

Farm and Allied Sector & Natural Resource Management

CBL is a major component of CORD and has two major sections ie. Farm and allied sector/NRM and Non-farm Sector. The farm and allied sector activities are closely linked to the natural resource of the area thus both the activities for CORD work together as a unit each one reinforcing the other.

CORD's target groups consist of the most underprivileged sections of the community. Financial support through micro-credit provided by Self-Help Groups (SHGs) plays a vital role too in supporting community members monetarily. Farm and Allied Sector activities emphasize working on multiple livelihood activities so that earning opportunities are available through all seasons. Farm and Allied Sector also integrates non-farm sectors activities into its CBL program in order to meet the family's needs through the year.



Medicinal plant cultivation at
Deuladiha, Orissa

Goal:-

The overall goal of the project is to mitigate the cause and negative impacts of unsustainable use of natural resources through sustainable land and water management practices so that communities are mobilized to improve their livelihood opportunities with greater care and better utilization of their land and water resources.

Objectives:-

- To establish various sustainable practices to manage and nurture natural resources
- To improve the livelihood and economic conditions by mobilizing the communities to promote various feasible activities in farm and allied sector.

Farm and Allied Sector's main focus in the agricultural department has been to increase cash crops, off-seasonal vegetable production and develop new techniques for farming such as System of Rice Intensification (SRI). In Orissa at Deuladiha CORD is working in collaboration with CLAP (Community Livelihood Action Programme) to grow medical plants and in Lathikatta women's self help group and youth self help group have grown vegetables by irrigating their un irrigated land with tube wells or by repairing traditional wells and de silting community ponds.

Poly-houses and Cash Crops:

Poly-houses are edifices made from poly-sheets (200 microns thick) for the optimum growth of plants. In the Kangra District (Himanchal Pradesh). Poly-houses remain very useful as the local weather often fluctuates, even including the occasional snowfall, which is not suitable for plant growth. Currently 23 of CORD's beneficiaries are using poly-houses with very positive results.



Farmers who have visited Farm and Allied Sector's demonstration of low cost poly-houses are motivated to construct such structures in their fields. Currently the awareness has been raised, and farmers have committed to construct the poly houses. CORD facilitates the technical assistance required and arrange the poly film used in poly house construction.



Vegetable Cultivation:

Farm and Allied Sector has 2826 beneficiaries with whom we are working to produce seasonal vegetables. These include vegetables such as potatoes, capsicum, radish, carrots, beans, tomatoes, spinach, cucumber, bitter melon, etc. Farmers are growing these vegetables in their agricultural field as cash crop.

Pattal production:

186 families earn their livelihood through "Pattal" (plate made out of leaf), of which 13 people have monthly earnings of more than Rs 3000.



Livestock and Animal Husbandry:

Since H.P. has such a rugged landscape, 80% of the population live in villages and depend on the agriculture. The land holdings are small and the farmers are generally marginal and agricultural laborers. Most of the farmers do not receive good returns from agriculture and want to adapt other agriculture related activities to enhance their income. Hence adoption of dairy farming, mushrooms, sericulture, fishery and bee keeping are the need of the hour.



Animal husbandry sectors play a vital role in providing household nutrition security, increased income, employment of women, and in rural transformation.

Dairy farming is an important source of subsidiary income to small/marginal farmers and agricultural laborers. The manure from animals provides a good source of organic matter for improving soil fertility and crop yields

Our community based field workers from Mahila Mandal and Yuva Mandal programs work with community members to generate awareness among them. In order to increase interest and awareness among villagers about dairy production, Farm and Allied Sector has plans and organizes exposure trips and local level dairy camp with the help of animal husbandry department of Himachal Pradesh out of 8246 beneficiaries in this sector in H.P 2731 beneficiaries have been promoted in dairy work.

Fishery:

From the Kardiyana village Mr. Tilack Raj in H.P. earns a monthly income of more than Rs.4000. He is currently constructing two more tanks for fish culture. Five farmers known to CORD are also interested to do this activity for their livelihood. In Lathkatta at Orissa too fishery activity through the SHG groups has been introduced. One SHG group in Lathikatta has also purchase a fishing boat and nets etc.

Mushrooms:

CORD's a aim is to provide the training to youth club members as well as our CBOs (Community Based Organisation) who are interested in becoming self employed.

The mushroom cultivation has become almost an annual activity for income generation in Himanchal Pradesh wherein for nine months in a year communities have been trained to earn through mushroom cultivation. Farm and Allied Sector's has received applications from active farmers for training in mushroom cultivation. Currently we have provided the training to 18 selected farmers in Indo-Dutch Mushroom training centre Palampur. By the end of June 2008 in Kangra, Himanchal CORD was able to motivate 370 families to grow Dhingri mushroom's as a livelihood activity and have provided 2000 bags of the mushrooms, with expected production 4-4.5 tons. In Lathkatta at Orissa too mushroom activity has been introduced to SHG groups.



Goat -Sheep Keeping and Poultry:

In terms of multiple livelihood, goat keeping and poultry (indigenous breeds, not the broiler) plays a very important role, since they bear high profit margins. These activities especially goat keeping and back yard poultry is a common activity of the poorest of the poor in all sites of CORD.

Beekeeping and Sericulture:

Currently quite a few individuals associated with CORD are involved in both 31 beekeeping and sericulture activity, out of which 12 are involved in sericulture, and 19 people are doing beekeeping.

Although these are only seasonal activities, they still remain a good source of income. In the villages of Kheer-chamba sarotri, Hatwas-bhuner, and Lambagaon in Himanchal Pradesh, sericulture is one of the major sources of income.

In the villages of Bhati, Patiyalkar, Rachiawlu, Amatarar, Oder, Rinnadhalu, and Chugera, Ichhi in Himanchal Pradesh, beekeeping has been a steady source of income.

Participatory Natural resource Management



PNRM is an approach to research that aims at improving livelihoods, agro-ecosystem resilience, agricultural productivity and environmental services. In other words, it aims to



augment social, physical, human, natural and financial capital. It does this by helping solve complex problems affecting natural resources in agro ecosystems.

CORD is working in natural resource management through the Participation of local community. The project area selected Panchayat of three blocks & implemented the work within the project area.

Farm sector planted the 6695 seedling of Mulberry species and 35568 of Napier grass.

CORD has been identified and selected as one of the organizations to implement “The Sustainable Mountain Livelihood Program in Sidhbari, Himanchal Pradesh.” A sustainable and resource based income generation development project with financial assistance from *Sir Rattan Tata Trust, Mumbai* and technical assistance from *People’s Science Institute*. Through this programme CORD is expected supposed to cover a minimum of 800 farmers in Kangra district.

IMPROVED AGRICULTURE PRACTICES – SRI

A successful Programme of the SRI system during Kharif season was carried out in 10 Panchayats with 115 farmers in the last season in District Kangra for the first time in H.P. The Farm & Allied sector decided to replicate this activity with 1000 Farmers of Kangra district in 2008.



Year	Training	Trained	Adopted
2006	1	17	12
2007	8	263	107
2008	24	1035	To be surveyed

Demonstration Projects:

Land & Water Management:

Objective is prevention of erosion and runoff water and moisture conservation.

Activities - measures like bunding, trenching, Vegetative barriers and engineering structures, Small water harvesting structures to increase the moisture regime and make agriculture more productive. Repair and restoration of traditional water harvesting systems was done where ever feasible in H.P. and in Orissa

Deep-rooting crops are planted to cure physical damage, promotion of crop rotation and good farming practices to cure biological damage.



Community Pond



Bowari



Irrigation channel



Drinking water



Irrigation Tank

Pasture land Development -With increase in population the pressure on common land has increased considerably. As a result, the land patches which are used for grazing purposes in the villages are getting diminished and overgrazed.

CORD objective is to manage, restore and develop pastures to overcome challenges of overgrazing pressures on degraded pasture lands through community participations and also develop understanding of the role that good pastures play in providing good nutrition to their livestock. CORD has also introduced pasture development techniques to the villagers such as hedge rows, growing grass on bunds. Choka system with grazing land development has been initiated in Deuladhia, Orissa.

Plan-Planting and sowing of high production yielding grasses like Styria and Napier varieties on the bunds of agricultural fields and designated pasture lands, restoration of degraded pastures lands by undertaking effective land management activities, bio fencing of pasture lands for proper protection.



Hedge Rows

Introduction of co-management plans for managing pastures, utilization of resources to complement livestock production, fodder demand and fodder production have also been undertaken at various sites in Kangra District.



Hedge Rows



Community Pasture Management

Farm-forestry and natural forest to increase biomass availability.

Objective -Rehabilitation, regeneration of natural forests, biodiversity conservation, Community Forest management , and Strengthening of the existing mixed farming management and alternate land uses like agro-forestry, agro-horticulture .

Activities: -. Promotion of agro-horticulture forestry by plantation of specific species for meeting fuel wood, fodder and small timber demand of the community. Protection of plantation area by bio-fencing using local fencing techniques have been used often to keep costs down to the minimum where social fencing was not possible.



Tranch Pit system at Deuladhia (Orissa)

Soil Degradation prevention and water conservation –



Trench Pit system at Deuladhia (Orissa)



Grass on bunds



Bunds on slopes



Choka System Deuladhia

Water erosion causes massive damage and is a prime reason for degradation. Kangra district receives average annual rainfall of 1200 M.M, as most of the land is in slopes; gentle sloping land is left exposed to the effects of heavy rain resulting in loss of topsoil and nutrients getting washed away with it. it also results in sliding of big chunks of land which otherwise could have been utilised in a better way. Bunding on slopes as well as grass on bunds is used to prevent soil erosion in cultivated lands. Choka system and trenching prevents soil erosion as well as helps conservation of water in areas that have very little rain except in monsoon. CORD has use these techniques in Orissa and Himanchal Pradesh.

The prevention of degradation carries with it its own motivating force i.e. increase in production that accompanies when land is protected. Degraded patches of land are identified and various measures are undertaken as suitable.

Organic Farming :-

Introduction: CORD's approach to agriculture is to create an integrated, humane, environmentally and economically sustainable agricultural production system

Indiscriminate use of fertilizers available on subsidized rates without taking into consideration the real requirement of soil has created nutrient imbalance in the soil. The soil erosion has also reduced the productivity of land, requiring farmers to apply more and more fertilizers and other chemicals that help check falling productivity. In the long run it has led to more degradation of land leading to high input costs and low income generation through agriculture.



CORD's objective is to help rural villages to decrease their dependency on inorganic compounds for farming purpose, decrease the farming costs and utilization of resources available within the village itself for healthy and sustainable farming.

Activities – The villagers are given all inputs required in process of organic conversion ranging from setting of vermin compost pits, preparation of organic fertilizers and pesticides through available resources at village level. We also promote effective Traditional knowledge and practices. Vermin Compost pits have been introduced to 1800 farmers in Kangra and to few farmers in other sites in Orissa and Tamilnadu as demonstrations.

CORD also uses weeds as green manure in SRI technique.

Vermi compost pit





Vermi compost



Matka Khad and Grain Rakshak

Liquid Manureing Systems For Sustainable Agriculture



Panchgavya



Vermi Wash



Mattaka, Vermin Wash and Amrit Jal

Traditionally cows have been worshiped in India for many reasons. In places where farming has been dissociated integrated nature of involving livestock such as cows has been disturbed. However, the practice continues in many places in India. CORD has promoted traditional practices of using cows urine

and cow dung effectively as fertilizer and pesticide by mixing certain other ingredients. Some of the examples have been shown above.



Soil management through Nature

The practice of 'mix cropping' (Wheat + Pea and Wheat + Masur, Wheat + Moth) with selected farmers to sustain soil fertility has been done in District Kangra. This is an

important step for organic cultivation/ chemical free agriculture. The Farm & Allied sector is trying to minimize investment in agriculture.



Low cost poly house



Chemical free vegetables

Trainings and Camps:

The Farm and Allied sector organizes special trainings for the selected farmers from time to time .



Vermin compost at Tampraipakkam



SRI Method training for paddy cultivation



Knowledge sharing



Training on organic farming