Government of Himachal Pradesh
Department of Agriculture

OPERATIONAL GUIDELINES

FOR THE

IMPLEMENTATION

OF

KISAN BAGWAN SAMRIDHI YOJNA

(PART–II) 2010-2011

(DIVERSIFICATION OF AGRICULTURE THROUGH MICRO-IRRIGATION AND RELATED INFRASTRUCTURE)

IN

HIMACHAL PRADESH

INDEX

Operational guidelines for the implementation of Project on Diversification of Agriculture through Micro Irrigation and related infrastructure

(Kisan Bagwan Samridhi Yojna)
Part-II

1. Introduction:

Majority of the farmers in the State (84.5%) are small and marginal. Average size of land holding is 1.1 hectare. Chunk of arable lands i.e. more than 80% are rain fed. Farmers by and large grow cereals, pulses and oil seeds and farming is subsistence type. The productivity of crops is on the decline mainly due to frequent and long dry spells during the growing periods of different crops. There are serious limitations due to hilly topography to increase cropped area and intensification of cropping systems. Crop diversification has proved to be good solution to make small holdings viable. Large scale diversification has taken place in pockets where assured irrigation facilities are available. At places where farmers have developed water source individually are earning handsomely by growing cash crops. There is huge demand for vegetables grown in the State in domestic market and also in neighboring States.

Annual average rainfall in the Pradesh is about 1200 mm. Though rain received is very good, but the distribution is highly skewed. 80% of total rainfall is received during four months from June to September. Water harvesting and its judicious and economic use are key to enhance productivity of crops and to diversify the area under cash crops.

Hill soils by and large are light textured and depth of soil profile is shallow to medium. Water use efficiency is low (25-50%) primarily due to flood irrigation and low water holding capacity of soil. Conventional irrigation systems and methods of irrigation are not suitable for hilly areas as losses of precious water are enormous. The micro -irrigation systems are easy to install and delivery of water is controlled. These systems suit to the hilly topography and water use efficiency is more that 80%. Small and marginal farmers are economically poor and cannot afford to install costly irrigation systems which are suitable for them. Irrigation system includes availability of water for irrigation and its delivery to the crops to satisfy their water needs as per requirement.

Keeping in view all aspects of present farming situations and opportunities, the Department of Agriculture formulated a Project which includes augmentation of water sources and utilization of irrigation potential created through installation of micro irrigation systems suitable for different slopes in the Pradesh. The project was posed for funding to NABARD under RIDF-XIV with a total cost of 198.08 crore. The project has now been sanctioned with a phasing of 3 years i.e. 2009-10 to 2011-12. During the project period, 20,007 ha. area shall be brought under micro- irrigation systems. During 2009-10, about 4100 hectares command area has been covered under sprinkler irrigation and 20 hectares command area has been covered under Drip-Irrigation. During the year 2010-2011, command area of 8000hectares will be covered under sprinkler systems. Farmers can avail project assistance for minimum 0.16 hectare and for maximum 4 hectares command area. Since initial installation cost is high, therefore, project assistance is available to all the sections of the farming community to the extent of 80% for the installation of micro irrigation systems and 50% for the creation of water sources. Estimates and designs of micro irrigation systems is to be installed and water harvesting/creation of water potential structures have been prepared for the guidance of DNO/PIAs and farmers. Farmers can avail project assistance as per their needs and requirements.

Response and feedback received from the PIAs, DNOs, Companies and farmers, the operational guidelines for smooth implementation and execution of the project have been revised for the guidance of field functionaries, companies and farmers. With the successful implementation of the project, there is perceptive change in cropping pattern and yield of crops in areas where MI technology has been adopted by the farmers. It is therefore imperative that farmers in the state are educated about usefulness and expected outcome of this technology which not only appropriate for hilly areas but also take care to

economize precious input i.e. water. It is accordingly impressed upon all the stake holders to execute and implement the project as per operational guidelines and ensure that project benefits flow to the weaker section of farming community to the maximum extent.

2. OBJECTIVES:

1. Promotion of efficient irrigation systems for equitable water distribution.
2. Harvesting of rain water and its proper use for productive purposes.
3. Conservation of natural resources.
4. Significant increase in yields of food grain crops and diversion of area from cereal to cash crops.
5. Reduction in cost of production of crops and improvement in quality of produce.
6. Strengthening of existing integrated farming systems.
7. Efficient application and use of inputs.
8. Assured production of crops.
9. Increased production of green fodders for animals.

3. Project Components:

Components	No. of Units	Approved project cost (lacs)	Project Assistance (lacs)	Beneficiary's contribution (lacs)
A. Installation of Micro Irrigation systems				
Sprinkler	17262	7941.40	6353.13	1588.27
Drip	50	21.20	16.98	4.22
Total:	**17312**	**7962.60**	**6370.11**	**1592.49**
B. Creation of Water Sources				
Tanks	6510	4711.20	2355.60	2355.60
Low Lift system	500	625.00	312.50	312.50
Medium Lifts	500	1700.00	850.00	850.00
Shallow wells	500	550.00	275.00	275.00
Shallow Tube wells	490	980.00	490.00	490.00
Deep Tube wells	10	80.00	40.00	40.00
Pumping Machinery	7510	999.06	499.53	499.53
Total:	**16020**	**9645.26**	**4822.63**	**4822.63**
G. Total (A+B)	**33332**	**17607.86**	**11192.74**	**6415.12**
C. Farmers Sensitization/ contingency/ escalation etc.	-	2200.99	1431.18	-
Total:	**-**	**19808.85**	**12623.92**	**6415.12**

4. Project areas.

As per need of farming community, project would be implemented in all the districts of the Pradesh. District-wise and component-wise targets **(Annexure-A)** have been fixed. Indicative estimates for the guidance of project implementing agency and farmers have been prepared by considering all aspects like topography, soils, crops to be grown, for the construction and development of water sources for which project assistance is available. The same are enclosed as per **Annexure X_a, b_1,b_2** and **c**.

Project assistance is available for the installation of portable MI System in command area 0.16 hectares to 0.5 hectare and for semi-permanent and permanent MI Systems for more that 0.5 hectare to 4 hectares. The same is given as per **Annexure-VII**. Also detail of items with approved cost which would be

used for the installation of MI System irrespective of unit command area is given as per **Annexure VII$_a$**. For the convenience of PIA's and farmers, rates of extra components/items have been considered and approved and the same are given at **Annexure VII$_c$**.

5. Beneficiaries:

- All the farmers are eligible for availing assistance in their own farm land who intends to install micro irrigation system (sprinkler or drip) on their farm lands.
- Preference would be given to farmers growing crops under rain fed situations.
- Small and marginal farmers shall be given preference over medium and large farm holders.
- Preference for availing assistance would also be given to the farmers whose livelihood source is agriculture sector only.
- Neo-literate youths having farm land shall also be preferred.

6. Procedure to avail project assistance:

Farmers willing to install micro irrigation system with or without water source by availing project assistance shall submit an application with the concerned Sub Divisional Soil Conservation Officer i.e. Project Implementing Agency (PIA) on prescribed application form **(Annexure-I).** The prescribed application forms shall be available in all the offices of the Department at District, Soil Conservation Sub Division, Block level and Circle level. Farmers can submit applications to the Agriculture Extension Officer of the area, Agriculture Development Officer of the Soil Conservation Circle, Junior Engineer of Soil Conservation Section, Subject Matter Specialist in the Block and SDSCO at Sub Division level. For the facilitation of farmers, Department has empanelled capable and experienced companies as service providers for planning, designing and execution of micro-irrigation systems on farmers fields. List of these service providers along with addresses and telephone numbers is given as per Annexure**-VI.** The same is also provided on department's web site **www.hpagriculture.com.**

7. Role and Responsibility of Project Implementing Agency:

For execution of this project, Sub Divisional Soil Conservation Officer will be the project implementing agency. He will be assisted by a core team comprising of ADO, JE, AEO (Graduate/Post Graduates). He and his team shall be responsible for the following:

1. After the receipt of the application on prescribed form from the beneficiary, the same shall be entered in a register and a Sr. No. shall be assigned to that application and date of receipt of application shall be entered.
2. He and his team will visit the site to verify the feasibility as per demand within 10 days from the receipt of application and if found suitable and feasible, then farmers will be asked to prepare revenue papers of command area to be covered under micro-irrigation system and the report should include the verification of water source ,if already available and if not , detailed estimate with location of source shall be prepared by the PIA. The verification report regarding water source should clearly indicate type of water source with quality and quantity of water.
3. After inspection of site, PIA will forward the application to the D.N.O. i.e. Deputy Director of Agriculture within 3 days from the date of inspection to obtain administrative approval for the execution of project proposals where project cost is more than Rs.50, 000. The proposal is to be sent on prescribed format given at **Annexure –II.** For proposals having project cost less than

Rs.50000, administrative approval shall be accorded by the PIA within 10 days from date of receipt of feasibility report.

4. After receipt of administrative approval from the DNO, PIA will issue authorization letter in favour of beneficiaries to install M.I. system and for construction of water source /creation of water sources / water augmentation structures etc. as per site requirement. Necessary format for issuance of authorization is given at **Annexure-III.**

5. PIA and his core team will exercise 100% test check during various stages of execution of the project components which inter alia will include the following.

- After development of site for the construction of water resource development structure.
- After excavation of earth and at the time of laying of foundations.
- At the time of dumping of MI Components at the site.
- After completion of water source as per specifications provided in the project.
- After installation of MI system as per specifications provided in the guidelines i.e. whether the scheme is running properly or not. If yes then PIA shall give certificate of satisfaction..

6. PIA and his core team will be responsible for the preparation of estimates as per site requirement for construction of water sources and through registered companies registered to act as service providers for planning and designing, so that micro irrigation systems are installed as per site specific situations. For according administrative approvals and financial sanctions, indicative cost estimates provided can also be considered, but the evaluation is to be done on actual basis.

7. Will facilitate in signing of agreement between farmer and service provider. He and his team will help farmers in securing loan and will also educate farmers to avail facility of Kisan Credit Card. This will help farmers in procuring requisite inputs etc before and after the execution of the project components.

8. PIA will be responsible for proper maintenance of record beneficiary-wise as per prescribed format given at **Annexure-B.**

9. PIA and his core team shall be responsible to ensure quality of construction material used for the creation of durable assets. The officer who will record measurement will certify that material used for the installation of M.I. system and for construction of related infrastructure is as per approved specifications. Certificate should be based on actual verification of BIS markings on the material used. Measurements are required to be recorded within 7 days from the date of completion of the project components.

10. Claims duly verified by the ADO or JE or Graduate AEO will be cleared within 7 days by the PIA. The project assistance be worked out in accordance with the approved assistance **(Annexure VII ,VII$_a$, VII$_b$ and VIII)** . The rates for ISI & Non ISI components to be used in the installed M.I. systems should be as per **VII$_a$ & VII$_b$**. The cost of items, fixtures used in addition to the approved components is admissible for project assistance under item fittings and accessories, but the list of such items shall have to be provided by the companies along with rates. For any other additional items preferred by the farmers or in case for proper functioning of the system additional item is essentially required and if due to these the cost of the system is more than the approved unit cost then the same shall be paid by the beneficiary. Component-wise ISI specifications both for sprinkler and drip systems are attached as per **Annexure - X** . The terms and conditions agreed by the firms are also attached as per **Annexure –XII**. The indicative Bill of Quantity (BOQ) to be used for the evaluation of installed M.I. systems is attached as per **Annexure- XI**.

11. PIA will submit Project Completion Report (PCR) on the prescribed Performa to the District Nodal Officer timely after the completion/testing of the system.

12. PIA will submit reimbursement claims and progress report every month on the prescribed Performa to DNO & Directorate regularly.

13. PIA will obtain an affidavit from farmer after the project is sanctioned with an undertaking that he will not avail any financial assistance from and other source for the assets created with the project assistance available under this project and will utilize the assets created for at least five years **(Annexure-IV).**
14. PIA will facilitate the signing of the agreement (**Annexure- V)** and he or his representative will be one of the witnesses while agreement is signed between the farmer and the company.
15. PIA will also ensure that bank draft of amount equal to 20% of actual cost of MI system is handed over to the company at the time of signing of agreement.
16. PIA will facilitate the farmers to obtain bank loans by preparing project to secure loan for the installation of MI system.
17. The completion time for the construction of water storage tanks is 90 days and for low lift, medium lift, shallow wells , shallow bore wells and deep tube wells, the same will be 180 days . PIA will ensure that no M.I. system is sanctioned / installed without water source. If the farmer fail to complete the construction work of water source within the stipulated period, then one time notice to complete the structure within 15 days is to be given to beneficiary. If he fails to complete the construction work within this period, his sanction is to be cancelled and sanction to next in waiting list is to be accorded.
18. The completion period of 75 days is allowed to service provider/ company for installation of M.I. systems. If the company fails to install the systems within the stipulated period then the company is liable to refund the entire amount deposited with them as beneficiary share with 20% interest which shall be charged from the date of agreement . PIA is to ensure that the companies complete the job within stipulated period and in case of repeated defaulters, the PIA shall move the case to higher authority as per terms and conditions of the empanelment.

8. Role and responsibility of District Nodal Officer:

For smooth implementation of the project, Deputy Directors of 10 district shall be the Nodal Officer, District Agriculture Officer of Lahaul, Sub Divisional Soil Conservation officer Kinnaur, Assistant Project Officer Kaza will be the Nodal Officers as well as PIA's in their respective areas/ districts. Resident Commissioner Pangi and ADM, Bharmour will be the D.N.O's for these areas. DNO's in the district will be assisted by a core team comprising of District Agriculture Officer, Sub Divisional Soil Conservation Officer and ADO (Hqr.) in 10 Districts and in Tribal areas the team would be DAO/APO,/SDSCO, one ADO/graduate AEO and one JE.

1. After receipt of physical and financial targets for 2010-11, DNO's will convene a meeting of PIA's, Core Teams of District and Soil Cons Sub Divisions, SMSs/ADOs working in the Blocks and will make a presentation on operational guidelines of the project. Thereafter, he will formulate a comprehensive plan for the timely execution and completion of project components so as to achieve project targets in full. After formulation of action plan, he will convene a meeting of PIA's, Core Teams and service providers empanelled and will draw time schedule as per guidelines so that individual projects are executed timely and benefits start flowing to the farmers in real terms. The progress shall be evaluated on the basis of actual area coverage under micro irrigation and productivity enhancement. The component of water resource development and utilization is critical for the success of this project.
2. The DNO shall issue the administrative approval within 10 days after the receipt of proposal from PIA duly verified and recommended for the installation of micro irrigation system and creation of water source.
3. DNO will ensure that project activities are carried out in a time bound manner and expected results are obtained timely. All functionaries working at block level be advised

to assist PIA in obtaining application from beneficiaries, spot inspection and test checking of progress.

4. Will organize awareness camps for farmers at focal points and will educate the farmers about the project details. During the awareness campaigns, the willing farmers be provided the prescribed application forms and necessary guidance.
5. After the completion of sub projects DNO will submit the compiled PCR's to the Directorate within 15 days after receiving these from PIAs for further submission to the NABARD.
6. The District core team will exercise at least 25% test check and will maintain close linkage with credit sanctioning institutions.
7. Monitor and review the physical and financial progress on monthly basis.
8. Training to farmers at KVK/University about use and maintenance of M.I. systems and crop production technology under irrigated conditions.

9. General:

Participatory and pragmatic approach with complete transparency would determine the success of the project. Technical knowhow on all the aspects of micro irrigation systems will be provided to the farmers so that they can utilize the durable assets created with project assistance in an efficient manner. It will be the responsibility of DNO and PIA to create such awareness amongst farmers.

I Project Assistance

The unit costs for the installation of Micro Irrigation systems i.e. 0.50 to 4.0 hect with sprinkler and 0.40 hect. with drip have been approved. Project assistance @ 80% is available for the installation of M.I. system and assistance to the extent of 50% of approved or actual cost whichever is less is available for the creation and augmentation of water sources subject to maximum ceilings. Project assistance shall be released to the beneficiaries directly or through bank in case farmer avail loan. The assistance for the installation of micro irrigation system can be released to the company after obtaining satisfactory report from core team and farmers. An affidavit to this effect that the payment may be released to the concerned company directly be obtained from the beneficiaries. Project assistance admissible for different project components is given below:

(i) Planning, designing and installation of Micro Irrigation Systems:

After taking into consideration the soil type, crops to be grown and their water requirement, the service provider will prepare a survey sheet and undertake the process of planning, designing and install the MI System in the command area for which farmer has submitted application and obtained sanction. For this Sub project (sprinkler irrigation system)component the farmer is eligible for project assistance(80%) on approved unit cost during 2010-2011 and fixed for command areas of 0.5, 1, 2, 3 and 4 hectares. The approved unit cost is given at **Annexure VIIa**. For calculation of project assistance of actual area covered under MI system for which rates have not been given the method of calculation and formula is given at **Annexure-VIII**. For drip irrigation unit area is 0.4 hect and unit cost would be Rs.42,500(**Annexure-VIIb**). The 80% project assistance would be Rs.34,000/-.

For introduction and promotion of MI technology it has been decided that during 2010-2011 project assistance(80%) shall be admissible for portable systems only upto 0.5 hectare area. For command areas in excess of 0.5 hectares and upto 4 hectares semi-permanent and permanent installed sprinkler systems would be eligible for project assistance(80%). Since holding in the Pradesh are small

and scattered in different parcels therefore it is advised that a combined scheme to a group of farmers can be formulated and project assistance can be released to individual farmer on the basis of commend area of that farmer. However in case of individual farmer the project can be sanctioned by taking into consideration his land holding in two to 3 parcels but in this case the cost of extra main or sub-main pipelines shall be borne by the beneficiary. Assistance under this project would be available for land holdings developed for growing crops like vegetables, cereals, pulses, oilseeds, potato, spices and tea.

(ii) For construction of water storage structures and augmentation of Water Sources:

Farmers can avail assistance for construction of water storage structures having capacity of 20 cum; 50 cum; 75 cum; 125 cum; 150 cum; 200 cum; 250 cum; 300 cum and 600 cum. Estimates for different type of water storage structures have been prepared and provided for the guidance of PIA/DNO and farmers (**Annexure X, b_1, b_2, c).** Size of water storage structure will depend on two factors:

(a) Command area and water requirement of crops grown in that command area.
(b) The water source i.e. Whether the water source is rain water, perennial water source or ground water.

The PIA will decide and recommend water resource developmentstructure as per actual site requirement. For that, PIA will prepare detailed estimates .Assistance for these water storage structures would be 50% of the actual cost of construction with maximum limit given as under. Measurement of structures and its costing be done as per schedule rates or analyzed rates whichever is found suitable. Estimates already provided are based on analyzed rates. These structures will be available to only those farmers who opt to install Micro-Irrigation system and PIA will recommend these structures as per actual water requirement of the crops and feasibility at the site. Single water source can also be shared by the beneficiaries but project assistance shall be available to individual beneficiary only and other beneficiaries shall have to give undertaking in this regard on judicial paper to the effect that they would share the common water source and would pay the recurring cost on mutually agreed terms and conditions. PIAs and their core teams must ensure that assistance approved and allowed for water resource development structures in small command areas from 0.16 hect. to 0.5 hect. should strictly be proportionate to the actual water requirement and that should be based on actual computation of water requirement and source of water.

- 50% assistance with maximum limit of Rs.8000/- only for katcha pond having 50 cum. Capacity.
- 50% assistance with maximum limit of Rs.31000/- only for katcha pond having 300 cum. Capacity.
- 50% assistance with maximum limit of Rs.54000/- only for katcha pond having 600 cum. Capacity.
- 50% assistance with maximum limit of Rs.13000/- only for pond with poly lining having 50 cum. capacity.
- 50% assistance with maximum limit of Rs.27000/- only for pond with poly lining having 150 cum. capacity.
- 50% assistance with maximum limit of Rs.45000/- only for pond with poly lining having 300 cum. capacity.
- 50% assistance with maximum limit of Rs.22000/- only for pond with poly & brick lining having 50 cum. capacity.
- 50% assistance with maximum limit of Rs.46000/- only for pond with poly & brick lining having 150 cum. capacity.
- 50% assistance with maximum limit of Rs.77000/- only for pond with poly & brick lining having 300 cum. capacity.
- 50% assistance with maximum limit of Rs.36000/- only for RCC water storage tank having 20 cum. capacity.
- 50% assistance with maximum limit of Rs.71000/- only for RCC water storage tank having 50 cum. capacity.
- 50% assistance with maximum limit of Rs.101000/- only for RCC water storage tank having 75 cum. capacity.
- 50% assistance with maximum limit of Rs.148000/- only for only for RCC water storage tank having 125 cum. capacity.
- 50% assistance with maximum limit of Rs.218000/- only for RCC water storage tank having 200 cum. capacity.
- 50% assistance with maximum limit of Rs.245000/- only for RCC water storage tank having 250 cum. capacity.
- 50% assistance is available for lifting water with electric motor up to 3 HP and 7.5 HP and above i.e. low and medium lift with maximum limit of assistance up to Rs.62500 and Rs.170000/-respectively. Small lifts will be

considered up to 3 HP and medium lifts above 3 HP. Pumping machinery above 7.5HP is also allowed ,but if extra cost over and above the maximum financial ceilings is involved, then the same will be borne by the farmer. Diesel/kerosin operated pumping machinery also allowed subject to maximum financial ceilings projected against electric operated machinery of that H.P.ratings.

- 50% assistance for shallow bore wells of appropriate depth and diameter(minimum depth 35 meter and minimum diameter 125mm) for these maximum limit of assistance would be Rs.100000/- only (Rupees One lakh only). For deep bore wells ,the depth range will be from 35 to 75 meters with minimum bore dia of 200mm . The depth of these bore wells can be more than 70 meters also and dia of bore well can be more than 200mm ,but financial ceilings will remain the same i.e. Rs.4.00Lakh Both M.S. Pipes and P.V.C. Pipes for bore well assembly can be used for these bore wells. Indicative estimates of all possible drilling methods have been prepared and already provided. While evaluating these structures; expenditure on SOP and Pump House can also be considered. The expenditure on pumping machinery can also be included henceforth as provision of these in the project document is less. Demand for construction of bore wells is more, therefore in view of more demand assistance for bore wells will only be allowed on community basis, i.e. for more than three farmers and not to individual farmer. Minimum command area under these bore wells will not be less than2 hectares. For sanctioning of deep bore wells, the PIAs through their DNOs will refer the cases to directorate along with compete estimate and report regarding feasibility of these structures. The feasibility reports should be from local hydro-logist of I&PH department or Central Ground Water Board. The beneficiaries should give undertaking on judicial paper to this effect that they will share and maintain the created water source on mutually agreed terms and conditions. This affidavit should be attested by the Notary.
- 50% assistance for shallow wells of appropriate depth and diameter(minimum depth 8 meter and minimum diameter 2.45 meter) with maximum limit of assistance would be Rs.55000/- only.
- 50% assistance is available for pumping machinery of 1HP to 15HP with maximum limit of different HP ceilings provided separately as per **(Annexure-IX).**

It is imperative that water being community resource, therefore, when it is exploited by constructing shallow or bore well or lifted with pumping machinery then preferably it should be utilized by a group of farmers. However, there is no restriction for individual farmers also.

In case a community water source is created and is to be used by a group of farmers then a common affidavit that it is a common source be obtained to minimize disputes if any in future. It is further suggested that the water resource to be created under this project can also be utilized for providing irrigation for poly houses. Hence this component be linked for the execution of both the projects i.e. poly house constructions and M.I. system. Also assistance available for pumping machinery can be dovetailed for both the projects.

10. Monitoring and Evaluation:

Concurrent and post project monitoring and evaluation of project is very important. This would help in bringing about need based modifications in the operational modalities of the project and would provide guidance with regard to facilitation required for the success of the project both to the beneficiaries and implementing department. It would be done by the;

- State Level Committee constituted for the smooth implementation of the project. (Kisan Bagwan Samridhi Yojna).
- By the funding agency i.e. NABARD
- State level project implementation unit, D.N.O. and PIA.
- By an independent agency having sufficient experience and knowledge of the project if required.

11. Facilitation to the farmers:

- Models of Micro Irrigation systems suitable for different agro-climatic conditions have been prepared and are available with DNO, PIA and other sub offices of the department i.e. at district level and block level.
- For the installation of micro irrigation system specifications and rates of different components have been prepared and finalized for their guidance.
- For planning, designing and execution of M.I. Systems experienced companies have been registered and authorized to act as service provider to them.
- Training regarding M.I. technology and crop production shall be given free of cost to the farmers who would install and use MI Systems.
- Farmers are at liberty to execute the project component at their own. For guidance of the farmers, detailed estimates have been prepared and specifications of construction material have also been approved.
- For availing bank loan, facilitation shall be provided by the Department for preparation of bank loan cases.
- Research and development support shall be provided by the Universities during the project implementation and post project period.
- All prescribed forms required by the farmers i.e. application form, agreement form etc shall be provided to farmers free of cost.

12. Expected Outcome:

- 20,007 hectares area shall be brought under micro-irrigation.
- Self employment to about 17,000 people, besides indirect employment to about 4,000 people of skilled and semi skilled nature.
- Conservation and efficient use of land and water.
- Increased area coverage under assured irrigation.
- Increase in production and productivity of vegetables and other crops.

Annexure-I

सेवा में

उप कृषि निदेषक / जिला कृषि अधिकारी/
सहायक परियोजना अधिकारी/ उप मण्डलीय भू–संरक्षण अधिकारी,
.....जिला.....हि0 प्र0 ।

विषय : पंडित दीन दयाल किसान बागवान समृद्धि योजना के अर्न्तगत सहायता हेतु प्रार्थना पत्र ।

श्रीमान जी,

मैं.....सपुत्र/सपुत्री/पत्नी श्री.....गांव.....
.....डाकघर.....तहसील.....जिला.....
.....हिमाचल प्रदेष का स्थाई निवासी हूॅ । मेरी किसान पास बुक के अनुसार.....मलकीयत भूमी है जिसमें से .....भूमि फसलों के अर्न्तगत है । मैं उपरोक्त योजना के अर्न्तगत उपलब्ध वितीय सहायता द्वारा स्प्रिंकलर/ड्रिप सिंचाई योजना का निर्माण करना चाहता हूॅ । सिंचाई हेतु मेरे पास साधन उपलब्ध है/नहीं है । अतः मैं इसके लिए भी आवष्यक सहायता चाहता हूॅ/नहीं चाहता हूॅ । मैं अपने परिवार एंव सम्बन्धित विवरण निम्न प्रकार से दे रहा हूॅ ।

1.	पूरा पता			
	दूरभाष न0			
2.	परिवार के कुल सदस्य	नाम	आयु	शैक्षणिक योग्यता
	पुरूष			
	स्त्रियां			
	बच्चे			
3.	क्या प्रार्थी अनुसूचित जाति/ अनुसूचित जनजाति से सम्बन्ध रखता है हां/ नहीं			
4	क्या प्रार्थी गरीबी रेखा के नीचे { बी.पी.एल}से सम्बन्ध रखता है हां/ नहीं			
5.	परिवार के सदस्य जो सरकारी एंव गैर सरकारी नौकरी कर रहे हैं ।			
6.	कुल भूमि ;किसान पास बुक के अनुसार			
	1.फसलों के अर्न्तगत क्षेत्र			
	{क} सिंचित क्षेत्र			
	{ख} असिंचित क्षेत्र			
	{ग} अन्य घासनी इत्यादि			
7.	पानी का स्त्रोत यदि उपलब्ध है ।			
8.	असिंचित क्षेत्र जहां स्प्रिंक्लर या ड्रिप लगााना है ;है0/ बीघा			
	{क} इस क्षेत्र में वर्तमान में लगाई जा रही फसलों का ब्यौरा ।			
	फसल का नाम			
	क्षेत्रफल			
	{ख} सिंचाई के बाद लगाई जा रही फसलों का ब्यौरा			
	फसल का नाम			
	क्षेत्रफल			
8.	योजना के अर्न्तगत वितीय सहायता निम्न 1, 2, 3, मदों के बारे में स्पष्ट करें ।			
	1. स्प्रिंकलर के निर्माण हेतु सेवा उपलब्ध करवाने वाली कम्पनी का नाम व पता ।			
	2. ड्रिप के निर्माण हेतु सेवा उपलब्ध करवाने वाली कम्पनी का नाम व पता ।			
	3. सिंचाई सुविधा हेतु टैंक, कुंआ, बोर वैल, पम्प यूनिट के निर्माण अथवा जल उठाऊ योजना के लिए ।			
9.	बैंक से ऋण लेना चाहता हूॅ या नहीं । यदि हां तो बैंक का नाम, पूरा पता			

उपर दी गई सूचना पूर्ण रूप से ठीक है तथा मैं योजना में दिए गए दिषा– निर्देषो के अनुसार कार्य करने के लिए तैयार हूॅ । अतः आपसे अनुरोध करता हूॅ कि मुझे कमांक 9 के अर्न्तगत दर्षाये गए मदों हेतू वित्तीय सहायता की स्वीकृति प्रदान की जाये।

भवदीय

किसान के हस्ताक्षर.....
पूरा पता.....
टैलीफोन/मोबाईल न0.....

Annexure-II

Format to be filled in by the PIA for submission to District Nodal Officer for obtaining Administrative Approval of the project proposal.

1.	Date of receipt of Application	
2.	Date of spot inspection	
3.	Category of farmers (SF/MF/Big from SC/ST/Gen./BPL)	
4.	Feasibility report.	
	Micro Irrigation	
A.	**Sprinkler System** Name & contact No of firm contracted for installation of MI System.	
	Area to be covered (Hectares.)	
	Estimated cost of MI System to be installed.	
	Amount of Assistance	
	Amount of Beneficiary Share.	
B.	**Drip System** Name & contact No of firm contracted for installation of MI System.	
	Area to be covered in hectares.	
	Estimated cost of installation of MI System in an unit area as per B .	
	Amount of Assistance.	
	Amount of Beneficiary Share.	
5. (A)	Feasibility & requirement of water potential as per specifications given in project document/operational guidelines.	
	Water storage structure (specify capacity in cum or liter/sec.)	
	Katchha Pond type Poly lined (---------- Cum.)	
	Poly lined with bricks (-------Cum.)	
	Stone masonry (---------- Cum.)	
	R.C.C (----------Cum.)	
	Shallow well (----------Cum.)	
	Bore Well (Expected Discharge in LPS. & Depth)	
	Lifts (small or medium) (Total Head, Discharge & H.P. of Pumping System)	
B.	Estimate of the sources to be created as per 5A	
	Amount of assistance.	
C.	Requirement of pumping unit in case of shallow and Bore wells (specify purpose & type of pumping unit)	
	Cost	
	Amount of assistance	

6.	Recommendation of PIA to DNO for Administrative Approval.				
	Total estimated cost of Micro Irrigation				
	Eligible cost				
	Project share				
	Beneficiary share				
7(A)	Total Eligible Project cost of all recommended project components	Project Cost			
		M.I. System		Water Source	Pumping Unit
		A)			
		B)			
		Sub Tt.			
		Total Cost (M.I. System + Water Source + Pumping Unit)=			
7(B)	Total recommended project assistance	M.I. System (80%)		Water Source (50%)	Pumping Unit (50%)
		A)			
		B)			
		Sub Total			
		Total Cost (M.I. System + Water Source + Pumping Unit)=			
8 (A)	Mode of payment of project assistance				
	➢ Directly to the beneficiary (as per guidelines)				
	➢ Through bank (to be specified) in case Beneficiary willing to avail credit facility (Full Name & Address of Bank)				
8(B)	Beneficiary would contribute his share as per procedure given in the guidelines.				

1. Certified that above details are based on spot inspection and information furnished by the beneficiary.
2. Certified that the undertaking from beneficiary shall be obtained on affidavit as per guidelines **Annexure-IV** after the issue of administrative approval and before the issue of work order or the issuance of authorization based on above from Sr. No. 1 to 8B.

Submitted to the DDA- Cum- District Nodal Officer for favour of perusal and further necessary action along with necessary estimates and documents.

Sub Divisional Soil Cons. Officer cum PIA, Sub–Division _____Distt._____

Annexure: III

To

Shri_____
S/O Shri_____
Resident of village_____
P.O._____Tehsil_____
Distt._____H.P.

Subject : Authorization for installation of Micro Irrigation system/creation of water source.

Sir,

Please refer to your application dated_____and recommendations of PIA received vide letter No._____ dated_____.

You are hereby authorized to undertake the followings as per specifications given in the guidelines issued by the Govt. vide letter No._____ dated_____.

1. Construction of Micro-Irrigation System (_____) having irrigated area (_____Hect.) with an estimated cost of Rs._____
(Rupees_____) only through company/service provider M/S _____ empanelled for this purpose vide letter No._____dated_____
2. For the construction of Tank/Well/Bore well/lift (capacity)/ pumping unit having capacity_____ _____cu.m /LPS with an estimated cost of Rs._____
(Rupees_____)only as per estimated cost prepared and submitted by PIA after spot inspection.

The above authorization is subject to the following terms and conditions:

1. Eligibility of assistance for (1) and (2) components would be 80% and 50% respectively subject to actual evaluation and maximum ceilings. The measurements are to be recorded by the PIA or his authorized representative.
2. The completion time for water storage tanks will be 90 days and for small lifts, Medium lifts , shallow wells , shallow bore wells and deep bore wells will be 180 days, failing which this authorization will be cancelled.
3. For any deviation from the given/ approved specifications with regard to constructions material and design etc. you will be liable for the same and the same may lead to forfeiture of assistance available under the scheme .
4. 10% variation in the sanctioned command area is allowed depending upon the site for which revised sanction is not required.
5. Project assistance shall be allowed for approved components and CCA covered.

6. Before undertaking constructions work, you have to submit an affidavit on the prescribed form **(copy enclosed)**

7. Before assigning work to the company/service provider, you will sign an agreement with the company/service provider and will comply with the agreed terms and conditions especially with regard to remittance of payments on the agreed form annexed in the guidelines . **(copy enclosed).**
8. You will also have to carry the material at your own cost from motorable pucca/ katchha road head.
9. Facilitation of stay arrangements for the staff/workers of the company is expected for which you may charge nominal amount in mutual agreement.
10. For the execution of civil works (Excavation of drain and channel and C. Conc. work etc.) required for installation of micro-irrigation system, estimates have been prepared. You will have the choice to do the civil work yourself and in that case 20% advance to be provided to the service provider will be less which will be equal to the amount involved for civil work. You may get the civil works executed through service providers as per mutual agreement.
11. You will have to deposit 20% amount of the sanctioned amount under MI component as beneficiary share with the PIA /Company in the shape of bank draft at the time of signing of agreement.
12. You will have to make arrangement for electricity and water at the site.
13. You will have to make payments to the companies for optional and additional items, if desired by you.

District Nodal Officer cum
Deputy Director of Agriculture,
Distt._____.H.P.

Copy forwarded to :

1. The PIA cum Sub Divisional Soil Cons. Officer ,Sub –Division _____Distt._____H.P.
2. The Manager,_____Branch_____
   P.O._____Tehsil_____Distt._____H.P.
3. The Company contracted by the farmer for the execution of Micro-Irrigation.

District Nodal Officer cum
Deputy Director of Agriculture,
Distt._____.H.P.

Annexure –IV

Undertaking to be given by the beneficiary in the shape of affidavit to be attested by the 1st class Magistrate/ Notary (After receiving the sanction from DNO.)

I/We_____

S/O_____R/O_____

Hereby undertake the following.

1. That I have received approval for the installation of Micro-Irrigation systems (_____Hect.) and for the creation of water source i.e. tank/bore well/well/lift/pumping unit and I am eligible to receive project Assistance amounting to Rs._____after the creation of infrastructure mentioned above.
2. The I will utilize and maintain the infrastructure created through project assistance for a period of minimum of five years.
3. That I will use the Micro-irrigation system for raising vegetable and other suitable crops.
4. That I have not availed any assistance for the creation of same infrastructure as approved as per Sr. No. 1 above.
5. That the contents of my application submitted to the Agriculture Department for sanction of project assistance under Kisan Bagwan Samridhi Yojna- Part -II are correct and no part of it is wrong and nothing has been concealed there from.
6. That I will part with my share (20%) for the installation of infrastructure (Micro irrigation) at the time of signing of agreement against sanctioned amount of these components which have been approved vide letter No._____dated _____by the Distt. Nodal Officer (Dy. Director of Agriculture /Distt. Agriculture Officer and Assistant Project Officer) / PIA (SDSCO) as per terms and conditions laid down for the operationalization of the scheme.
7. That I will bear the carriage charges of construction material from the pucca or Katchha road head to the site.
8. That I will make arrangement for electricity and water etc .at the site.
9. That I will facilitate for making stay arrangements of the labour who will be involved in the installation of these structures.
10. That I will complete the water source within the stipulated / fixed time schedule of 90 days for storage tanks and 180 days for small, medium lifts, shallow wells , shallow and deep bore wells.

I further undertake that in the event of departure from the above i.e. Sr. No. 1 to 10, I shall be liable to refund the whole or part of the project assistance as the case be to the project sanctioning authority i.e. Distt. Nodal Officer/PIA(SDSCO) ----------H.P..

Deponent

Verification.

I the above named deponent do hereby solemnly admit and verify that the contents of the above affidavit are true and correct and no part of it is false and nothing material has been concealed there from.

Verified at_____on this _____day of _____2009.

Deponent

Note: **To be attested by 1st class Magistrate / Notary.**

Annexure- V

AGREEMENT BETWEEN FARMER AND ELIGIBLE FIRM / COMPANY (SERVICE PROVIDER) FOR THE SURVEY,PLANNING DESIGNING AND INSTALLATION OF MICRO-IRRIGATION SYSYTEM ON FARMERS FIELDS UNDER KISAN BAGWAN SAMRIDHI YOJNA-PART –II.

(On judicial paper to be attested by 1st class Magistrate/ Notary)

This agreement made this _____ day of _____ between Shri/Smt. _____ R/O _____(herein after called the farmer or the first party) and Shri _____ S/O Sh._____ R/O _____ (hereinafter called the service provider or 2nd party . He can be a proprietor of the firm/ company or authorized representative duly authorized by the firm /company to sign and enter into an agreement).It is hereby agreed between the parties as follows:

The parties hereby agreed to undertake the following:

(1) The farmer will provide land for installation of micro-irrigation system and shall provide water source for installation and operationalization of micro-irrigation system for irrigating the crops to be grown in that piece of land. The land will be cleared of bushes etc and made fit for installation of micro-irrigation systems by the first party.

(2) The farmer will accept cost estimates, design of micro-irrigation systems and will fix suitable time schedule for the installation/construction of infrastructure.

(3) The second party approved by the Govt. will arrange specified construction material and will execute the work to the best satisfaction of first party within 75 days from the date of signing of the agreement.

(4) The first party will select the model and design of micro-irrigation systems and will provide cheque / draft to the selected company equal to 20% of the construction cost as beneficiary share at the time of signing this agreement.

(5) The service provider/ company will provide the material up to road head point Kucha or Pucca and any head load will be borne by the beneficiary.

(6) Before execution, the farmer will inspect the material and ask SDSCO of the sub-division i.e. PIA to inspect and verify the specifications of construction material.

(7) The service provider will execute the construction work of micro-irrigation system to the satisfaction of the farmer/PIA.

(8) In case of default/deviation from the agreed terms and conditions, the parties concerned will be liable for the following:

a. Loss accrued to the first party by way of non installation of irrigation system within 75 days, second party will be liable to refund the entire amount with 20% interest from the date of deposit of this amount. In case there is any construction defect or non specified

construction material is used, then second party would remove the defect and replace the material at his own cost.

b. First party shall have to sign an agreement with the service provider of his choice within 15 days from the receipt of sanction from DNO/PIA.

c. The execution of civil works will be decided mutually by both the parties.

In witness whereof the said _____ and _____ have hereto respectively signed this agreement on the day year first hereinabove written.

Signature

Witness

1._____(PIA or his representative)

Farmer (First party)

2._____(Local person)

Company (Service Provider)

ANNEXURE-VI

LIST OF EMPANELLED COMPANIES

Sr. No.	Name and Address of Company	Fax No.	Telephone No.
1.	Himalayan Plastics Limited,9& 10 Industrial Estate, Chambaghat, Solan -173213 (H.P.) India.	01792-224367	01792-230127 E.Mail: himalyapipes@sancharnet.in
2.	Netafim Irrigation India Pvt. Ltd. S1,S10, Plot No.16, Pankaj, Arcade , Sector -5, Dwarka, New Delhi. 110075.	02667-264600	+919725014978/79/80, 09971124914
3.	Harvell Agua India Pvt. Ltd. 301-304, Meghdoot-94, Nehru Palace, New Delhi-110019.	+91-11-26464819	+91-11-26485365, 26413370,01905-241986 E.Mail: info@harvel.in and mandi@harvel.in
4.	Jain Irrigation System Ltd. Jain Plastic Park, PO Box-72, NH-6, Jalgaon -425001, Maharashtra.	0257-2258111	0257-2258011 E. Mail: jisl@jains.com
5.	Swati Storewell Pvt. Ltd.,44& 45, Industrial Area , Sector –I, Parwanoo -173230 (H.P.)	01792-232770	01792-232570 ,232863
6.	EPC, Industries Ltd. H-109 , MIDC Ambad, Nashik -422010 , Maharashtra , India.	0253-2382975	0253-2381081,82,83 E.Mail: epcind@vsnl.com
7.	Finolex Plasson Industries Limited , Plot No.399, URSE,Taluka Maval , Distt. Pune 410506, India.	02114-237044	02114-237045/6/7/8 E-Mail :finolexplasson@fpil.in
8.	M/S Premier Irrigation Adritec, Pvt. Ltd.H.O. 17/1-C , Alipore Road, Kolkatta - 700027	+913324797626	+913324797455/5155/9530 E. Mail: sales@pial.in
9.	Nimbus Industries , G-9C, Kabir Marg, Bani Park , Jaipur,302016.		0141-4028496, M-09001999373
10.	M/S Chemiplast Industries, 55-57, Industrial Area, Sector -1, Parwanoo. H.P.	01792-232770	01792-232570&232863
11.	M/S Parixit Industries Ltd. 2021, Gupta Arcade, Shresta Vihar, DELHI -92	079-66318125	079-66318121-24, 09910885218, E.Mail: aksaxena@prixit.com

Annexure-VII

Unit –wise approved rates for surveying ,planning, designing and installation of Micro-Irrigation Systems under Kisan Bagwan Samridhi Yojna –Part –II i.e. Project for Diversification of Agriculture through Micro-Irrigation and Other Related Infra-Structure on Individual farmers fields.

A) Sprinkler Irrigation System

Sr.No.	Command Area (to be covered under irrigation) in hect.	Approved Rates per Unit	Project Assistance (80%)	Beneficiary Share (20%)
1.	**2.**	**3.**	**4.**	**5.**
1.	0.50	17375	13900	3475
2.	1.00	37000	29600	7400
3.	2.00	73860	59088	14722
4.	3.00	109650	87720	21930
5.	4.00	159200	127360	31840

B(Drip Irrigation System)

Sr.No.	Command Area (to be covered under irrigation) in hect.	Approved Rates per Unit	Project Assistance (80%)	Beneficiary Share (20%)
1.	**2.**	**3.**	**4.**	**5.**
1.	0.40	42500	34000	8500

- **Optional items for Sprinkler System for which additional expenditure, if any shall be borne by the farmers. The companies intending to fix special type of these fixtures as per farmers demand will have to get rates authenticated from the directorate.**

1) Screen Filters/Disc Filters/ Media Filters of different capacities for which rates have not been approved.
2) Fertigation Tanks/Equipments.
3) Rain guns of different capacity for which rates have not been approved.
4) Pressure gauges for which rates have not been approved.
5) Use of G.I./M.S. pipe for Semi-Permanent/Permanent systems.
6) Pumping Units of different capacities.
7) Any other items for which rates have not been approved.

Note :- If the above optional items can be fixed within the approved unit rates ,then the same shall be considered for release of assistance.

Annexure-VII-a

Sl. No		Name of System Components	Raw Material Used	ISI Code	Speci./Wt. (Kg/Mtr.)	Unit	Approved Rates
1		2	3	4	5	6	7
1		**HDPE PIPE FOR MAIN & SUB MAIN LINE FOR SEMI PERMANENT AND PERMANENT SYSTEM**					
	1	40 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.251	Rmt	31.00
	2	40 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.340	Rmt	42.00
	3	40 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.434	Rmt	54.00
	4	40 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.514	Rmt	64.00
	5	50 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.378	Rmt	47.00
	6	50 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.53	Rmt	66.00
	7	50 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.673	Rmt	83.00
	8	50 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.797	Rmt	98.00
	9	63 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.586	Rmt	72.00
	10	63 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.835	Rmt	103.00
	11	63 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.062	Rmt	131.00
	12	63 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.249	Rmt	154.00
	13	75 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	0.836	Rmt	103.00
	14	75 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.191	Rmt	147.00
	15	75 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.5	Rmt	185.00
	16	75 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.783	Rmt	220.00
	17	90 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.197	Rmt	148.00
	18	90 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.695	Rmt	209.00
	19	90 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	2.144	Rmt	264.00
	20	90 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	2.539	Rmt	313.00
	21	110 mm X 4 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	1.793	Rmt	221.00
	22	110 mm X 6 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	2.518	Rmt	310.00
	23	110 mm X 8 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	3.178	Rmt	391.00
	24	110 mm X 10 Kg/cm2	HDPE , PE-63	IS: 4984 : 1995	3.817	Rmt	470.00
	25	40 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995		Rmt	37.95
	26	40 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.288	Rmt	36.00
	27	40 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.36	Rmt	45.00
	28	40 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.434	Rmt	54.00
	29	50 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.365	Rmt	45.00
	30	50 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.445	Rmt	55.00
	31	50 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.568	Rmt	70.00
	32	50 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.673	Rmt	98.90
	33	63 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.5	Rmt	71.40
	34	63 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.692	Rmt	86.00
	35	63 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.883	Rmt	109.00

	36	63 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.062	Rmt	131.00
	37	75 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.683	Rmt	84.00
	38	75 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.987	Rmt	122.00
	39	75 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.249	Rmt	154.00
	40	75 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.5	Rmt	185.00
	41	90 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	0.988	Rmt	122.00
	42	90 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.402	Rmt	173.00
	43	90 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.788	Rmt	220.00
	44	90 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	2.145	Rmt	264.00
	45	110 mm X 4 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	1.477	Rmt	182.00
	46	110 mm X 6 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	2.102	Rmt	259.00
	47	110 mm X 8 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	2.672	Rmt	329.00
	48	110 mm X 10 Kg/cm2	HDPE , PE-80	IS: 4984 : 1995	3.178	Rmt	391.00
	49	40 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	37.95
	50	40 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	44.55
	51	40 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.299	Rmt	37.00
	52	40 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.36	Rmt	45.00
	53	50 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	49.50
	54	50 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.365	Rmt	45.00
	55	50 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.458	Rmt	57.00
	56	50 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.554	Rmt	69.00
	57	63 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	74.25
	58	63 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.569	Rmt	70.00
	59	63 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.728	Rmt	90.00
	60	63 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.883	Rmt	109.00
	61	75 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	125.40
	62	75 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	0.816	Rmt	101.00
	63	75 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.026	Rmt	127.00
	64	75 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.249	Rmt	154.00
	65	90 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	165.00

	66	90 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.149	Rmt	142.00
	67	90 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.474	Rmt	182.00
	68	90 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.788	Rmt	220.00
	69	110 mm X 4 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995		Rmt	264.00
	70	110 mm X 6 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	1.689	Rmt	168.00
	71	110 mm X 8 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	2.189	Rmt	270.00
	72	110 mm X 10 Kg/cm2	HDPE , PE-100	IS: 4984 : 1995	2.643	Rmt	325.00
	73	63 mm X 3.2 Kg/cm2	HDPE	IS: 14151 (PART-I): 1999	0.403	Rmt	48.32
	74	75 mm X 2.5 Kg/cm2	HDPE	IS: 14151 (PART-I): 1999	0.483	Rmt	57.91
	75	90 mm X 2.5 Kg/cm2	HDPE	IS: 14151 (PART-I): 1999	0.634	Rmt	76.02
	76	110 mm X 2.5 Kg/cm2	HDPE	IS: 14151 (PART-I): 1999	0.952	Rmt	114.14
2		**LATERALS LINE (LLDPE)**					
	1	16 mm Diameter, 2.5 Kg/cm2,Class II	LLDPE	IS:12786:1992		Rmt	7.58
	2	20 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	11.55
	3	25 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	19.16
	4	32 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	28.34
	5	16 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	7.50
	6	20 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	13.52
	7	25 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	18.00
	8	32 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	29.38
3		**PORTABLE SYSTEM & COMPONENTS**					
	1	**50 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	4.00 Kg/cm2 Class-III		
		(a) 6 Meter Long	HDPE	do		Each	390.00

		(b) 3 Meter Long	HDPE	do		Each	245.00
		(c) Pump Connecting Nipple	HDPE	do		Each	115.00
		(d) Duly Coupled Bend	HDPE	do		Each	95.00
		(e) Duly Coupled Equal Tee	HDPE	do		Each	185.00
		(f) Duly Coupled End cap	HDPE	do		Each	50.00
		(g) Sprinkler Attachment	HDPE	do		Each	115.00
		(h) Foot Baton Assembly (50mmX3/4")	GI/HDPE	do		Each	75.00
		(h) Foot Baton Assembly (50mmX1.25")	GI/HDPE	do		Each	100.00
	2	**63 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	3.20 Kg/cm2 Class-II		
		(a) 6 Meter Long	HDPE	do		Each	470.00
		(b) 3 Meter Long	HDPE	do		Each	287.00
		(c) Pump Connecting Nipple	HDPE	do		Each	135.00
		(d) Duly Coupled Bend	HDPE	do		Each	125.00
		(e) Duly Coupled Equal Tee	HDPE	do		Each	203.99
		(f) Duly Coupled End cap	HDPE	do		Each	52.00
		(g) Sprinkler Attachment	HDPE	do		Each	150.00
		(h) Foot Baton Assembly (63mmX3/4")	GI/HDPE	do		Each	90.00
		(h) Foot Baton Assembly (63mmX1.25")	GI/HDPE	do		Each	120.00
	3	**63 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	4.00 Kg/cm2 Class-III		
		(a) 6 Meter Long	HDPE	do		Each	525.00
		(b) 3 Meter Long	HDPE	do		Each	336.60
		(c) Pump Connecting Nipple	HDPE	do		Each	185.00
		(d) Duly Coupled Bend	HDPE	do		Each	125.00
		(e) Duly Coupled Equal Tee	HDPE	do		Each	203.99
		(f) Duly Coupled End cap	HDPE	do		Each	62.00

		(g) Sprinkler Attachment	HDPE	do		Each	160.00
		(h) Foot Baton Assembly (63mmX3/4")	GI/HDPE	do		Each	90.00
		(h) Foot Baton Assembly (63mmX1.25")	GI/HDPE	do		Each	125.00
	4	**75 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	2.5 Kg/cm2 Class-I		
		(a) 6 Meter Long	HDPE	do		Each	525.00
		(b) 3 Meter Long	HDPE	do		Each	338.45
		(c) Pump Connecting Nipple	HDPE	do		Each	200.00
		(d) Duly Coupled Bend	HDPE	do		Each	148.00
		(e) Duly Coupled Equal Tee	HDPE	do		Each	232.73
		(f) Duly Coupled End cap	HDPE	do		Each	79.95
		(g) Sprinkler Attachment	HDPE	do		Each	165.00
		(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	105.00
		(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	130.00
	5	**75 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	4.00 Kg/cm2 Class-III		
		(a) 6 Meter Long	HDPE	do		Each	595.00
		(b) 3 Meter Long	HDPE	do		Each	370.00
		(c) Pump Connecting Nipple	HDPE	do		Each	207.47
		(d) Duly Coupled Bend	HDPE	do		Each	142.00
		(e) Duly Coupled Equal Tee	HDPE	do		Each	232.73
		(f) Duly Coupled End cap	HDPE	do		Each	28.64
		(g) Sprinkler Attachment	HDPE	do		Each	170.00
		(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	105.00
		(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	135.00

	6	**PORTABLE COMPONENTS (MIX)**					
		(a) Duly Coupled Reducing Tee	HDPE	Non ISI	63 X 63 X 50 mm	Each	231.00
		(b) Duly Coupled Reducing Tee	HDPE	do	75 X 75 X 63 mm	Each	264.00
		(c) Duly Coupled Reducing Tee	HDPE	do	90 X 90 X 75 mm	Each	346.50
		(c) Duly Coupled Reducing Tee	HDPE	do	110 X 110 X 90 mm	Each	419.10
		(d) Duly Coupled Reducing Bend	HDPE	do	63 X 50 mm	Each	148.50
		(e) Duly Coupled Reducing Bend	HDPE	do	75X 50 mm	Each	173.25
		(f) Duly Coupled Reducing Bend	HDPE	do	90 X 75 mm	Each	247.50
		(g) Duly Coupled Reducing Bend	HDPE	do	110 X 90 mm	Each	338.25
		(h) Duly Coupled Reducer	HDPE	do	63 X 50 mm	Each	74.00
		(i) Duly Coupled Reducer	HDPE	do	75 X 63 mm	Each	93.00
		(j) Duly Coupled Reducer	HDPE	do	90 X 75 mm	Each	140.00
		(k) Duly Coupled Reducer	HDPE	do	110 X 90 mm	Each	180.00
4		**HYDRANTS**					
	1	HYDRANTS, 3/4" (Inch)	BRASS	do		Each	522.00
	2	HYDRANTS, 1" (Inch)	BRASS	do		Each	825.00
	3	HYDRANTS, 1.25" (Inch)	BRASS	do		Each	895.00
	4	HYDRANTS, 1.5" (Inch)	BRASS	do		Each	930.00
	5	HYDRANTS, 3/4" (Inch)	ALUMINIUM	do		Each	406.00
	6	HYDRANTS, 1" (Inch)	ALUMINIUM	do		Each	433.00
	7	HYDRANTS, 1.25" (Inch)	ALUMINIUM	do		Each	842.00
	8	HYDRANTS, 1.5" (Inch)	ALUMINIUM	do		Each	920.00
	9	HYDRANTS, 3/4" (Inch)	METAL	do		Each	380.00
	10	HYDRANTS, 1" (Inch)	METAL	do		Each	400.00
	11	HYDRANTS, 1.25" (Inch)	METAL	do		Each	550.00
	12	HYDRANTS, 1.5" (Inch)	METAL	do		Each	910.00

	13	**63 mm (2")** HYDRANTS including GI Riser Pipe (IS: 1239:1990), 63 mm PP Ball Valve, 63 mm Pump Connecting Nipple, GI Tee, GI Nipple (As per requirement of Main & Sub main line) & Plain concrete grouting for GI Tee & Riser Pipe	GI/HDPE/PP	As per ISI as well as Non ISI		Each	1425.39
	14	**75 mm (2.5")** HYDRANTS including GI Riser Pipe (IS: 1239:1990), 75 mm PP Ball Valve, 75 mm Pump Connecting Nipple, GI Tee, GI Nipple (As per requirement of Main & Sub main line) & Plain concrete grouting for GI Tee & Riser Pipe	GI/HDPE/PP	do		Each	1895.84
	15	HYDRANTS KEY , 3/4" (Inch)	BRASS	Non ISI		Each	222.75
	16	HYDRANTS KEY, 1" (Inch)	BRASS	do		Each	287.71
	17	HYDRANTS KEY, 1.25" (Inch)	BRASS	do		Each	315.00
	18	HYDRANTS KEY, 1.5" (Inch)	BRASS	do		Each	280.80
	19	HYDRANTS KEY, 3/4" (Inch)	ALUMINIUM	do		Each	240.00
	20	HYDRANTS KEY, 1" (Inch)	ALUMINIUM	do		Each	216.00
	21	HYDRANTS KEY, 1.25" (Inch)	ALUMINIUM	do		Each	259.20
	22	HYDRANTS KEY, 1.5" (Inch)	ALUMINIUM	do		Each	280.00
	23	HYDRANTS KEY, 3/4" (Inch)	METAL	do		Each	220.00
	24	HYDRANTS KEY, 1" (Inch)	METAL	do		Each	285.00
	25	HYDRANTS KEY, 1.25" (Inch)	METAL	do		Each	259.20
	26	HYDRANTS KEY, 1.5" (Inch)	METAL	do		Each	275.00

	27	VALVE BOXES for HYDRANTS/VALVES,7 "	ENGINEERING PLASTICS	do	Round	Each	250.00
	28	VALVE BOXES for HYDRANTS/VALVES,10"	ENGINEERING PLASTICS	do	Round	Each	675.00
	29	VALVE BOXES for HYDRANTS/VALVES,12"	ENGINEERING PLASTICS	do	Round	Each	1000.00
	30	VALVE BOXES for HYDRANTS/VALVES,14"	ENGINEERING PLASTICS	do	Round	Each	1250.00
	31	VALVE BOXES for HYDRANTS/VALVES,7 "	ENGINEERING PLASTICS	do	Rectangular	Each	550.00
	32	VALVE BOXES for HYDRANTS/VALVES,10"	ENGINEERING PLASTICS	do	Rectangular	Each	800.00
	33	VALVE BOXES for HYDRANTS/VALVES,12"	ENGINEERING PLASTICS	do	Rectangular	Each	1100.00
	34	VALVE BOXES for HYDRANTS/VALVES,14"	ENGINEERING PLASTICS	do	Rectangular	Each	1300.00
5		**SPRINKLER NOZZLES & RAINGUN**					
	1	SPRINKLER NOZZLE FOR 12-18 meter radius of throw at a pressure of 1 -2.5 Kg/cm2 with discharge of 0.4 - 0.6 lps	Brass	IS: 12232 (Part-2):1996 & (PART-1):1995	Full Circle	Each	399.00
	2	SPRINKLER NOZZLE FOR 12-18 meter radius of throw at a pressure of 1 -2.5 Kg/cm2 with discharge of 0.4 - 0.6 lps	Brass	IS: 12232 (Part-2):1996 & (PART-1):1995	Part Circle	Each	425.00
	3(a)	Anti Frost Metal Impact Sprinkler 3/4"FOR 12-18 meter radius of throw at a pressure of 3-5Kg/cm2 with discharge of 0.2- 0.8 lps	Brass	Non ISI	Full Circle	Each	450.00
	3(b)	Red cap Sprinkler (Anti Frost)				Each	900.00

	4	Plastic Impact SPRINKLER 1/2"FOR 12-18 meter radius of throw at a pressure of 2.5-4 Kg/cm2 with discharge of 0.1- 0.2 lps	ENGINEERING PLASTICS	IS: 12232 (Part-2):1996 & (PART-1):1995	Full Circle	Each	240.00
	5	Plastic Impact SPRINKLER 1/2"FOR 12-18 meter radius of throw at a pressure of 2.5-4 Kg/cm2 with discharge of 0.12- 0.3 lps	ENGINEERING PLASTICS	IS: 12232 (Part-2):1996 & (PART-1):1995	Part Circle	Each	300.00
	6	Plastic Impact SPRINKLER 3/4"FOR 12-18 meter radius of throw at a pressure of 2.5-4 Kg/cm2 with discharge of 0.3- 1.0 lps	ENGINEERING PLASTICS	IS: 12232 (Part-2):1996 & (PART-1):1995	Full Circle	Each	300.00
	7	Plastic Impact SPRINKLER NOZZLE 3/4"FOR 12-18 meter radius of throw at a pressure of 2.5-5 Kg/cm2 with discharge of 0.2- 0.6 lps	ENGINEERING PLASTICS	IS: 12232 (Part-2):1996 & (PART-1):1995	Part Circle	Each	400.00
	8	Plastic Impact Sprinkler assembly 1/2"with 10mm, 1 m long MS rod riser	ENGINEERING PLASTICS	As per ISI as well as Non ISI		Each	270.00
	9	Plastic Impact Sprinkler assembly 3/4"with 10 mm, 1 m long MS rod riser	ENGINEERING PLASTICS	do		Each	300.00
	10	RainGun , 3/4"	Brass	do	Full Circle	Each	440.00
	11	RainGun , 1"	Brass	do	Full Circle	Each	1200.00
	12	Raingun, 1.25"	Brass	do	Full Circle	Each	3000.00
	13	RainGun, 1.5"	Brass	do	Full Circle	Each	5000.00
	14	RainGun, 2"	Brass	do	Full Circle	Each	10500.00
	15	RainGun , 3/4"	Brass	do	Part Circle	Each	800.00
	16	RainGun , 1"	Brass	do	Part Circle	Each	1200.00
	17	Raingun, 1.25"	Brass	do	Part Circle	Each	3000.00
	18	RainGun, 1.5"	Brass	do	Part Circle	Each	5500.00
	19	RainGun, 2"	Brass	do	Part Circle	Each	12000.00
6		**MICRO & MINI-SPRINKLERS**					

	1	Micro Sprinkler with 30 cm Stake & 60 cm long 8X 6 mm Micro tube for Radius of throw 1 to 5 Meter at a Pressure of 1.5 to 2 Kg/cm2 for discharge of 30-60 LPH with complete Assembly	ENGINEERING PLASTICS	do		Each	30.03
	2	Micro Sprinkler with 1 Meter Metallic Stake & Micro tube for Radius of throw 1 to 5 Meter at a Pressure of 1.5 to 2 Kg/cm2 for discharge of 60-160 LPH with complete Assembly	ENGINEERING PLASTICS	do		Each	52.32
	3	Mini Impact Sprinkler with 1 Meter long 8 mm MS RISER ROD & 12mmX8mm Micro tube for Radius of throw 6-11 Meter at a Pressure of 1.5 to 4 Kg/cm2 for discharge of 230-720 LPH with complete assembly	ENGINEERING PLASTICS	do		Each	120.00
7		**RISER PIPE & SPRINKLERS STANDS**					
	1	RISER PIPE, 3/4" X 2.5 Feet Long	GI	IS: 1239:1990		Each	98.10
	2	RISER PIPE, 3/4" X 5 Feet Long	GI	IS: 1239:1990		Each	175.00
	3	RISER PIPE, 1.25" X 2.5 Feet Long	GI	IS: 1239:1990		Each	240.00
	4	RISER PIPE, 1.5" X 5 Feet Long	GI	IS: 1239:1990		Each	450.00
	5	RAINGUN TRIPOD STAND 1.25", 5 feet long (with Legs fully open)	GI	do		Each	2145.00
	6	RAINGUN TRIPOD STAND 1.5", 5 feet long (with legs fully open)	GI	do		Each	2310.00
	7	RAINGUN TRIPOD STAND 2", 5 feet long (with legs fully open)	GI	do		Each	2475.00

8		**VALVES & CONTROL VALVES**					
	1	PP Ball Valves, 40 mm	PP	As per ISI as well as Non ISI		Each	365.00
	2	PP Ball Valves, 50 mm	PP	do		Each	404.56
	3	PP Ball Valves, 63 mm	PP	do		Each	540.00
	4	PP Ball Valves, 75 mm	PP	do		Each	750.00
	5	PP Ball Valves, 90 mm	PP	do		Each	1150.00
	6	PP Ball Valves, 110 mm	PP	do		Each	900.18
	7	Gate Valves, 32 mm (1.25")	GM	do		Each	650.00
	8	Gate Valves, 40 mm (1.5")	GM	do		Each	850.00
	9	Gate Valves, 50mm (2")	GM	do		Each	1250.00
	10	Gate Valves, 65 mm (2.5")	GM	do		Each	1600.00
	11	Gate Valves, 80 mm (3")	GM	do		Each	2500.00
	12	Gate Valves, 100 mm (4")	GM	do		Each	4000.00
	13	Gate Valves, 125 mm (5")	GM	do		Each	6000.00
	14	PVC Ball Valves, 40 mm	PVC	do		Each	250.00
	15	PVC Ball Valves, 50 mm	PVC	do		Each	325.00
	16	PVC Ball Valves, 63 mm	PVC	do		Each	571.00
	17	PVC Ball Valves, 75 mm	PVC	do		Each	696.00
	18	PVC Ball Valves, 90 mm	PVC	do		Each	885.00
	19	PVC Ball Valves, 110 mm	PVC	do		Each	1500.00
9		**SERVICE SADDLE**					
	1	40 mm X 3/4"	PP	Non ISI		Each	34.01
	2	40 mm X 1"	PP	do		Each	50.00
	3	50 mm X 3/4"	PP	do		Each	40.38
	4	50 mm X 1"	PP	do		Each	39.13
	5	50 mm X 1.25"	PP	do		Each	55.00
	6	63 mm X 3/4"	PP	do		Each	44.64
	7	63 mm X 1"	PP	do		Each	55.00
	8	63 mm X 1.25"	PP	do		Each	55.00
	9	63 mm X 1.5"	PP	do		Each	61.00
	10	75 mm X 3/4"	PP	do		Each	48.89
	11	75 mm X 1"	PP	do		Each	60.06

	12	75 mm X 1.25"	PP	do		Each	65.00
	13	75 mm X 1.5"	PP	do		Each	65.00
	14	75 mm X 2"	PP	do		Each	67.00
	15	90 mm X 3/4"	PP	do		Each	52.97
	16	90 mm X 1"	PP	do		Each	71.34
	17	90 mm X 1.25"	PP	do		Each	84.00
	18	90 mm X 1.5"	PP	do		Each	84.00
	19	90 mm X 2"	PP	do		Each	84.00
	20	90 mm X 2.5"	PP	do		Each	84.00
	21	110 mm X 3/4"	PP	do		Each	64.69
	22	110 mm X 1"	PP	do		Each	84.42
	23	110 mm X 1.25"	PP	do		Each	90.00
	24	110 mm X 1.5"	PP	do		Each	90.00
	25	110 mm X 2"	PP	do		Each	90.00
	26	110 mm X 2.5"	PP	do		Each	90.00
	27	40 mm X 3/4"	MS/ GM	do		Each	83.00
	28	40 mm X 1"	MS /GM	do		Each	86.00
	29	50 mm X 3/4"	MS/GM	do		Each	96.00
	30	50 mm X 1"	MS/GM	do		Each	99.00
	31	50 mm X 1.25"	MS/GM	do		Each	110.00
	32	63 mm X 3/4"	MS/GM	do		Each	120.00
	33	63 mm X 1"	MS/GM	do		Each	122.00
	34	63 mm X 1.25"	MS/GM	do		Each	132.00
	35	63 mm X 1.5"	MS/GM	do		Each	140.00
	36	75 mm X 3/4"	MS/GM	do		Each	142.00
	37	75 mm X 1"	MS/GM	do		Each	152.00
	38	75 mm X 1.25"	MS/GM	do		Each	184.00
	39	75 mm X 1.5"	MS/GM	do		Each	203.00
	40	75 mm X 2"	MS/GM	do		Each	250.00
	41	90 mm X 3/4"	MS/GM	do		Each	180.00
	42	90 mm X 1"	MS/GM	do		Each	190.00
	43	90 mm X 1.25"	MS/GM	do		Each	205.00
	44	90 mm X 1.5"	MS/GM	do		Each	225.00
	45	90 mm X 2"	MS/GM	do		Each	270.00
	46	90 mm X 2.5"	MS/GM	do		Each	295.00
	47	110 mm X 3/4"	MS/GM	do		Each	210.00
	48	110 mm X 1"	MS/GM	do		Each	225.00
	49	110 mm X 1.25"	MS/GM	do		Each	260.00
	50	110 mm X 1.5"	MS/GM	do		Each	295.00
	51	110 mm X 2"	MS/GM	do		Each	330.00
	52	110 mm X 2.5"	MS/GM	do		Each	370.00
10		**IRRIGATION SYSTEM SAFETY DEVICES**					
	1	**NON RETURN**		ISI			

		VALVES					
		(a) NRV, Low Friction 1.5"	GM	do		Each	600.00
		(b) NRV, Low Friction 2"	GM	do		Each	800.00
		(c) NRV, Low Friction 2.5"	GM	do		Each	1200.00
		(d) NRV, Low Friction 3"	GM	do		Each	2000.00
		(e) NRV, Low Friction 4"	CI/MS	do		Each	3500.00
	2	**BUTTERFLY VALVES**					
		(a) Butterfly Valves, 2"	CI/MS	do		Each	1072.50
		(b) Butterfly Valves, 2.5"	CI/MS	do		Each	1200.00
		(c) Butterfly Valves, 3"	CI/MS	do		Each	1402.50
		(d) Butterfly Valves, 4"	CI/MS	do		Each	2055.00
	3	**PRESSURE RELIEF VALVE, 2"**	Metal	As per ISI as well as Non ISI		Each	2289.04
	4	**PRESSURE REGULATING VALVES**		As per ISI as well as Non ISI			
		(a) Pressure Regulating Valves, 1.5"	PVC	do		Each	1200.00
		(b) Pressure Regulating Valves, 2"	PVC	do		Each	1500.00
	5	**BY PASS ASSEMBLY**					
		1.5" X 1.5"	GI/GM	Non ISI		Each	1340.00
		2" X 1.5"	GI/GM	do		Each	1442.24
		2.5" X 2"	GI/GM	do		Each	1690.96
		3" X 1.5"	GI/GM	do		Each	1925.00
		3" X 1.5"	GI/GM	do		Each	2450.00
		4" X 2"	GI/GM	do		Each	2719.52
	6	**PRESSURE GAUGE**					
		(a) Pressure Gauge, Ordinary	Metal	ISI		Each	186.44
		(a) Pressure Gauge, Glycerine	Metal	do		Each	376.60
	7	**WATER METER**					
		(a) 1.5"	Metal	do		Each	2205.00
		(b) 2"	Metal	do		Each	2250.00
		© 2.5"	Metal	do		Each	3500.00
		(d) 3"	Metal	do		Each	5000.00
		(e) 4"	Metal	do		Each	8000.00
	8	**AIR RELEASE VALVES**					
		(a) AIR RELEASE VALVES 1"	ENGINEERING PLASTICS	As per ISI as well as Non ISI		Each	375.00

		(b) AIR RELEASE VALVES 2"	ENGINEERING PLASTICS	As per ISI as well as Non ISI		Each	600.00
		(c) AIR RELEASE VALVES 1.5"	CI	do		Each	702.00
	9	**FLUSH VALVES**					
		(a) 40 mm	PP	do		Each	94.00
		(b) 50 mm	PP	do		Each	103.00
		© 63 mm	PP	do		Each	181.00
		(d) 75 mm	PP	do		Each	190.00
		(e) 90 mm	PP	do		Each	252.50
		(f) 110 mm	PP	do		Each	250.00
		(a) 40 mm	PVC	do		Each	54.00
		(b) 50 mm	PVC	do		Each	69.16
		© 63 mm	PVC	do		Each	81.00
		(d) 75 mm	PVC	do		Each	97.00
		(e) 90 mm	PVC	do		Each	104.27
		(f) 110 mm	PVC	do		Each	183.41
11		**FITTINGS & ACCESSORIES FOR IRRIGATION SYSTEM**					
	1	FITTINGS & ACCESSORIES (In % of Total Materials Cost) Specify nature of fittings with specifications and rate (Attach separate sheet if required)	GI/HDPE/PP		For Portable Sprinkler System	LS	2%
	2	FITTINGS & ACCESSORIES (In % of Total Materials Cost) Specify nature of fittings with specifications and rate (Attach separate sheet if required)	GI/HDPE/PP		For Semi Permanent and Permanent Sprinkler System	LS	5%
12		**SERVICE CHARGES FOR IRRIGATIONS SYSTEM**					
	1	Installation Charge including testing (In % of Total Material Cost)			For Portable Sprinkler System	JOB WORK	2%
	2	Installation Charge including testing (In % of Total Material Cost)			For Semi Permanent and permanent Sprinkler System	JOB WORK	5%

	3	Survey, Planning, Designing & Estimation of Irrigation System at Individual Farmer Sites Basis (In % of Total Materials Cost)			For Portable Sprinkler System	JOB WORK	1%
	4	Survey, Planning, Designing & Estimation of Irrigation System at Individual Farmer Sites Basis (In % of Total Materials Cost)			For Semi Permanent and permanent Sprinkler System	JOB WORK	1%

Annexure-VII-b

Rates approved for Installation of Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

Sl. No		Name of System Components	Raw Mat. Used	ISI Code	Speci./ Wt. (Kg / Mtr.)	Unit	Approved Rates
1		2	3	4	5	6	7
1		**PVC PIPE FOR MAIN & SUB MAIN LINE**					
	1	40 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	24.32
	2	40 mm X 8 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	32.00
	3	50 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	35.93
	4	63 mm X 4 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	38.46
	5	63 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	55.25
	6	75 mm X 4 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	55.51
	7	75 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	77.65
	8	90 mm X 4 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	77.22
	9	90 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	111.93
	10	110 mm X 4 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	110.47
	11	110 mm X 6 Kg/cm2	PVC	IS: 4985 : 1999		Rmt	163.53
2		**LATERALS LINE (LLDPE)**					
	1	16 mm Diameter, 2.5 Kg/cm2,Class II	LLDPE	IS:12786:1992		Rmt	7.50
	2	20 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	11.55
	3	25 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	18.00
	4	32 mm Diameter, 2.5 Kg/cm2, Class II	LLDPE	IS:12786:1992		Rmt	12.00
	5	16 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	8.78
	6	20 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	13.52
	7	25 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	21.06
	8	32 mm Diameter, 4.0 Kg/cm2,Class III	LLDPE	IS:12786:1992		Rmt	35.10
3		**EMITTTING PIPE (INTEGRAL DRIP LATERALS CLASS I (0.7 mm to 0.9 mm thickness)**					

	1	12 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	8.88
	2	12 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	7.30
	3	12 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	6.54
	4	12 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	6.10
	5	12 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	5.72
	6	12 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	5.45
	7	12 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	5.18
	8	12 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	2.01
	9	12 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	4.80
	10	16 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	11.77
	11	16 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	10.14
	12	16 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	9.21
	13	16 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	8.77
	14	16 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	8.34
	15	16 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	8.07
	16	16 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	7.85
	17	16 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	7.68
	18	16 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	7.25
4		**EMITTTING PIPE (INTEGRAL DRIP LATERALS CLASS II (0.9 mm to 1.1 mm thickness)**					
	1	12 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	10.00
	2	12 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	8.88

	3	12 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	7.90
	4	12 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	7.47
	5	12 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	7.19
	6	12 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	6.98
	7	12 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	6.76
	8	12 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	6.49
	9	12 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	5.94
	10	16 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	13.63
	11	16 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	12.26
	12	16 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	11.55
	13	16 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	11.00
	14	16 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	10.85
	15	16 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	10.52
	16	16 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	10.36
	17	16 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	10.00
	18	16 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	9.81
5		**EMITTTING PIPE (INTEGRAL DRIP LATERALS CLASS III (1.1 mm to 1.3 mm thickness)**					
	1	12 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	12.70
	2	12 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	11.23
	3	12 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	10.25
	4	12 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	9.86

	5	12 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	9.48
	6	12 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	9.06
	7	12 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	8.52
	8	12 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	8.16
	9	12 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	7.26
	10	16 mm, 1 to 4 LPH, 20 cm	LLDPE	IS:13488:1992		Rmt	15.50
	11	16 mm, 1 to 4 LPH, 30 cm	LLDPE	IS:13488:1992		Rmt	14.50
	12	16 mm, 1 to 4 LPH, 40 cm	LLDPE	IS:13488:1992		Rmt	13.90
	13	16 mm, 1 to 4 LPH, 50 cm	LLDPE	IS:13488:1992		Rmt	13.60
	14	16 mm, 1 to 4 LPH, 60 cm	LLDPE	IS:13488:1992		Rmt	13.10
	15	16 mm, 1 to 4 LPH, 75 cm	LLDPE	IS:13488:1992		Rmt	12.60
	16	16 mm, 1 to 4 LPH, 90 cm	LLDPE	IS:13488:1992		Rmt	11.75
	17	16 mm, 1 to 4 LPH, 100 cm	LLDPE	IS:13488:1992		Rmt	11.40
	18	16 mm, 1 to 4 LPH, 150 cm	LLDPE	IS:13488:1992		Rmt	10.60
6		**ON LINE DRIPPER**					
	1	2 LPH	PP	IS:13487:1992		Each	2.83
	2	4 LPH	PP	IS:13487:1992		Each	2.83
	3	8 LPH	PP	IS:13487:1992		Each	2.83
	4	2 LPH (PRESSURE COMPENSATING)	PP	IS:13487:1992		Each	3.05
	5	4 LPH (PRESSURE COMPENSATING)	PP	IS:13487:1992		Each	3.05
	6	8 LPH (PRESSURE COMPENSATING)	PP	IS:13487:1992		Each	3.05
7		**MICRO TUBE**					0.00
	1	4 mm (OD)	LLDPE				2.08
	2	6 mm (OD)	LLDPE				2.20
	3	8 mm (OD)	LLDPE				3.54
8		**SAND FILTERS with Back Wash Assembly**					
	1	5 m3/Hr. X 1.5"	MS	IS:14606:1998		Each	7000.00

	2	15m3/Hr. X 2.0"	MS	IS:14606:1998		Each	9175.95
	3	10 m3/Hr. X 1.5"	MS	IS:14606:1998		Each	8145.73
	4	25 m3/Hr. X 2"	MS	IS:14606:1998		Each	12500.00
	5	30 m3/Hr. X 2.5"	MS	IS:14606:1998		Each	14674.00
	6	40 m3/Hr. X 2.5"	MS	IS:14606:1998		Each	16822.00
9		**Disc Filter**					
	1	5 m3/Hr. X 3/4"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	550.00
	2	6 m3/Hr. X 1"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	550.00
	3	7 m3/Hr. X 1"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	550.00
	4	10 m3/Hr. X 1.25"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	1000.00
	5	12 m3/Hr. X 1.5"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	1000.00
	6	14 m3/Hr. X 1.5"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	1000.00
	7	20 m3/Hr. X 1.5"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	1495.00
	8	25 m3/Hr. X 2"	METAL/PLASTIC	IS:12785:1994	130 micron	Each	2350.00
10		**SCREEN FILTERS**					
	1	5 m3/Hr X 1.5"	METAL/PLASTIC	IS:12785:1994		Each	245.58
	2	10 m3/Hr X 2"	METAL/PLASTIC	IS:12785:1994		Each	1837.00
	3	15 m3/Hr X 1.5"	METAL/PLASTIC	IS:12785:1994		Each	1530.00
	4	20 m3/Hr X 2"	METAL/PLASTIC	IS:12785:1994		Each	1530.00
	5	25 m3/Hr X 2"	METAL/PLASTIC	IS:12785:1994		Each	2333.00
	6	30 m3/Hr X 2.5"	METAL/PLASTIC	IS:12785:1994		Each	2498.00
	7	40 m3/Hr X 2.5"	METAL/PLASTIC	IS:12785:1994		Each	2829.00
11		**HYDRO-CYCLONE FILTERS**					
	1	20 m3/Hr X 2"	METAL/PLASTIC	IS:14743:1999		Each	3335.00
	2	25 m3/Hr X 2"	METAL/PLASTIC	IS:14743:1999		Each	3835.00
	3	30 m3/Hr X 2.5"	METAL/PLASTIC	IS:14743:1999		Each	5000.00
	4	40 m3/Hr X 2.5"	METAL/PLASTIC	IS:14743:1999		Each	5729.00
12		**HELICAL DISC FILTERS**					

	1	30 m3/Hr X 2"	METAL/PLASTIC	ISI as well as NON ISI	130 micron	Each	5000.00
	2	50 m3/Hr X 2"	METAL/PLASTIC	do	130 micron	Each	7500.00
13		**Fertilizer Tank with Assembly**					
	1	30 Liters	MS	Non ISI		Each	2637.00
	2	60 Liters	MS	do		Each	4521.00
	3	90 Liters	MS	do		Each	6017.00
	4	120 Liters	MS	do		Each	8600.00
14		**VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD**					
	1	VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD (3/4")	Plastic	do		Each	932.71
	2	VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD (1")	Plastic	do		Each	1500.00
	3	VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD (1.25")	Plastic	do		Each	1950.00
	4	VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD (1.5")	Plastic	do		Each	2450.00
	5	VENTURI INJECTOR ASSEMBLY WITHOUT MANIFOLD (2")	Plastic	do		Each	2950.00
15		**FLOW CONTROL VALVES**					
	1	12 mm	Plastic	do		Each	12.00
	2	16 mm	Plastic	do		Each	15.00
	3	20 mm	Plastic	do		Each	35.00
	4	32 mm	Plastic	do		Each	40.00
16		**VENTURI MANIFOLD**					
	1	3/4"	Plastic	do		Each	330.00
	2	1"	Plastic	do		Each	360.00
	3	1.25"	Plastic	do		Each	420.00
	4	1.5"	Plastic	do		Each	480.00
	5	2"	Plastic	do		Each	600.00
17		**MISTERS & FOGGERS**					
	1	Mister Sprayer With Stabliser	Plastic	do		Each	55.00
	2	Cross Fogger with Anti drain Valve	Plastic	do		Each	151.02
	3	Anti drain Valve for upside	Plastic	do		Each	50.36

		down sprinkler & Mister					
18		**FITTINGS & ACCESSORIES FOR DRIP IRRIGATION SYSTEM**					
	1	FITTINGS & ACCESSORIES (In % of Total Materials Cost)(Specify fittings and accessories with complete specifications and rates .Attach separate sheet if required.)	GI/HDPE/PP			LS	5%
19		**SERVICE CHARGES FOR IRRIGATIONS SYSTEM**					
	1	Installation Charge (In % of Total Material Cost)			JOB WORK		5%
	2	Survey, Planning, Designing & Estimation of Irrigation System at Individual Farmer Sites Basis (In % of Total Materials Cost)			JOB WORK		2%

Annexure-VII-C

Rates approved for extra items for Installation ofSprinkler / Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

Sl. No	Name of System Components	Unit	Parixit Industries Limited-,3rd Floor Silver Oaks , Mahalaxmi Cross Road, Paldi , Ahmedabad-380 007
1	2	3	4
	COMPRESSION FITTINGS		
1	COUPLER 20 MM	NO	45.00
2	COUPLER 25 MM	NO	50.40
3	COUPLER 32 MM	NO	79.20
4	COUPLER 40 MM	NO	100.80
5	COUPLER 50 MM	NO	158.20
6	COUPLER 63 MM	NO	331.20
7	COUPLER 75 MM	NO	455.40
8	COUPLER 90 MM	NO	592.20
9	COUPLER 110 MM	NO	1002.60
10	BEND 20 MM	NO	50.40
11	BEND 25 MM	NO	54.00
12	BEND 32 MM	NO	79.20
13	BEND 40 MM	NO	100.80
14	BEND 50 MM	NO	160.20
15	BEND 63 MM	NO	343.80
16	BEND 75 MM	NO	500.40
17	BEND 90 MM	NO	640.80
18	BEND 110 MM	NO	1184.40
19	TEE 20 MM	NO	68.40
20	TEE 25 MM	NO	72.00
21	TEE 32 MM	NO	102.60
22	TEE 40 MM	NO	140.40
23	TEE 50 MM	NO	228.60
24	TEE 63 MM	NO	487.80
25	TEE 75 MM	NO	739.80
26	TEE 90 MM	NO	945.00
27	TEE 110 MM	NO	1458.00
28	END CAP 20 MM	NO	36.00
29	END CAP 25 MM	NO	39.60
30	END CAP 32 MM	NO	50.40
31	END CAP 40 MM	NO	70.20
32	END CAP 50 MM	NO	102.60
33	END CAP 63 MM	NO	194.40
34	END CAP 75 MM	NO	297.00

35	END CAP 90 MM	NO	363.60
36	END CAP 110 MM	NO	626.40
37	MTA 20x1/2"	NO	32.40
38	MTA 25X3/4"	NO	39.60
39	MTA 32X1"	NO	54.00
40	MTA 40X1 1/4"	NO	90.00
41	MTA 50 X1.5"	NO	108.00
42	MTA 63x2"	NO	286.20
43	MTA 75X 2 1/2"	NO	401.40
44	MTA 90X3"	NO	540.00
45	MTA 110X4"	NO	930.60
46	REDUCER 25X20 MM	NO	50.40
47	REDUCER32X25 MM	NO	59.40
48	REDUCER 32X40 MM	NO	86.40
49	REDCER 32X50 MM	NO	118.80
50	REDUCER 40X50 MM	NO	149.40
51	REDUCER 50X63 MM	NO	239.40
52	REDUCER 63X75 MM	NO	363.60
53	REDUCER 63X90 MM	NO	460.80
54	REDUCER 75X90 MM	NO	514.80
55	REDCER 90X110 MM	NO	797.40
56	MALE THREADED TEE32X32X1"	NO	118.80
57	MALE THREADED TEE1'X1"X1"	NO	118.80
58	MALE THREADED ELBOW32MMX1"	NO	86.40
59	MS SPANNER LIGHT DUTY 20 MM	NO	180.00
60	MS SPANNER LIGHT DUTY 25 MM	NO	180.00
61	MS SPANNER LIGHT DUTY 32 MM	NO	180.00
62	MS SPANNER LIGHT DUTY 40 MM	NO	225.00
63	MS SPANNER LIGHT DUTY 50 MM	NO	270.00
64	MS SPANNER LIGHT DUTY 63 MM	NO	360.00
65	MS SPANNER LIGHT DUTY 75 MM	NO	405.00
66	MS SPANNER LIGHT DUTY 90 MM	NO	540.00
67	MS SPANNER LIGHT DUTY 110 MM	NO	585.00
68	MS SPANNER HEAVY DUTY 20 MM	NO	450.00
69	MS SPANNER HEAVY DUTY 25 MM	NO	450.00
70	MS SPANNER HEAVY DUTY 32 MM	NO	450.00
71	MS SPANNER HEAVY DUTY 40 MM	NO	450.00
72	MS SPANNER HEAVY DUTY 50 MM	NO	540.00
73	MS SPANNER HEAVY DUTY 63 MM	NO	675.00
74	MS SPANNER HEAVY DUTY 75 MM	NO	765.00
75	MS SPANNER HEAVY DUTY 90 MM	NO	900.00
76	MS SPANNER HEAVY DUTY 110 MM	NO	990.00

Annexure-VII-C

Rates approved for extra items for Installation ofSprinkler / Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

Sl. No	Name of System Components	Unit	Jain Irrigation Systems Ltd. Jain Plastic Part , PO Box -72, Jalgaon, 425001, Maharashtra.
1	2	3	4
1	Plastic Impact SPRINKLER FOR 6.5-8.50 meter radius of throw at a pressure of1.5-3.5 Kg/cm2 with discharge of 0.036- 0.08lps	ENGINEERING PLASTICS	173.2
2	Plastic Impact SPRINKLER FOR 6.5-8.50 meter radius of throw at a pressure of 1.5-3.5 Kg/cm2 with discharge of 0.036- 0.08lps with assembly 1.00m	ENGINEERING PLASTICS	223.56
3	Plastic Impact SPRINKLER FOR 7-8 meter radius of throw at a pressure of 2-4 Kg/cm2 with discharge of 0.1-0.18lps	ENGINEERING PLASTICS	193.97
4	Plastic Impact SPRINKLER FOR 7-8 meter radius of throw at a pressure of 2-4 Kg/cm2 with discharge of 0.1-0.18lps with assembly 1.0m	ENGINEERING PLASTICS	265.58
5	Valves & Control Valves		
	PVC Ball Valves, 40mm (plain)		260.84
	PVC Ball Valves, 50mm (plain)		304.82
	PVC Ball Valves, 63mm (plain)		620.21
	PVC Ball Valves, 75mm (plain)		1006.29
	PVC Ball Valves, 90mm (plain)		1812.89
6	AMNON PC CNL DRIP LINE		
	Amnon PC CNL 16mm 1lph 15cm	LLDPE	32.97
	Amnon PC CNL 16mm 1lph 20cm	LLDPE	31.45
	Amnon PC CNL 16mm 1lph 30cm	LLDPE	24.09
	Amnon PC CNL 16mm 1lph 40cm	LLDPE	20.49
	Amnon PC CNL 16mm 2.2lph 15cm	LLDPE	32.97
	Amnon PC CNL 16mm 2.2lph 20cm	LLDPE	31.45
	Amnon PC CNL 16mm 2.2lph 30cm	LLDPE	24.09
	Amnon PC CNL 16mm 2.2lph 40cm	LLDPE	20.49

Annexure-VII-C

Rates approved for extra items for Installation of Sprinkler / Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

Sl. No	Name of System Components	Raw Material Used	Unit	Jain Irrigation Systems Ltd. Jain Plastic Part , PO Box - 72, Jalgaon, 425001, Maharashtra.
1	2	3	4	5
1	Venturi Manifold			
	MANIFOLDS GI +GMV 1.5" X 3/4"	Plastic	Each	1799.64
	MANIFOLDS GI +GMV 2" X 3/4"	Plastic	Each	2218.26
	MANIFOLDS GI +GMV 2.5" X 3/4"	Plastic	Each	2951.77
	MANIFOLDS GI +GMV 3" X 3/4"	Plastic	Each	4361.96
	MANIFOLDS GI +GMV2" X 1"	Plastic	Each	2871.44
	MANIFOLDS GI +GMV2" X 1¼"	Plastic	Each	3135.88
	MANIFOLDS GI +GMV 2" X 1½"	Plastic	Each	3412.95
	MANIFOLDS GI +GMV 2.5" X 1"	Plastic	Each	3022.57
	MANIFOLDS GI +GMV 2.5" X 1¼"	Plastic	Each	3274.41
	MANIFOLDS GI +GMV 2.5" X 1½"	Plastic	Each	3594.87
	MANIFOLDS GI +GMV 2.5" X 2"	Plastic	Each	3702.62
	MANIFOLDS GI +GMV 3" X 1"	Plastic	Each	4181.19
	MANIFOLDS GI +GMV 3" X 1¼"	Plastic	Each	4558.19
	MANIFOLDS GI +GMV 3" X 1½"	Plastic	Each	4861.24
	MANIFOLDS GI +GMV 3" X 2"	Plastic	Each	5094.01
	MANIFOLDS GI +GMV 4" X 2"	Plastic	Each	8615.25
2	**Screen Filters**			
	$25m^3$/ Hr. x2" (Metal)	Metal / Plastic(IS - 12785:1994)	Each	4798.29
3	**Disc. Filter (Metal)**			
	25m3/ Hr. x2" (Metal)		Each	6876.27
	40m3/ Hr. x2.5" (Metal)		Each	8614.22

Annexure-VII-C

Rates approved for extra items for Installation of Sprinkler / Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

S. No	Name of System Components	Unit	ISI- Code	Netafim Irrigation India Pvt. Ltd. S1,S10, Plot No.16, Pankaj, Arcade , Sector -5, Dwarka, New Delhi- 110075
1	Dripnet PC 16320 0.6L/H 0.20M 350M	Mtrs.	IS:13488:1992	22.76
2	Dripnet PC 16320 0.6L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
3	Dripnet PC 16320 0.6L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.3
4	Dripnet PC 16320 0.6L/H 0.50M 400M	Mtrs.	IS:13488:1992	17.04
5	Dripnet PC 16320 1.0L/H 0.20M 350M	Mtrs.	IS:13488:1992	22.76
6	Dripnet PC 16320 1.0L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
7	Dripnet PC 16320 1.0L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.30
8	Dripnet PC 16320 1.0L/H 0.50M 400M	Mtrs.	IS:13488:1992	17.04
9	Dripnet PC 16320 1.6L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
10	Dripnet PC 16320 1.6L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.3
11	Dripnet PC 16320 1.6L/H 0.50M 400M	Mtrs.	IS:13488:1992	17.04
12	Dripnet PC 16320 1.6L/H 0.60M 400M	Mtrs.	IS:13488:1992	16.49
13	Dripnet PC 16320 2.0L/H 0.30M 400M	Mtrs.	IS:13488:1992	19.08
14	Dripnet PC 16320 2.0L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.3
15	Dripnet PC 16320 2.0L/H 0.50M 400M	Mtrs.	IS:13488:1992	17.04
16	Dripnet PC 16320 2.0L/H 0.60M 400M	Mtrs.	IS:13488:1992	16.49
17	Dripnet PC 16320 3.0L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.3
18	Dripnet PC 16320 3.0L/H 0.50M 400M	Mtrs.	IS:13488:1992	17.04
19	Dripnet PC 16320 3.0L/H 0.60M 400M	Mtrs.	IS:13488:1992	16.49
20	Dripnet PC 16350 0.6L/H 0.20M 300M	Mtrs.	IS:13488:1992	22.76
21	Dripnet PC 16350 0.6L/H 0.20M 350M	Mtrs.	IS:13488:1992	22.76
22	Dripnet PC 16350 0.6L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
23	Dripnet PC 16350 0.6L/H 0.40M 400M	Mtrs.	IS:13488:1992	17.3
24	Dripnet PC 16350 1.0L/H 0.20M 300M	Mtrs.	IS:13488:1992	22.76
25	Dripnet PC 16350 1.0L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
26	Dripnet PC 16350 1.0L/H 0.40M 350M	Mtrs.	IS:13488:1992	17.3
27	Dripnet PC 16350 1.6L/H 0.30M 350M	Mtrs.	IS:13488:1992	19.08
28	Dripnet PC 16350 1.6L/H 0.40M 350M	Mtrs.	IS:13488:1992	17.3
29	Dripnet PC 16350 1.6L/H 0.50M 350M	Mtrs.	IS:13488:1992	17.04
30	Dripnet PC 16350 2.0L/H 0.40M 350M	Mtrs.	IS:13488:1992	17.3
31	Dripnet PC 16350 2.0L/H 0.50M 350M	Mtrs.	IS:13488:1992	17.04
32	Dripnet PC 16350 3.0L/H 0.40M 500MWO CART	Mtrs.	IS:13488:1992	17.3
33	Dripnet PC 16350 3.0L/H 0.50M 350M	Mtrs.	IS:13488:1992	17.04
34	Dripnet PC 16350 3.0L/H 0.60M 350M	Mtrs.	IS:13488:1992	16.49
35	DRIP NET 12mm /1LPH/0.30M			16.1
36	DRIP NET 12mm /1LPH/0.40M			14.7

Annexure-VII-C

Rates approved for extra items for Installation of Sprinkler / Drip Irrigation Systems in H.P.State under Kisan Bagwan Samridhi Yojna Part -II

Sl. No	Name of System Components	Raw Material Used	ISI Code	Speci./Wt. (Kg / Mtr.)	Unit	Approved Rates
1	2	3	4	5	6	7
1	**90 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	2.50 Kg/cm2 Class-III		
	(a) 6 Meter Long	HDPE	do		Each	720.00
	(b) 3 Meter Long	HDPE	do		Each	450.00
	(c) Pump Connecting Nipple	HDPE	do		Each	360.00
	(d) Duly Coupled Bend	HDPE	do		Each	360.00
	(e) Duly Coupled Equal Tee	HDPE	do		Each	420.00
	(f) Duly Coupled End cap	HDPE	do		Each	140.00
	(g) Sprinkler Attachment	HDPE	do		Each	390.00
	(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	120.00
	(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	240.00
2	**90 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	3.20 Kg/cm2 Class-III		
	(a) 6 Meter Long	HDPE	do		Each	840.00
	(b) 3 Meter Long	HDPE	do		Each	510.00
	(c) Pump Connecting Nipple	HDPE	do		Each	360.00
	(d) Duly Coupled Bend	HDPE	do		Each	360.00
	(e) Duly Coupled Equal Tee	HDPE	do		Each	420.00
	(f) Duly Coupled End cap	HDPE	do		Each	140.00
	(g) Sprinkler Attachment	HDPE	do		Each	390.00
	(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	120.00
	(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	240.00
3	**110 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	2.50 Kg/cm2 Class-III		
	(a) 6 Meter Long	HDPE	do		Each	930.00
	(b) 3 Meter Long	HDPE	do		Each	660.00
	(c) Pump Connecting Nipple	HDPE	do		Each	420.00
	(d) Duly Coupled Bend	HDPE	do		Each	390.00
	(e) Duly Coupled Equal Tee	HDPE	do		Each	450.00
	(f) Duly Coupled End cap	HDPE	do		Each	150.00
	(g) Sprinkler Attachment	HDPE	do		Each	420.00
	(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	150.00

	(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	300.00
4	**110 mm** Duly Coupled Portable Sprinkler System		IS: 14151 (PART-II): 1999	3.20 Kg/cm2 Class-III		
	(a) 6 Meter Long	HDPE	do		Each	1025.00
	(b) 3 Meter Long	HDPE	do		Each	720.00
	(c) Pump Connecting Nipple	HDPE	do		Each	420.00
	(d) Duly Coupled Bend	HDPE	do		Each	389.00
	(e) Duly Coupled Equal Tee	HDPE	do		Each	365.00
	(f) Duly Coupled End cap	HDPE	do		Each	150.00
	(g) Sprinkler Attachment	HDPE	do		Each	420.00
	(h) Foot Baton Assembly (75mmX3/4")	GI/HDPE	do		Each	150.00
	(h) Foot Baton Assembly (75mmX1.25")	GI/HDPE	do		Each	300.00
5	20mmx 10 Kg/ cm^2	HDPE - PE-63	IS-4984:1995		Rmt	16.50
	25mmx 10 Kg/ cm^2	HDPE - PE-63	IS-4984:1995		Rmt	22.65
	32mmx 6 Kg/ cm^2	HDPE - PE-63	IS-4984:1995		Rmt	28.65
	32mmx 10 Kg/ cm^2	HDPE - PE-63	IS-4984:1995		Rmt	38.40

ANNEXURE-VIII

Calculation of Project Assistance between Two unit areas for installation of Sprinkler System:-

Sr.No	Command Area (to be covered under irrigation) in hectare)	Recommended cost per Hect.	Cost per Unit	No. of Units	Area coverage in Hect.	Total Cost Rs. In lakh	%age Area coverage.
1	2	3	4	5	6	7	8
1	0.50	34750	17375	7160	3580	1244.05	17.91
2	1.00	37000	37000	5800	5800	2146.00	29.02
3	2.00	36930	73860	2901	5802	2142.68	29.03
4	3.00	36550	109650	799	2397	876.10	11.99
5	4.00	39800	159200	602	2408	958.38	12.05
	Total:-				**17262**	**7367.21**	**100.00**

A) For area coverage between two Unit Areas of command area of 0.50 to 4.00 hect., following formula is to be applied:

Unit Rate of
Lower cost Unit Rate of Higher Cost Model-Unit Rate of Lower Cost Model x Area Coverage above area fixed
Model (Higher Model Area-Lower Model Area
for particular model.

$$109650 + \frac{159200-109650}{(4\text{ Hect.}-3\text{ Hect.})} \times (3.20\text{ Hect.}-3.00\text{ Hect.})$$

$$109650+ \frac{49550}{1} \times 0.20 = 119560 = \text{Or say Rs. } 119560/-$$

So cost of installation of M.I. System in command area of 3.20 hectares covered area will be Rs. 119,560/- only.

B) For calculation of assistance for command area of less than 0.50 hect. but uniform unit rate of 0.50hect will be applicable i.e. 0.16 Hect.CCA , the amount will be 0.16x (17375/ 0.50) = Rs. 5560/-.

ANNEXURE-IX

COST OF PUMPING MACHINERY FOR DIFFERENT MODELS

Model **A**	Single Phase Mono Block pumps with 3,000 RMP for pumping irrigation water				
	S. No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect accessories	Unit cost Rs.
	1	2	3	4	5
	1	1	5920	700	6620
	2	1.5	7240	1200	8440
	3	2	8620	1500	10120
	4	3	13300	2000	15300
	5	5	15510	3000	18510
Model **B**	Three Phase Mono Block Pump sets Centrifugal, RPM 3000 (**For Thanks**)				
	S. No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect accessories	Unit cost Rs.
	1	2	3	4	5
	1	3	11110	3000	14110
	2	5	13740	4000	17740
	3	7.5	16730	4500	21230
	4	10	21730	5000	26730
	5	15	27810	6000	33810
Model **C**	Single Phase Open Well Submersible Pump Sets.(**for SHALLOW WELLS**)				
	S. No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect accessories	Unit cost Rs.
	1	2	3	4	5
	1	1	8410	2500	10910
	2	1.5	10850	3000	13850
	3	2	11470	3500	14970
Model **D**	Three Phase Agriculture Open well Submersible Pump sets, RPM 3000				
	S .No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect. accessories	Unit cost Rs.
	1	2	3	4	5
	1	2 H.P.	11470	3000	14470
	2	3	14680	3500	18180
	3	5	20160	4000	24160
	4	7.5	22430	4500	26930
	5	10	28040	5000	33040
Model **E1**	Bore well Pump sets with Bore size 100 mm dia with 3000 RPM Speed.				
	S. No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect accessories	Unit cost Rs.
	1	2	3	4	5
	1	1	14750	5000	19750
	2	1.5	18750	6000	24750
	3	2	16650	6500	23150
	4	3	21550	7000	28550
Model **E2**	Bore well pump sets with Bore size 150mm dia with 3000 RPM Speed				
	S. No	Rating H.P.	Cost of Pumping Machinery	Add for mech. & elect accessories	Unit cost Rs.
	1	2	3	4	5
	1	7.5 H.P.	26400	12000	38400

Annexure-X

Component –wise Specifications

Drip Emitters:

i) Drip Emitters (on line) shall be of class-A & B category as per IS 13487 : 1992.

ii) Emitter exponent for pressure compensated Drippers shall not be more than 0.2.

iii) Based on water quality, farmer's ability to operate & maintain the systems and / or as explained earlier for specified crop spacing, Bed width and row to row spacing.

Laterals.

i) Maximum lateral length shall be decided considering the following criteria

a) Pressure variation should not be more than 20 %
b) Discharge variation should not be more than 10 %

ii) Total length of lateral for a given field considered in the bill of materials shall not be in excess of the actual calculated requirement, due to standard bundle sizes of companies. Smaller bundle sizes shall also be made available in order to match the calculated requirement of lateral pipe with the actual quantities considered for bill of materials.

Filters :

i) The capacity of filter selected shall not be less than the system flow, but should not be very high when compared with the system.

ii) To obtain un restricted flow through out , choice of disc filters, if the water quality is good without appreciable load of physical impurities. Screen filters work well, when the water is free from sediments. When water is loaded with high contents of physical and biological impurities, then screen filters do not work alone . The system should be insulated from all these problems.

iii) For water sources with sand and other heavier particles, a Cyclone Separator or Hydro cyclone of capacity not less than the system capacity shall be selected. The Cyclone Separator or Hydro cyclone alone shall not be selected and at least a Screen Filter shall be provided after the Cyclone Separator (Where-ever applicable).

iv) For water sources with heavy loads of Biological impurities such as Algae, Trash and other debris, a combination of Media Filter followed by a Screen filter shall be selected.

v) For water sources with heavy loads of sand and other heavy particles combined with biological impurities such a Algae and Trash, a combination of Hydro Cyclone followed by a sand filter followed by a Screen Filter shall be selected.

vi) The additional items as suggested above for different water impurities will be optional and cost is to be met by the farmer.

Fertigation Equipment :

i) Fertigation is compulsory and hence for all drip irrigation systems fertigation equipments (tank or ventury) of suitable capacity proportionate to the Fertigation quantities and frequency of Fertigation shall be selected and recommended.

ii) For efficient fertigation, use of fertilizer injections pumps should be encouraged / promoted.

Valves :

i) Size of the control valves on the mainline and sub mains shall be either of the same size as the pipe size or of one size less than the pipe size. Too large or too small control valves shall not be selected.

ii) While grouping of sub mains into different irrigation sections, One control valve shall be provided for every Group for easy irrigation scheduling.

iii) Flush valves shall be provided at the end of all sub mains.

iv) Air/ Vacuum relief valves shall be provided for every 500m length of mainline and on Sand Filters & Fertigation Tanks.

v) In case of In-line drip systems Air/ Vacuum relief valves with suitable assemblies shall be provided on all sub mains.

Mainline Pipes:

i) Mainline pipes shall be selected for the system flow and shall be based on both of the criteria given below :

   a) Velocity in the pipe shall not exceed 1.5 m/ sec and

   b) Total friction loss in the mainline shall not exceed 3 m.

ii) The pressure rating of the pipes shall be decided based on the pressure prevailing in the system and shall adhere to the following condition :

iii) Maximum allowable pressure at a given point in the system = 80 % of pipe pressure rating.

Submain Pipes :

i) Sub main pipe size shall not be below 32 mm and shall be decided based on the criteria to ,limit the pressure loss in the sub main.

ii) Pressure rating of the sub main shall not be below 10 Kg/cm^2 for PVC and 6Kg /Cm^2 for HDPE for 40 mm and 50 mm and for pipes of 63 mm and above the same shall not be below 4 Kg/cm^2.

iii) IS Code for PVC 4985 and for 4984 for HDPE pipe may be used as main and sub main.

Sprinkler Irrigation System Design :

i) The spacing between sprinklers shall not exceed 60 % of the diameter of throw at the chosen operating pressure and discharge conditions.

ii) The selection of pipe pressure class for the sprinkler pipes shall be based on the operating pressured of the sprinklers.

iii) Sizing of the sprinkler pipes shall be selected for the system flow and shall be based on both of the criteria given below :

   a) Velocity in the pipe shall not exceed 1.5 m /sec and

   b) Total friction loss in the mainline shall not exceed 3 m.

Component –wise List of BIS Standards

i) Screen Filter with latest amendments (IS 12785 :1994)

ii) Media Filter (IS 14606 : 1998).

iii) Hydro cyclone Filter (IS 14743 : 1999).

iv) Disc Filter (IS 12785 : 1994)

v) Polyethylene pipe for Laterals (IS 12786 : 1989).

vi) Emitting Pipe System (IS 13488 : 1992).

vii) On line Emitters (IS 13487 : 1992).

viii) Irrigation Equipment rotating sprinkler Part –I , Design and Operational requirements (Ist revision) (IS 12232 (Part I) :1996).

ix) Irrigation Equipment rotating sprinkler Part –II ,Test method for uniformity of distribution system (Ist revision) (amendment I) (is 12232 (Part II) : 1995).

x) Irrigation Equipments sprinkler pipes specifications Part-I , Polyethylene pipes (IS 14151 (Part –I): 1999).

xi) Irrigation Equipments sprinkler pipes specifications Part-II , Quick couples Polyethylene pipes (IS 14151 (Part –II): 1999).

xii) PVC Pipes for water supply (IS 4985 : 1999).

xiii) Valves (Gate Valve & Non –return valves) – As per ISI specifications.

xiv) Jets /Sprays (IS 14605 : 1998).

xv) Water meters (IS 779 : 1994)

xvi) G.I. Pipes (IS 1239 : 1990).

xvii) G.I. Fittings (IS 1879 : 1987).

xviii) HDPE Pipes (IS 4984 : 1995)

xix) C.I. Non return Valve (IS 5312 – Part I : 1984) (IS 5312 –Part -2 : 1986).

xx) PVC Moulded Fittings (IS 7834 : 1987).

xxi) PVC Fabricated Fittings (IS 10124 : 1988).

xxii) Irrigation Equipment –Design, Installation and Field Evaluation of Micro Irrigation Systems – Code Of Practice (First Revision) (IS 10799 : 1999).

xxiii) C.I. Sluice Valve (IS 14846 : 2000).

Annexure -XI

COST ESTIMATE (As Per Approved Rates)

Indicative requirement of material for Micro -irrigation Scheme (Sprinkler System) for an area of **0.50Hect .**

S.No.	Description of Items	Qty	Unit	Rate	Amount
1	Providing , Laying , jointing in position HDPE pipe of GRADE -PE 63 and PE -80 conforming to IS: 4984: 1995 and suitable for the respective working pressure with all fittings and accessories e.g. Coupling, Tees, bends, reducers, screwed adapters, flanged tail pieces etc.				
	4.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	42	Rmtr	45.00	1890.00
2	Providing and fixing of PP Ball valve of following diameter having flow indicator when lever is removed, security pivot to maintain lever in space, double water tight joint, direct injection stem non mechanical with a base which permits maximum penetration.				
	50mm	1.00	Each	404.56	404.56
	63mm	0.00	Each		
	75mm	0.00	Each		
	90mm	0.00	Each		
	110mm	0.00	Each		
3	Providing & fixing of a double acting Air Release valve 1" dia made of high strength aluminum/plastic with fibre glass reinforced . The Air release valve shall be capable of both releasing and admitting air from and into the line.	1	Each	375.00	375.00
4	Providing and supplying of duly coupled 63mm HDPE based portable sprinkler pipes (IS : 14151-Part -2 Marked) to with stand pressure up to 3.20kg/cm^2				
a	6.00 meters long	22	Each	470.00	10340.00
b	3.00meters long	4	Each	287.00	1148.00
c	Providing 63mm duly coupled bend	3	Each	125.00	375.00
d	Providing duly coupled Tee of 63mm x 63mmx63mm size.	3	Each	203.99	611.97
e	Providing Duly Coupled End cap , 63mm	4	Each	52.00	208.00

f	Providing Sprinkler nozzle 12Meters radius of throw range at a pressure of 1.76 Kg /Cm^2 for discharge of 0.5LPS	2	Each	425.00	390.00
g	Providing 63mm Sprinkler Attachment	2	Each	150.00	300.00
h	Providing Foot Batten Assembly	2	Each	90.00	180.00
i	Providing G.I. Riser pipe 20mm dia and 75 cm long with socket	2	Each	98.10	196.20
j	Providing pump connecting couplers /nipples quick action	1	Each	135.00	135.00
	Total:-				**16553.73**
5	Fittings and Accessories etc. (in2 % of total material cost) Specify nature of fittings with specification and rate (Attach Separate sheet if required)			2 % of material cost	331.07
6	Installation charges including testing (% of material cost)	0.50 Hect.		2 % for the material cost	331.07
	Total:-				**17215.87**
7	Survey , Planning, Designing and Estimation of Systems on individual basis for CCA of different units	0.50 Hect.		1% of the system cost	172.16
	Total:-				**17388.03**
	Unit Cost per Ha.				**34776.06**
	Say				**34750.00**

Annexure-XI

COST ESTIMATE (As per Approved Rates)

Indicative requirment of material for Micro -irrigation Scheme (Sprinkler System) for an area of **1.00 Hect .**

S.No.	Description of Items	Qty	Unit	Rate	Amount
1	Excavation in foundations, trenches etc. in earth work , lift up to 1.50metres stacking the excavted soil not more than 3 meters clear from the edge of the excation and then returning the stacked soil in 15cm in layers, when required into plinths, sides of foundations etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated earth as directed within a lead of 20meters (Pick work 80% and Jumper work 20%) and having X-Section of 0.45m x 0.60m	39.42	Cum	154.73	6099.46
2	Providing and laying cement concrete 1:4:8 (1Cement : 4Sand : 8Graded Stone aggregate 40mm nominal size) and curing complete excluding cost of form work in foundation and plinth	0.07	Cum	2298.00	160.86
3	Half brick masonry in common burnt clay building bricks in cement mortar 1:4 (1Cement : 4Sand)	1.23	Sqm	429.30	528.04
4	Precast Concrete man hole cover in CC1:2:4 over Hydrant	0.03	Cum	3500.00	105.00
	Total cost of Civil Work:-				**6893.36**
5	Providing , Laying , jointing in position HDPE pipe of GRADE -PE 63 and PE -80 conforming to IS: 4984: 1995 and suitable for the respective working pressure with all fittings and accessories e.g. Coupling, Tees, bends, reducers, screwed adapters, flanged tail pieces etc.				
	4.0 Kg /Cm^2 (PE-80 Grade)				
	50mm	150	Rmtr	45.00	6750.00
	Total Length of the Main and a Sub Main	**150**			
6	Providing and Supplying 50mm Hydrant including GI Riser pipe 63mm PP ball valve ,63mm pump connecting nipple, plain concrete grouting for GI Tee, connecting riser pipe with sub main including complete set of fitting etc.	2	Each	1425.39	2850.78
7	Providing and fixing of PP Ball valve of following diameter having flow indicator when lever is removed, security pivot to maintain lever in space, double water tight joint, direct injection stem non mechanical with a base which perrmits maximum penetration.				
	50mm	1	Each	404.56	404.56
8	Providing & fixing of a double acting Air Release valve 1" dia made of high strength aluminum/plastic with fibre glass reinforced . The Air release valve shall be capable of both releasing	1	Each	375.00	375.00

	and admitting air from and into the line.				
9	Providing and supplying of duly coupled 63mm HDPE based portable sprinkler pipes (IS : 14151-Part -2 Marked) to with stand pressure up to 4.00kg/cm^2				
a	6.00 meters long	20	Each	525.00	10500.00
b	3.00meters long	5	Each	336.00	1680.00
c	Providing 63mm duly coupled bend	3	Each	125.00	375.00
d	Providing duly coupled Tee of 63mm x 63mmx63mm size.	3	Each	203.99	611.97
e	Providing Duly Coupled End cap , 63mm	4	Each	62.00	248.00
f	Providing Sprinkler nozzle 12Meters radius of throw range at a pressure of 1.76 Kg /Cm^2 for the discharge of 0.5 LPS	4	Each	425.00	1700.00
g	Providing 63mm Sprinkler Attachment	4	Each	160.00	640.00
h	Providing Foot Batten Assembly	4	Each	90.00	360.00
i	Providing G.I. Riser pipe 20mm dia and 75 cm long with socket	4	Each	98.10	392.40
j	Providing pump connecting couplers /nipples quick action	1	Each	135.00	135.00
	Total of HDPE Pipe work:-				**27022.71**
10	Fittings and Accessories etc. 5% on material cost i.e. Rs.27087.71			5 % for HDPE - Pipe	1351.14
11	Installation charges including testing (5% of material cost i.e.Rs. 27087.71)	1.00 Hect.		5 % for the material cost	1351.14
	Total:-				**29724.99**
	Total of Civil work and Pipe work				**36618.35**
12	Survey , Planning, Designing and Estimation of Systems on individual basis for CCA of different units	1.00 Hect.		1% of the system cost	366.18
	Total:-				**36984.53**
	Unit Cost per Ha.				**36984.53**
	Say			**Rs.**	**37000.00**

Annexure-XI

Bill of Quantity (As per Approved Rates)

Indicative requirement of material for Micro -irrigation Scheme (Sprinkler System) for an area of **2.00 Hect.**

S.No.	Description of Items	Qty	Unit	Rate	Amount
1	Excavation in foundations, trenches etc. in earth work , lift up to 1.50metres stacking the excavted soil not more than 3 meters clear from the edge of the excation and then returning the stacked soil in 15cm in layers, when required into plinths, sides of foundations etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated earth as directed within a lead of 20meters (Pick work 80% and Jumper work 20%) and having X-Section of 0.45m x 0.60m	74.79	Cum	154.73	11572.26
2	Providing and laying cement concrete 1:4:8 (1Cement : 4Sand : 8Graded Stone aggregate 40mm nominal size) and curing complete excluding cost of form work in foundation and plinth	0.13	Cum	2298.00	298.74
3	Half brick masonry in common burnt clay building bricks in cement mortar 1:4 (1Cement : 4Sand)	2.46	Sqm	429.30	1056.08
4	Precast Concrete man hole cover in CC1:2:4 over Hydrant	0.06	Cum	3500.00	210.00
	Total cost of Civil Work:-				**13137.08**
5	Providing , Laying , jointing in position HDPE pipe of GRADE -PE 63 and PE -80 conforming to IS: 4984: 1995 and suitable for the respective working pressure with all fittings and accessories e.g. Coupling, Tees, bends, reducers, screwed adapters, flanged tail pieces etc.				
A	4.0 Kg /Cm^2 (PE-80Grade)				
	40mm	0	Rmtr		
	50mm	100	Rmtr	45.00	4500.00
	63mm	124	Rmtr	71.40	8853.60
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
B	6.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	75	Rmtr	55.00	4125.00
	63mm	0	Rmtr		
	75mm	0	Rmtr		
	90mm	0	Rmtr		

	110mm	0	Rmtr		
	Total Length of the Main and a Sub Main	**299**			
6	Providing and Supplying 50mm Hydrant including GI Riser pipe 63mm PP ball valve ,63mm pump connecting nipple, plain concrete grouting for GI Tee, connecting riser pipe with sub main including complete set of fitting etc.	4	Each	1425.39	5701.56
7	Providing and fixing of PP Ball valve of following diameter having flow indicator when lever is removed, security pivot to maintain lever in space, double water tight joint, direct injection stem non mechanical with a base which perrmits maximum penetration.				
	63mm	1	Each	540.00	540.00
8	Providing & fixing of a double acting Air Release valve 2" dia made of high strength aluminum/plastic with fibre glass reinforced . The Air release valve shall be capable of both releasing and admitting air from and into the line.	1	Each	600.00	600.00
9	Providing and supplying of duly coupled 63mm HDPE based portable sprinkler pipes (IS : 14151-Part -2 Marked) to with stand pressure up to 3.20kg/cm^2				
a	6.00 meters long	37	Each	525.00	19425.00
b	3.00meters long	6	Each	336.00	2016
c	Providing 63mm duly coupled bend	6	Each	125.00	750.00
d	Providing duly coupled Tee of 63mm x 63mmx63mm size.	6	Each	203.99	1223.94
e	Providing Duly Coupled End cap , 63mm	8	Each	62.00	496.00
f	Providing Sprinkler nozzle 12Meters radius of throw range at a pressure of 1.76 Kg /Cm2 for discharge of 0.5LPS	8	Each	425.00	3400.00
g	Providing 63mm Sprinkler Attachment	8	Each	160.00	1280.00
h	Providing Foot Batten Assembly	8	Each	90.00	720.00
i	Providing G.I. Riser pipe 20mm dia and 75 cm long with socket	8	Each	98.10	784.80
j	Providing pump connecting couplers /nipples quick action	1	Each	135.00	135.00
	Total of HDPE Pipe work:-				**54550.90**
10	Fittings and Accessories etc. 5% on material cost i.e. Rs.54537.30/-			5 % for HDPE - Pipe	2727.55

11	Installation charges including testing (5% of material cost i.e.Rs. 54537.30/-)	2.00 Hect.		5 % for the material cost	2727.55
	Total:-				**60006.00**
	Total of Civil work and Pipe work				**73143.08**
12	Survey , Planning, Designing and Estimation of Systems on individual basis for CCA of different units	2.00 Hect.		1% of the system cost	731.43
	Total:-				**73874.51**
	Unit Cost per Ha.				**36937.26**
	Say				**36930.00**

Annexure-XI

COST ESTIMATE (As per Approved Rates)

Indicative requirment of material for Micro -irrigation Scheme (Sprinkler System) for an area of **3.00 Hect.**

S.No.	Description of Items	Qty	Unit	Rate	Amount
1	Excavation in foundations, trenches etc. in earth work , lift up to 1.50metres stacking the excavted soil not more than 3 meters clear from the edge of the excation and then returning the stacked soil in 15cm in layers, when required into plinths, sides of foundations etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated earth as directed within a lead of 20meters (Pick work 80% and Jumper work 20%) and having X-Section of 0.45m x 0.60m	95.44	Cum	154.73	14767.43
2	Providing and laying cement concrete 1:4:8 (1Cement : 4Sand : 8Graded Stone aggregate 40mm nominal size) and curing complete excluding cost of form work in foundation and plinth	0.20	Cum	2298.00	459.60
3	Half brick masonry in common burnt clay building bricks in cement mortar 1:4 (1Cement : 4Sand)	3.69	Sqm	429.30	1584.12
4	Precast Concrete man hole cover in CC1:2:4 over Hydrant	0.09	Cum	3500.00	315.00
	Total cost of Civil Work:-				**17126.15**
5	Providing , Laying , jointing in position HDPE pipe of GRADE -PE 63 and PE -80 conforming to IS: 4984: 1995 and suitable for the respective working pressure with all fittings and accessories e.g. Coupling, Tees, bends, reducers, screwed adapters, flanged tail pieces etc.				
A	4.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	105	Rmtr	45.00	4725.00
	63mm	100	Rmtr	71.40	7140.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		

B	6.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	60	Rmtr	55.00	3300.00
	63mm	55	Rmtr	86.00	4730.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
C	8.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	0	Rmtr		
	63mm	50	Rmtr	109.00	5450.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
	Total Length of the Main and a Sub Main	**370**			
6	Providing and Supplying 50mm Hydrant including GI Riser pipe 63mm PP ball valve ,63mm pump connecting nipple, plain concrete grouting for GI Tee, connecting riser pipe with sub main including complete set of fitting etc.	6	Each	1425.39	8552.34
7	Providing and fixing of PP Ball valve of following diameter having flow indicator when lever is removed, security pivot to maintain lever in space, double water tight joint, direct injection stem non mechanical with a base which perrmits maximum penetration.				
	50mm	0	Each		
	63mm	1	Each	540.00	540.00
	75mm	0	Each		
	90mm	0	Each		
	110mm	0	Each		
8	Providing & fixing of a double acting Air Release valve 2" dia made of high strength aluminum/plastic with fibre glass reinforced . The Air release valve shall be capable of both releasing and admitting air from and into the line.	1	Each	600.00	600.00
9	Providing and supplying of duly coupled 63mm HDPE based portable sprinkler pipes (IS : 14151-Part -2 Marked) to with stand pressure up to 3.20kg/cm^2				

a	6.00 meters long	45	Each	470.00	21150.00
b	3.00meters long	6	Each	287.00	1722.00
c	Providing 63mm duly coupled bend	6	Each	125.00	750.00
d	Providing duly coupled Tee of 63mm x 63mmx63mm size.	6	Each	203.99	1223.94
e	Providing Duly Coupled End cap , 63mm	8	Each	52.00	416.00
f	Providing Sprinkler nozzle 12Meters radius of throw range at a pressure of 1.76 Kg /Cm2 for discharge of 0.5LPS	10	Each	425.00	4250.00
g	Providing 63mm Sprinkler Attachment	10	Each	150.00	1500.00
h	Providing Foot Batten Assembly	10	Each	90.00	900.00
i	Providing G.I. Riser pipe 20mm dia and 75 cm long with socket	10	Each	98.10	981.00
j	Raingun confirming to ISI Marked or equivalent 2" full circle	1	Each	5000.00	5000.00
k	Raingun confirming to ISI Marked or equivalent 1.5" part circle	1	Each	5500.00	5500.00
l	Raingun Tripod stand , length of tripod with legs with legs fully open should not be less than 1 meter (1.5")	2	Each	2310.00	4620.00
m	Providing pump connecting couplers /nipples quick action	1	Each	135.00	135.00
	Total of HDPE Pipe work:-				**83185.28**
10	Fittings and Accessories etc. 5% on material cost i.e. Rs. 83220.28)			5 % for HDPE - Pipe	4159.26
11	Installation charges including testing (5% of material cost i.e.Rs. 83220.28)	3.00 Hect.		5 % for the material cost	4159.26
	Total:-				**91503.80**
	Total of Civil work and Pipe work				**108629.95**
12	Survey , Plalnning, Designing and Estimation of Systems on individual basis for CCA of different units	3.00 Hect.		1% of the system cost	1086.30
	Total:-				**109716.25**
	Unit Cost per Ha.				**36572.08**
	Say				**36550.00**

Annexure- XI

COST ESTIMATE (As per Approved Rates)

Indicative requirement of material for Micro -irrigation Scheme (Sprinkler System) for an area of **4.00Hect**

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S.No.	Description of Items	Qty	Unit	Rate	Amount
1	Excavation in foundations, trenches etc. in earth work , lift up to 1.50metres stacking the excavted soil not more than 3 meters clear from the edge of the excation and then returning the stacked soil in 15cm in layers, when required into plinths, sides of foundations etc. consolidating each deposited layers by ramming and watering and then disposing of all surplus excavated earth as directed within a lead of 20meters (Pick work 80% and Jumper work 20%) and having X-Section of 0.45m x 0.60m	112.99	Cum	154.73	17482.94
2	Providing and laying cement concrete 1:4:8 (1Cement : 4Sand : 8Graded Stone aggregate 40mm nominal size) and curing complete excluding cost of form work in foundation and plinth	0.27	Cum	2298.00	620.46
3	Half brick masonry in common burnt clay building bricks in cement mortar 1:4 (1Cement : 4Sand)	4.92	Sqm	429.00	2110.68
4	Precast Concrete man hole cover in CC1:2:4 over Hydrant	0.12	Cum	3500.00	420.00
	Total cost of Civil Work:-				**20634.08**
5	Providing , Laying , jointing in position HDPE pipe of GRADE -PE 63 and PE -80 conforming to IS: 4984: 1995 and suitable for the respective working pressure with all fittings and accessories e.g. Coupling, Tees, bends, reducers, screwed adapters, flanged tail pieces etc.				
B	4.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	0	Rmtr		
	63mm	112	Rmtr	71.40	7996.80
	75mm	110	Rmtr	84.00	9240.00
	90mm	0	Rmtr		
	110mm	0	Rmtr		
C	6.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	0	Rmtr		

	63mm	100	Rmtr	86.00	8600.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
D	8.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	0	Rmtr		
	63mm	100	Rmtr	109.00	10900.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
E	10.0 Kg /Cm^2 (PE-80 Grade)				
	40mm	0	Rmtr		
	50mm	0	Rmtr		
	63mm	50	Rmtr	131.00	6550.00
	75mm	0	Rmtr		
	90mm	0	Rmtr		
	110mm	0	Rmtr		
	Total Length of the Main and a Sub Main	**472**			
6	Providing and Supplying 63mm Hydrant including GI Riser pipe 63mm PP ball valve ,63mm pump connecting nipple, plain concrete grouting for GI Tee, connecting riser pipe with sub main including complete set of fitting etc.	8	Each	1425.39	11403.12
7	Providing and fixing of PP Ball valve of following diameter having flow indicator when lever is removed, security pivot to maintain lever in space, double water tight joint, direct injection stem non mechanical with a base which permits maximum penetration.				
	50mm	0	Each		
	63mm	0	Each		
	75mm	1	Each	750.00	750.00
	90mm	0	Each		
	110mm	0	Each		
8	Providing & fixing of a double acting Air Release valve 2" dia made of high strength aluminum/plastic with fibre glass reinforced . The Air release valve shall be capable of both releasing and admitting air from and into the line.	1	Each	600.00	600.00

9	Providing and supplying of duly coupled 63mm HDPE based portable sprinkler pipes (IS : 14151-Part -2 Marked) to with stand pressure up to 3.20kg/cm^2				
a	6.00 meters long	52	Each	470.00	24440.00
b	3.00meters long	8	Each	287.00	2296
c	Providing 63mm duly coupled bend	6	Each	125.00	750.00
d	Providing duly coupled Tee of 63mm x 63mmx63mm size.	6	Each	203.99	1223.94
e	Providing Duly Coupled End cap , 63mm	8	Each	52.00	416.00
f	Providing Sprinkler nozzle 12Meters radius of throw range at a pressure of 1.76 Kg /Cm2 for discharge of 0.5LPS	14	Each	425.00	5950.00
g	Providing 63mm Sprinkler Attachment	14	Each	150.00	2100.00
h	Providing Foot Batten Assembly	14	Each	90.00	1260.00
i	Providing G.I. Riser pipe 20mm dia and 150 cm long with socket	14	Each	175.00	2450.00
j	Raingun confirming to ISI Marked or equivalent 2" full circle	1	Each	10500.00	10500.00
k	Raingun confirming to ISI Marked or equivalent 2" part circle	1	Each	12000.00	12000.00
l	Raingun Tripod stand , length of tripod with legs with legs fully open should not be less than 1 meter (2")	2	Each	2475.00	4950.00
m	Providing pump connecting couplers /nipples quick action	1	Each	135.00	135.00
	Total:-				**124510.86**
20	Fittings and Accessories etc. 5% on material cost i.e. Rs. 124774.06)			5 % for HDPE - Pipe	6225.54
21	Installation charges including testing (5% of material cost i.e.Rs. 124774.06)	4.00 Hect.		5 % for the material cost	6225.54
	Total:-				**136961.94**
	Total of Civil work and Pipe work				**157596.02**
22	Survey , Planning, Designing and Estimation of Systems on individual basis for CCA of different units	4.00 Hect.		1% of the system cost	1575.96
	Total:-				**159171.98**
	Unit Cost per Ha.			**Rs.**	**39793.00**
	Say			**Rs.**	**39800.00**

Annexure- XII

Terms and conditions to be followed/observed by the companies shortlisted on the basis of technical and financial bids who already consented for undertaking survey planning, designing and installation of micro irrigation systems (Sprinkler and Drip) on farmer's field under Kisan Bagwan Samridhi Yojna Part-II i.e. diversification of Agriculture through micro irrigation and related infrastructure.

1. The empanelled companies are required to undertake proper survey, planning, designing before installation of Micro Irrigation systems as per site specific field conditions in all the districts of the Pradesh. They will undertake above process after authorization/work orders are issued by the competent authority of the department in favour of the farmer.
2. For the year, 2010-11, a target of 7996 ha area to be brought under M.I. Systems (Sprinkler) has been fixed and each empanelled company is required to install M. I. Systems in an area of 300 hectares (Minimum) till 31.3.2011. Eligibility of a company in future shall depend upon the performance of the company, which shall be evaluated on the basis of its achievements made during this period.
3. Unit cost as approved by the State Level Committee **(ANNEXURE-VII)** shall be the maximum unit cost for allowing project assistance of 80% to an individual farmer. Unit cost has been worked out for an unit area having command area of M.I. System installed 0.5, 1.00, 2.00, 3.00 and 4.00 ha for sprinkler systems and 0.4 ha for drip. It is further clarified that farmers would be eligible for project assistance for command area of less or more than the area for which unit cost has been fixed**.** The sprinkler systems of 0.16 hect (minimum command area) to 0.50 hect will be of portable and all other systems above 0.50 hectares will be semi-permanent or permanent.
4. The Bill of quantity(BOQ) of different ISI and non ISI components to be used for the installation of Micro Irrigation systems as per site specific conditions will not be uniform and will depends upon factors like slope, texture , depth of soil and water source i.e. its location and quantum of water available in the source etc. The dimensions of command area i.e. length, width of different parcels which will constitute command area would actually suggest as to whether the Micro Irrigation system required would be portable, semi permanent or permanent. There may be locations where mini sprinklers, nozzle, (full circle, part circle), rain guns, fixed hydrants of different size and capacity may be required. In all the cases the eligible total cost would remain the same as approved. Therefore, the extra cost over and above the approved unit cost shall be borne by the beneficiaries. The rates finalized for ISI and non ISI components in consultation with all the companies are enclosed as per **ANNEXURE-VII a, b, c**. The companies will use only approved components (ISI and non ISI) and will apply the rates finalized for each component. It is also made clear that in case farmers want to install or use any other components

for which rates have not been approved he may be allowed to do so but the cost of these components shall be borne by the farmers himself.

5. It is expected that after the installation of MI system there will be shift in cropping pattern. Therefore before designing the MI system, it is incumbent upon the companies to compute crop water requirement by taking into consideration all relevant factors i.e. crops to be grown, soil type and availability of water etc.
6. Each company shall have to open its outlets in each district at focal points so that farmers can get logistic support like after sale service etc. These are required to be made functional within one month from the date of empanelment. The companies are also required to keep samples of ISI and non ISI components duly approved by the technical committee of the department in each district at outlets. So that PIA's can verify the quality of material/ component used for the installation of MI system on the basis of counter samples. The companies shall provide user manual in Hindi or English to the farmers free of cost. The manual should contain all details regarding after sale service centers and contact person with telephone number and details with regard to operation and maintenance of MI systems.
7. The empanelled companies shall enter to an agreement with the farmers and for that format has been prescribed **(ANNEXURE-V).** The company will not charge more than 20% of the total project cost as an advance. The company will take advance at the time of dumping of material at the site as per agreement. The project assistance shall be released to the companies through farmer after testing of MI system installed to the entire satisfaction of the farmer and PIA. In case farmer had availed bank loan then the assistance will be released to those beneficiaries through bank.
8. The unit costs as well as components costs approved for different type of MI systems are inclusive of all taxes and carriage of material up to road head both kuccha and pucca. The head load if any will be borne by the beneficiaries. These rates will be applicable uniformly throughout state.
9. The companies are expected to provide full facilitation to the farmers i.e. the designing of MI system should be based on correct survey of the site and it should contain the design of pumping machinery, rising main and the on farm delivery system.
10. The installed MI system can be inspected and evaluated by the officers of the Agriculture Department, funding agency (NABARD), any other designated officer of the state Govt. or it can be done by authorized third party.
11. The company shall have to pay bank guarantee of Rs.5.00 lacs duly pledged in the name of Director of Agriculture, Himachal Pradesh before empanelment.

12. The choice of service provider/ company for the installation of MI systems would depend upon the choice of the farmers; therefore work to be done by a particular company shall depend upon their efficiency and credibility.
13. The completion period of the M.I. system has been kept 75 days from the date of agreement. In case the company fails to complete the installation within 75 days, then company will be liable to refund the entire 20 % beneficiary share with 20% interest, which will be charged from the date of agreement. In case of such repeated defaults, appropriate action against company shall be initiated which will include de-empanelment, blacklisting and forfeiture of bank guarantee as the case may be.
14. During the implementation of project the department can impose any other condition as per need and circumstances in consultation with companies.