without water and pond without are the same. Even, some people think, ducks can't live without water. But it's totally wrong. Pond without water but duck can be raised without water. Thousands of ducks can be raised without water by keeping them inside house. Can be raised ducks in both commercial and small scale meat or egg production purpose. In the last fiscal year 12 duck rearing has been demonstrated in working area.



1.11 Quail Rearing:

Quail farming is a new income generating activities (IGA) for the pro-poor people in our country. "Quail farming" means, raising quails commercially/small scale (like other poultry birds) for the purpose of profitable eggs and meat production. Quail farming business is very easy, lucrative and entertaining. It's very easy to maintain a quail farm, because quails are among the smallest species of poultry birds. The Japanese scientists



first tamed the wild quails and revealed the ways to raise them as domestic birds. Quail farming is more profitable like other farming ventures, such as chicken, turkey or duck farming. Almost all types of weather conditions are suitable for starting quail farming. Meat and eggs of quail are very tasty and nutritious. Quail eggs are very nutritious than other poultry eggs because quail eggs contain comparatively more protein, phosphorus, iron, vitamin A, B1 and B2. Quail farming can play a vital role to meet up the demand of food and nutrition. Quail farming business requires small capital and labor. Quails can be raised along with other poultry birds for meat or eggs production.

NGF has started another new income generating activity "Quail farming" by the selected beneficiaries in our project working area with the booster of PKSF. In the fiscal year 2015-2016, we demonstrated 12 numbers of quail farming IGA. Quail farming plays a vital role in our working area because quails are smaller sized poultry birds, and it's very easy to handle them.

Skill Development Training:

In livestock unit we trained 550 beneficiaries in 22 batches under four sub-sectors. They are now successfully implementing on their project.

Sl. No	Name of Training	Name of batch	Beneficiaries
1	Goat Rearing	4	100
2	Cow Rearing	2	50
3	Broiler	2	50
4	Vermi-compost	14	350
	Total	22	550

Vaccination and Deworming:

Sixteen vaccination campaigns conducted for cow, goat, hen and duck in Shankarkathi, Kadamtala, Ratonpur and Krishnonagar branch under Shyamnagar & Kaligonj upazila. We have reached approximately average 2400 household and completed vaccination regarding FMD disease for 120 cows, Anthrax disease for cows, PPR



disease for 3850 goats, Ranikkhet disease for 3900 hens and Duck plague disease for 1150 ducks.

Sl. No	Description	number/a mount/vial	Covered Household (approximately)	Animal
1	Deworming	2800	1900	3600
2	FMD	12	96	120
3	Anthrax	32	2000	3000
4	PPR	40	1700	3850
5	BCRDV/RDV	40	900	3900
6	Duck plague	12	200	1150

