**Lecture 3 Government of India Financial Assistance for Promotion of Micro Irrigation in India**

**3.1 Financial Assistance under National Mission on Micro Irrigation**

India is an agrarian country. Water management is of critical importance to Indian agriculture. While the irrigated area in the country has almost doubled since independence, it is believed that the irrigated area cannot exceed 50% of the cultivable area with the conventional methods of irrigation even if the irrigation potential is fully utilized. To address the judicious and improved methods / technologies for harnessing maximum benefits from available water resources to enhance crop productivity without affecting soil health. The scheme on Micro- Irrigation, which was launched during the year 2005-06, has been upscaled to be implemented as the **‘**National Mission on Micro-irrigation’ (NMMI)during XI Plan period.

The main objectives of NMMI are:

* To increase the area under micro-irrigation through improved technologies.
* To enhance the water use efficiency.
* To increase the productivity of the crops and farmers’ income.
* To establish convergence and synergy among ongoing Govt. programmes.
* To promote, develop and disseminate MI technology for agriculture or horticulture development with modern scientific knowledge.
* To create employment opportunities for skilled and unskilled person especially unemployed youth

 This is a Centrally Sponsored Scheme under which out of the total cost of the MI System, 40% will be borne by the Central Government, 10% by the State Government and the remaining 50% will be borne by the beneficiary, either through his/her own resources or soft loan from financial institutions. Assistance for beneficiary farmers will be for covering a maximum area of 5ha/ beneficiary.

At least 33% of the allocation is to be utilized for small, marginal and women farmers. The allocation to SC/ST farmers will be proportionate to their population in the district. Farmers who have already availed the benefit of subsidy can again avail subsidy after 10 years.

The assistance for MI demonstrations, to be taken in farms belonging to State/Central Governments, State Agricultural Universities (SAUs) and ICAR Institutions, progressive farmers and Non-Governmental Organizations (NGO)/Trusts, on their own land will be @ 75% of the cost for a maximum area of 0.5 ha per beneficiary, which will be met entirely by the Central Government.

Assistance will be available for both drip and sprinkler irrigation for wide spaced as well as close spaced crops. However, assistance for sprinkler irrigation system will be available only for those crops where drip irrigation is uneconomical. Assistance is also available for irrigation systems for protected cultivation including greenhouses, polyhouses and shadenet houses. Assistance is available for implementation of advanced technology like fertigation with fertilizer tank / venture systems, sand filters / media filters, hydrocyclone filters / sand separators and other different type of filters and valves required for MI system.

The Panchayati Raj Institutions (PRIs) are involved in selecting the beneficiaries. The scheme includes both drip and sprinkler irrigation. However, sprinkler irrigation will be applicable only for those crops where drip irrigation is uneconomical. There will be a strong HRD input for the farmers, field functionaries and other stake holders at different levels. Besides, this there is provision for be publicity campaigns, seminars/workshops at extensive locations to develop skills and improve awareness among farmers about importance of water conservation and management. The Precision Farming Development Centres (PFDCs) provide research and technical support for implementing the scheme. Supply of good quality system both for drip and sprinkler irrigation having BIS marking, proper after sales services to the satisfaction of the farmer is paramount.

At the National Level, the Executive Committee of NMMI reviews the progress of NMMI and approve the Annual Action Plans of States. At the State level, the State Micro-irrigation Committee (SMIC) woversees the implementation of the Mission programme in districts. The District Micro-irrigation Committee (DMIC) coordinates the implementation of NMMI programme at the District level. NCPAH coordinates and monitor the programme of NMMI in different States.

The scheme is implemented by an Implementing Agency (IA) appointed by the State Government, which will be the District Rural Development Agencies (DRDA) or any identified Agency, to whom funds will be released directly on the basis of approved district plans for each year.

The IA shall prepare the Annual Action Plan for the State on the basis of the district plans and get it forwarded by SMIC for approval of the Executive Committee (EC) of NMMI. Payment is made through RTGS to the IA who transfers funds to the identified districts. DMIC provides funds to the system suppliers through the farmers’ / beneficiaries’. Registration of System Manufacturers will be done by the SMIC for use in the Districts.

Micro-irrigation systems costs have been standardized upon which the subsidy amount is being calculated, as stated in Tables 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6.

**Table 3.1 Indicative cost of installing drip irrigation system for calculation of subsidy**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cost in Rs./ha | | | | | | | |
| Lateral Spacing (m x m) | 0.2 | 0.4 | 1 | 2 | 3 | 4 | 5 |
| 12 x 12 | 8057 | 13785 | 18820 | 29928 | 46467 | 57809 | 73611 |
| 100 x 10 | 8308 | 14277 | 20041 | 32323 | 50128 | 62787 | 79831 |
| 9 x 9 | 8490 | 14631 | 20900 | 34039 | 52704 | 66294 | 84219 |
| 8 x 8 | 8673 | 15088 | 22028 | 36217 | 56087 | 70893 | 89964 |
| 6 x 6 | 9492 | 16605 | 26551 | 44387 | 71715 | 86970 | 109129 |
| 5 x 5 | 10061 | 17977 | 30143 | 51438 | 74334 | 94465 | 126925 |
| 4 x 4 | 11177 | 18621 | 31793 | 55725 | 86926 | 113812 | 135459 |
| 3 x 3 | 12088 | 20048 | 36551 | 63269 | 97448 | 122553 | 153441 |
| 2.5 x 2.5 | 14939 | 27092 | 52230 | 95083 | 145227 | 203823 | 248954 |
| 2 x 2 | 18319 | 31616 | 63598 | 123441 | 179332 | 249134 | 305797 |
| B. Close spaced Crops | | | | | | | |
| 1.5 x 1.5 | 21514 | 35973 | 74437 | 141858 | 211855 | 292595 | 360002 |
| 2.5 x 0.6 | 15463 | 26791 | 54909 | 100906 | 154213 | 214153 | 262885 |
| 1.8 x 0.6 | 18807 | 32909 | 70086 | 132653 | 199684 | 271986 | 338705 |
| 1.2 x 0.6 | 24063 | 43816 | 97598 | 185565 | 2800886 | 378946 | 474070 |

**Table 3.2 Indicative cost of micro sprinkler and mini sprinkler irrigation system**

|  |  |  |
| --- | --- | --- |
| Cost in Rs | | |
| Area (ha) | Micro Sprinkler | Mini Sprinkler |
| Spacing of Sprinkler (m x m) | |
| 5 x 5 | 10 x 10 |
| 0.2 | 17019 | Not Feasible |
| 0.4 | 51245 | 35968 |
| 1 | 90070 | 74097 |
| 2 | 129830 | 139142 |
| 3 | 175315 | 211289 |
| 4 | 221628 | 271958 |
| 5 | 221628 | 333150 |

**Table 3.3 Indicative cost of drip irrigation/fogging/misting system under protected cultivation**

|  |  |  |  |
| --- | --- | --- | --- |
| Cost in Rs. per unit) | | | |
| **SN** | **Particulars** | **504 Sqm** | **100 Sqm** |
| 1. | Green House / Poly House  a)     High Cost  b)    Naturally Ventialted | 55,000 | 21,000 |
| 2. | Shadenet | 45,000 | 18,000 |

**Table 3.4 Indicative cost of portable sprinkler irrigation system**

|  |  |  |  |
| --- | --- | --- | --- |
| **Area** | **63 mm** | **75 mm** | **90 mm** |
| Up to 0.4 ha | 10399 | NA | NA |
| More Than 0.4 ha – 1 ha | 16993 | 19044 | NA |
| More Than1 ha – 2 ha | 24533 | 27280 | NA |
| More Than 2 ha – 3 ha | NA | NA | 36822 |
| More Than 3 ha – 4 ha | NA | NA | 46438 |
| More Than 4 ha – 5 ha | Na | NA | 52573 |

**Table 3.5 Indicative cost of semi-permanent sprinkler irrigation system**

|  |  |
| --- | --- |
| **Area** | **Cost (in Rs.)** |
| Up to 0.4 ha | 19615 |
| 0.4 ha – 1 ha | 31832 |
| 1 ha – 2 ha | 60699 |
| 2 ha – 3 ha | 81929 |
| 3 ha – 4 ha | 104689 |
| 4 ha – 5 ha | 127003 |

**Table 3.6 Indicative cost of large volume sprinklers (rain guns)**

|  |  |  |  |
| --- | --- | --- | --- |
| Cost in Rs. | | | |
| **Area** | **63 mm** | **75 mm** | **90 mm** |
| More Than 0.4 ha – 1 ha | 24940 | 30011 | NA |
| More Than 1.0 ha – 2 ha | NA | 38075 | NA |
| More Than 2.0 ha – 3 ha | NA | NA | 54112 |
| More Than 3.0 ha – 4 ha | NA | NA | 62720 |
| More Than 4.0 ha – 5 ha | NA | NA | 68878 |

(Source: Guidelines, NMMI)

The total cost of the scheme is being shared between Central Government, the State Government and the beneficiary either through his/her own resources or soft loan from financial institutions in the ratio of 40%, 10% and 50% respectively. Bankable schemes are being formulated for availing bank loans.

**3.2 Financial support from National Bank for Agriculture and Rural Development (NABARD)**

Broad guidelines for scheme formulation by banks for financing drip irrigation systems are available at NABARD. The loans are available to farmers from different banks, through NABARD. Some cooperative societies and IFFCO also provide finances required for the initial installation of the micro-irrigation system.

**3.3 Financial Assistance from National Horticulture Board (NHB)**

National Horticulture Board (NHB) also has a scheme to assist farmers in increasing the produce of horticultural crops. It also includes financial assistance for micro-irrigation. The pattern of assistance of NHB is credit linked back-ended subsidy @ 20% of the total project cost limited to Rs 25 lakh per project in general area and Rs 30.00 lakh in NE Region, Hilly and scheduled areas.

The terms and conditions of the assistance of NHB are as follows:

i) The assistance shall be available for projects covering area above four hectares (above 10 acres) in case of open field cultivation in general area and 5 acres in NE, hilly/scheduled area.

ii) Credit component as means of finance of the project should be term loan from banking or non-banking financial institutions and should be at least 35% (i.e. 15% more than the admissible rate of subsidy.)

iii) Projects shall be appraised to ensure and enable entrepreneur to incorporate essential hitech components in the form of planting material, plantation, irrigation, fertigation, vermicompost unit, precision farming, on farm PHM related infrastructure, GAP etc.; and to that extent, the project shall be integrated in nature.

iv) Normative cost of various components shall be prescribed by NHB.

v) NHB provides financial assistance for creating irrigation infrastructure for digging bore well to a maximum ceiling of Rs. 4.00 lakh per unit maximum upto two units.

vi) Expenses towards sprinkler system upto 10 Acres with maximum ceiling of 1.0 lakh for installation drip system upto 2.0 lakh.