

**Crossbred Female Calf-Rearing Scheme
for
Genetic Up-gradation
of Cattle
Under
Rashtriya Krishi Vikash Yojna
(2012-13 to 2014-15)**

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Introduction:

Thousands of poor farm households in Odisha depend on different forms of Livestock to varying degrees for their subsistence. Livestock is the major source of supplementary income for the rural households in Odisha. Livestock production is an integral part of the rural livelihood systems. Livestock production takes place in millions of small holders scattered throughout the state. The development of the livestock sector is the critical pathway to rural prosperity. Livestock are critical input to help poor rural people escape the poverty trap.

The poorer people often depend for a large part of their livelihoods on small and marginal land holdings. However, landless people often have little opportunity for their livelihood. Animal Husbandry provides them some subsistence income and nutrition to their family.

The Odisha Livestock Policy has been approved, which is pro-active, pro-poor and gender sensitive. Improvement in Livestock production is an important pathway for increasing the income of marginal and small farmers and landless labourers, given the uncertainties of crop production. However there is need to provide an enabling environment in which livestock rearers are able to take advantage of the opportunities. Livestock production has the potential to demonstrate appreciable growth by giving right kind of support.

The policy explicitly seeks to help the poor. It argues that livestock can serve as an engine for the for the social and economic development of the rural population, enabling steady growth of rural household income, increasing rural employment opportunities and improved quality of life, cutting across caste, class and gender. The primary reforms adopted in policy are marketisation of veterinary and artificial insemination, promotion of linkage between grass root organisations and the animal husbandry department, reorientation of the Directorate towards disease control, prevention and eradication, and livestock sector development.

The operational guidelines communicated by the department will be followed while replicating the scheme for another 3 years to cover additional 60 thousand calves.

Genetic Upgradation in Cattle:

In order to increase the present per-capital consumption of milk, 104 gms. per day against the National average of 220 gms. per day, requires effective genetic upgradation of local cattle and buffaloes. The genetic upgradation programme in cattle and buffaloes through Artificial Insemination (AI) is being taken in a more effective manner in order to increase the CB population in the State.

Dairy Farming is a viable option for small and marginal farmers in the rural areas for income generation. The Artificial Insemination Programme is being taken up for last several years for genetic up-gradation of cattle and buffalo. Even the most hilly and backward areas have large presence of cattle population with mixed genes of exotic species. Such population of animals and genetic up-gradation did not result in either higher milk productivity or increased income to the people. The cross-bred female calves born out of A.I. need good feed and care for 2 years to achieve its genetic potential. The animals need to be maintained with adequate nutritional requirement Therefore the plan proposes to support the dairy farmers in term of feed, insurance and health service so that dairying would be cost effective minimising some pressure towards cost of management of their stock.

The Scheme:

Popularly known as Calf Rearing Scheme is assisted by Rastriya Krishi Vikash Yojana(RKVY) The Scheme was inaugurated by the Honorable Chief Minister of Odisha on 2nd November 2010, with an overarching goal of assisting the dairy farmers to rear crossbred female calves. The principal objective of the scheme is to provide balanced nutrition to the crossbred female calves, so as to ensure timely sexual maturity, and produce more milk in future.

Objectives:

In consonance with the perspective plan 2010-20, the specific objectives of the Calf Rearing Scheme are:-

- To enable the economically weaker section of the farming society to protect and nourish cross-bred heifer calves for better growth and health.

- To contribute towards the nourishment of the calf so as to yield increased milk production after attaining cow-hood.
- To help augmenting the availability of good quality dairy animals.
- To manage the cross bred female CB calves with adequate health care, deworming.
- To sustain the improved germplasm created through genetic up-gradation/ Cross breeding.
- To reduce the delayed maturity in CB Exotic heifers through supplementation of balanced feed.

Salient Features:

- All residents of Odisha fulfilling the eligibility criteria can be beneficiaries of the Scheme. Female CB calves of the following categories are selected for the scheme.
- Progeny born out of Frozen semen artificial insemination done in Non-descript(ND)/graded/crossbred cows
- AI calves available with the MPCS members and farmers in the milk route/Intensive Dairy Zone.
- Progeny born from the elite cow owners covered under field performance recording programme(FPRP)

The farmers those who are not able to afford can be supported with the cattle feed for 2 years to ensure success of the AI programme. The calves during the early age i.e. from 1 to 8 months require de-worming and vaccination to protect from the contaminated diseases.

1. Consumption of Feed by a Female calf and its cost from 4 - 28 months

Month	Amount per day in Kgs	Total days	Quantity	Rate per Kg.	Amount in Rs.	Calf feed subsidy amount @ 50% (in Rs.)
4 to 6	1	60	60	15	900	450
6 to 8	1.25	60	75	15	1125	562.5
8 to 12	1.5	120	180	15	2700	1350
12 to 15	1.75	90	160	15	2400	1200
15 to 19	2	90	210	15	3150	1575
20 to 28	2.5	270	675	15	10125	5062.5
		Total:	1360		20400	10200

The total quantity of feed per calf from 4-28 months works out to 1360 Kg and the cost thereof is around 20400/- (Rs. 15/- per Kg). 50% of the compounded feed will be provided to the farmers. The assistance will be provided in form of kinds.

The subsidized calf feed cost per calf comes to - **Rs.10200/-**

2. De-worming Schedule of Calves:

All the calves will be dewormed as per the following schedule.

Age	Dose
Within 3 weeks	1 st Dose
3 rd month	2 nd dose
6 th month	3 rd Dose
12 th month	4 th Dose
18 th month	5 th Dose
24 th month	6 th Dose

The heifers will be vaccinated against the blood protozoan diseases, Theileriasis.

The cost of deworming and vaccination of each calf comes to approximately - **Rs.250/-**

3. Insurance of Calves

All cross bred heifer calves will be insured for three years by a nationalised insurance company and the premium amount will be borne out of the scheme

Insurance cost for 3 years -**Rs. 300/-**

4. Health Care

The department will provide the necessary health care services like preventive inoculation, treatment etc to the calves booked under the scheme.

Abstract of the cost of assistance per calf:

SI.No	Particulars	Cost in Rs.
1	Calf Feed	10200.00
2	Insurance	300.00
3	Deworming	250.00
4	Contingency	100.00
	Total	10850

Type of Calves to be inducted

As priority is given for the CB calves born from ND Cows, so there is no upper limit per farmer for the number of calves born out of ND cows whereas crossbred cows only one calf per farmer are covered under the scheme

Age of the calves

The calves are selected from 4 months to 8 months of age whereas the calf feed is supplied from 4 -28 months of age.

Calves to be assisted already selected during 2010-11 & 2011-12

As per the scheme, each calf gets assistance from 4 months to 28 months. The calves those were selected during last 2 years will be supported during the current year. During last 2 years 39,324 calves have been covered. The total requirement amounts to Rs.1550.39 lakhs. The detailed calculations are given below.

Budget Requirement for Calf rearing Scheme to cover old calves:

Sl No	A. Quantity of Feed Required and Cost of Feed Thereoff	
1	For the calves booked during the year 2010-11(1 st Year-19324 calves)	
	Feed required per Calf (24-28 Months) (Kgs)	337.5
	Feed required per Calf @50% subsidy (Kgs)	168.75
	Total feed required for 19324 calves (Kgs)	3260925
	Cost of Calf feed @ Rs.15/-per Kgs for 20000 (Rs.)	48913875
	Total requirement	Rs.489.14 lakhs
2	For the calves booked during the year 2011-12(2nd Year-20000 calves)	
	Feed required per Calf(12-24 Months) (Kgs)	707.5
	Feed required per Calf @50% subsidy(Kgs)	353.75
	Total feed required for 20,000 Calves(Kgs)	7075000
	Cost of Calf feed @ Rs.15/-per Kg for 20000 calves (Rs)	106125000
	Total requirement	Rs.1061.25 lakhs

Calves to be booked and funds required from 2012-13 to 2014-15:

The proposed project aims to cover 20000 female CB calves for each year from 2012-13 to 2014-15. During the year **2012-13**, an amount of Rs 472.50 lakhs will be required to meet the subsidised feed cost, insurance premium, and cost for deworming and contingencies for 20000(15,000+5000) calves in 2 quarters on realistic basis. The amount required to cover 15000 female CB calves for Insurance premium, deworming and Contingencies will be Rs.472.50 lakhs.

For the year 2013-2014

During the year 2013-14, 25000 new calves will be booked under the schemes in addition to the same no of calves during 12 -13. Therefore the requirement of feed will be for a period of 4- 12 months of age of the calves for 2013 -14 , 12 -24 months for the calves booked during 2012-13 and calves booked (approx. 4500 nos) during last quarter of 2011-12. The cost of Insurance premium, deworming and contingencies for the calves booked during 2013-14 will be same as in case of calves booked during 2012-13. Therefore the financial requirement during 2013-14 will be Rs. 2568.31 Lakhs (includes Feed cost for the calves booked during 12-13 and 2011-12)

For the year 2014-2015

During the year 2014-15 a third batch of 20000 calves will also be booked.

The financial outlay during this year includes feed cost for 24 to 28 months of the calves booked during 2012-13, 12 -28 months of the calves booked during 2013-14 and 4 -28 months for the calves booked during the year 2014-15. In addition the cost of insurance premium deworming and vaccination and contingencies for 20000 calves is also included in the funds required during 2014-15. Therefore, the fund required during 2014-15 is Rs 4243.75 Lakhs. The year wise requirement of funds under RKVY for implementation of the scheme is as follows.

Year wise Fund requirement (Rs in Lakhs)

Sl. No	Particulars	2012-13	2013-14	2014-15	Total
1	To assist 20,000 Female Cross Bred Calves in a year for three years.	472.5	1191.25 602.50	506.25 1567.50 2170 .00	6510.00
2	To assist the calves already selected and booked during 2010-11	489.14			489.14
3	To assist the calves already selected and booked during 2011-12	792.94	774.56		1567.50
	Total fund required	1754.58	2568.31	4243.75	8566.64

Benefits incurred out of the scheme

The scheme will help a number of farmers of the state. It has been experienced that-

- a) The farmers have been relieved out of the stress for maintaining their female calves to attain mother hood.
- b) It has been observed that many of the calves have already come to heat during the period of assistance resulting increase in number of AI in the State.
- c) The process has motivated other farmers to produce CB calves out of AI.
- d) Timely assistance to the calves in term of vaccination, deworming has reduced calf mortality born out of AI.
- e) The daily Milk procurement by OMFED is being increased gradually.

Hence, the proposed project may be approved and required funds may be placed in favour of the department for greater interest of a large number of farmers of the state.