

Norms & Guidelines for Protected Cultivation for the year 2018-19

Under Departmental Schemes



Department of Horticulture

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Norms and Guidelines for Protected Cultivation under Departmental schemes – 2018-19

1. Process of Application

i. The execution of work shall be covered under following scope of work :-

| S N | Stage/Work | Type of Work and action to be taken | Duty Assigned | Time Frame |
|-----|--|---|---|--|
| 1 | Application | Submission of application along with the details and uploading of all documents as per poly net | Farmer | Application will remain valid for 30 days after completion of application process. |
| 2 | Document/ Site/ Farmer Verification | Identification of farmer along with verification of documents of case uploaded by farmer and checking of estimate uploaded by farmer as per norms & guidelines and checking of site clearance. | Horticulture Extension officer | Within 11 days from the date of upload of estimate. |
| 3 | Sanction | Accord sanction for installation of structure on recommendation of Horticulture Development Officer | District Horticulture Officer | Within 10 days from the date of recommendation by Horticulture Extension Officer. |
| 4 | Installation of Poly house/ Net house/ Walk in Tunnels | Structure installation at farmers' field. | Farmer | Within 90 Calendar days from the date of sanction. |
| 5 | Physical Verification | Physical Verification of poly house/net house/walk-in-tunnels Installed at farmers' field. | DDH (Field), DHO & concerned HDO and any other nominee. | Within 15 working days from the date of installation intimation. |
| 6 | Release of assistance | After successful physical verification of poly house/net house/walk-in-tunnels by Deptt. team, subsidy shall be released directly in the Aadhar seeded Bank Account of beneficiary through DBT. | DHO | Within 15 working days from the date of successful physical verification and subject to availability of funds. |

- ii. The farmer has to apply online/Poly Net either in office of DEPARTMENT or from its own resources for generation of application number as per check-list attached at **Annexure – I**. Farmers are advised to take advice from DEPARTMENT Extension Officers for suitability of erection of Protected Structure and cultivation of crops inside. Farmers shall follow the instructions of Soil & Water testing laboratory.
- iii. On submission of complete documents, the application shall be approved and the seniority shall be maintained from date of approval. The seniority shall be maintained for 30 days, if farmer not start construction work within 30 days after sanction, sanction will be canceled.
- iv. On completion of structure by farmer and on his request the inspection shall be carried by DEPARTMENT.
- v. On the basis of physical verification conducted by JIT the assistance shall be released in the Aadhar seeded bank account of beneficiary directly through Direct Benefit Transfer (DBT).
- vi. Approval shall not be granted if protected structure is already installed.

2. **Eligibility Criteria for applicant:**

- i. Farmers who have taken assistance from any scheme of State or Govt. of India upto prescribed limit shall not be eligible for assistance under the scheme.
 - ii. All applications received during current financial year shall be eligible for assistance as per seniority list and as per these norms and guidelines.
 - iii. Minors are not eligible.
 - iv. Applicant who has Agriculture land in Haryana can be a beneficiary under the schemes. The document viz. Aadhar card/Ration card/voter card/Domicile/Passport etc. is required.
 - v. Farmer means a person having land ownership in one's name and to submit revenue proof to this effect. All the documents submitted shall not be more than six months old. Farmer includes farmer's family, means husband, wife and their children. Ration card is required to prove family unit, however, separate electricity bill can be a proof of separate family identity for the purpose of application and availing subsidy in case one does not have Ration Card.
 - vi. The adult son/daughter or in case of his/her death, his/her widow/widower and children shall be deemed to be living with the parents or either of them. The adult son/daughter shall only be considered as separate unit only when separated from parents. It means they live separate from parents and this can be verified by means of separate electricity bill can be a proof of separate family identity for the purpose of application and availing subsidy in case one does not have Ration Card.
 - vii. Department promotes cluster and for that farmers of Haryana (having land in his/her name in Haryana state) can take land on lease under departmental schemes except SCSP scheme only. But in all such cases the projects should be bankable and lease agreement must be minimum for 8 years.
 - viii. Under SCSP scheme no lease applicant shall be eligible for availing subsidy.
3. Only those applicants are eligible to apply who did not availed assistance on account of Protected Cultivation in his/her name/spouse name or in name of dependent member of his/her family from any Government agency.
4. **Application Forms and formats:** The sample forms and formats are annexed at **Annexure-II**.
5. **Assistance Limit:** The assistance shall be applicable on the basis of cost norms given below based on guidelines for erection of Poly House, Net House and WIT under departmental scheme 2017-18.

A. IHD Scheme – 2018-19

Table 1: For beneficiary who have taken land on lease and beneficiary who have total land more than 5 acre - Plain Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | IHD |
|---------|---|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (50%) |
| A | Naturally Ventilated Poly house (NVPH) | Up to area 500sqm | 850 | 425.00 |
| | | >500sqm up to 1008 sqm | 800 | 400.00 |
| | | >1008sqm up to 2080 sqm | 750 | 375.00 |
| | | >2080sqm up to 4000 sqm | 725 | 362.50 |
| B | Poly house with fan and pad cooling system (NVPH) | Up to area 500sqm | 1307 | 653.50 |
| | | >500sqm up to 1008 sqm | 1277 | 638.50 |
| | | >1008sqm up to 2080 sqm | 1197 | 598.50 |
| | | >2080sqm up to 4000 sqm | 1150 | 575.00 |
| C | Net House-Tubular structure | with plastic top as addition; >4.00 m height | 600 | 300.00 |
| | | Dome shape; >4.00 m height | 550 | 275.00 |
| | | Flat shape-all GI; 4.0 m height | 475 | 237.50 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 349 | 174.50 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 590 | 295.00 |
| | | 5.0 m height | 740 | 370.00 |

Table 2: For beneficiaries who have taken land on lease and beneficiaries who have total land more than 5 acre - Hilly Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | IHD |
|---------|--|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (50%) |
| A | Naturally Ventilated Polyhouse (NVPH) | Up to area 500sqm | 977 | 488.50 |
| | | >500sqm up to 1008 sqm | 920 | 460.00 |
| | | >1008sqm up to 2080 sqm | 862 | 431.00 |
| | | >2080sqm up to 4000 sqm | 834 | 417.00 |
| B | Polyhouse with fan and pad cooling system (NVPH) | Up to area 500sqm | 1503 | 751.50 |
| | | >500sqm up to 1008 sqm | 1469 | 734.50 |
| | | >1008sqm up to 2080 sqm | 1377 | 688.50 |
| | | >2080sqm up to 4000 sqm | 1322 | 661.00 |
| C | Net House-Tubular structure | with plastic top as addition; >4.00 m height | 690 | 345.00 |
| | | Dome shape; >4.00 m height | 632 | 316.00 |
| | | Flat shape-all GI; 4.0 m height | 546 | 273.00 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 401 | 200.50 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 678 | 339.00 |
| | | 5.0 m height | 851 | 425.50 |

Table 3: For beneficiaries who have total land 5 acre or less – Plain Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | IHD |
|---------|--|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (65%) |
| A | Naturally Ventilated Polyhouse (NVPH) | Up to area 500sqm | 850 | 552.50 |
| | | >500sqm up to 1008 sqm | 800 | 520.00 |
| | | >1008sqm up to 2080 sqm | 750 | 487.50 |
| | | >2080sqm up to 4000 sqm | 725 | 471.25 |
| B | Polyhouse with fan and pad cooling system (NVPH) | Up to area 500sqm | 1307 | 849.55 |
| | | >500sqm up to 1008 sqm | 1277 | 830.05 |
| | | >1008sqm up to 2080 sqm | 1197 | 778.05 |
| | | >2080sqm up to 4000 sqm | 1150 | 747.50 |
| C | Net House- Tubular structure | with plastic top as addition; >4.00 m height | 600 | 390.00 |
| | | Dome shape; >4.00 m height | 550 | 357.50 |
| | | Flat shape-all GI; 4.0 m height | 475 | 308.75 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 349 | 226.85 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 590 | 383.50 |
| | | 5.0 m height | 740 | 481.00 |

Table 4: For beneficiaries who have total land 5 acre or less – Hilly Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | IHD |
|---------|--|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (65%) |
| A | Naturally Ventilated Polyhouse (NVPH) | Up to area 500sqm | 977 | 635.05 |
| | | >500sqm up to 1008 sqm | 920 | 598.00 |
| | | >1008sqm up to 2080 sqm | 862 | 560.30 |
| | | >2080sqm up to 4000 sqm | 834 | 542.10 |
| B | Polyhouse with fan and pad cooling system (NVPH) | Up to area 500sqm | 1503 | 976.95 |
| | | >500sqm up to 1008 sqm | 1469 | 954.85 |
| | | >1008sqm up to 2080 sqm | 1377 | 895.05 |
| | | >2080sqm up to 4000 sqm | 1322 | 859.30 |
| C | Net House- Tubular structure | with plastic top as addition; >4.00 m height | 690 | 448.50 |
| | | Dome shape; >4.00 m height | 632 | 410.80 |
| | | Flat shape-all GI; 4.0 m height | 546 | 354.90 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 401 | 260.65 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 678 | 440.70 |
| | | 5.0 m height | 851 | 553.15 |

*= Cost norms means upper limit of cost for calculation of subsidy

B. SCSP Scheme – 2018-19

Table 1: SC beneficiaries who have own land on his/ her name - Plain Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | SCSP |
|---------|---|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (90%) |
| A | Naturally Ventilated Poly house (NVPH) | Up to area 500sqm | 850 | 765.00 |
| | | >500sqm up to 1008 sqm | 800 | 720.00 |
| | | >1008sqm up to 2080 sqm | 750 | 675.00 |
| | | >2080sqm up to 4000 sqm | 725 | 652.50 |
| B | Poly house with fan and pad cooling system (NVPH) | Up to area 500sqm | 1307 | 1176.30 |
| | | >500sqm up to 1008 sqm | 1277 | 1149.30 |
| | | >1008sqm up to 2080 sqm | 1197 | 1077.30 |
| | | >2080sqm up to 4000 sqm | 1150 | 1035.00 |
| C | Net House-Tubular structure | with plastic top as addition; >4.00 m height | 600 | 540.00 |
| | | Dome shape; >4.00 m height | 550 | 495.00 |
| | | Flat shape-all GI; 4.0 m height | 475 | 427.50 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 349 | 314.10 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 590 | 531.00 |
| | | 5.0 m height | 740 | 666.00 |

Table 2: SC beneficiaries who have own land on his/ her name - Hilly Area

| Sr. No. | Type of Structure | Size Range | Cost norm*Rs./ per sqm | SCSP |
|---------|--|--|------------------------|---------------------------|
| | | | | Total Subsidy limit (90%) |
| A | Naturally Ventilated Polyhouse (NVPH) | Up to area 500sqm | 977 | 879.30 |
| | | >500sqm up to 1008 sqm | 920 | 828.00 |
| | | >1008sqm up to 2080 sqm | 862 | 775.80 |
| | | >2080sqm up to 4000 sqm | 834 | 750.60 |
| B | Polyhouse with fan and pad cooling system (NVPH) | Up to area 500sqm | 1503 | 1352.70 |
| | | >500sqm up to 1008 sqm | 1469 | 1322.10 |
| | | >1008sqm up to 2080 sqm | 1377 | 1239.30 |
| | | >2080sqm up to 4000 sqm | 1322 | 1189.80 |
| C | Net House-Tubular structure | with plastic top as addition; >4.00 m height | 690 | 621.00 |
| | | Dome shape; >4.00 m height | 632 | 568.80 |
| | | Flat shape-all GI; 4.0 m height | 546 | 491.40 |
| | | Flat shape- Cable purlin, 4.0 m ht. | 401 | 360.90 |
| D | Walk-In-Tunnel (WIT)/ Single Span NVPH | 3.5 m height | 678 | 610.20 |
| | | 5.0 m height | 851 | 765.90 |

*= Cost norms means upper limit of cost for calculation of subsidy

Optional Component Under Net House

Norms

In the specifications of INH and net house with cable purlins, Aluminium Screen and shading net has been mentioned as optional component. Following are the rate per sqm of these components.

| <u>Item</u> | <u>Unit Rate</u> |
|--|------------------|
| 1. Aluminium Screen | Rs. 79 per sqm. |
| 2. Shading Net 35 to 65% minimum 75 GSM to 90 GSM plastic as top is dome top | Rs. 29 per sqm. |

If any farmer willing to install optional component then he/ she will be given additional subsidy on the basis of unit rate mentioned against the item as above subject to size of protected structure sanctioned. Subsidy limit and percentage shall remain same as of protected structure under the guidelines.

Note: Any material/ component found absent that amount shall be deducted.

6. **Area Limit:** the total area limit for assistance per beneficiary is 4000 sqm irrespective of type of structure e.g. one farmer beneficiary can take assistance on either one or in combination of different structure types (NVPH/HTGH/WIT/Net House) up to maximum limit of 4000 sqm.
7. **Technical Specifications:** The technical specifications of Poly House, Net House and Walk-in-Tunnels is enclosed at **Annexure – III to VIII**.
8. **Training:** The farmers are advised to have a minimum three days training-cum-workshop regarding awareness on Protected Cultivation, issues related to Cultivation, Construction and Maintenance of Poly houses.
9. **Sanction:** The cases shall be entertained on First Come First Serve Basis. The sanction shall be issued as per norms & guidelines and availability of budget. All the structures sanctioned during current financial year should be completed during same financial year. The validity of sanction letter shall be 90 days or 31st March, whichever is earlier from the date of issue. If farmer not start construction work within 30 days after sanction, sanction will be canceled. In case of bankable projects, the financing banks may refer booklet on ‘Model Bankable Project on Protected Cultivation in Haryana’ published by NABARD, Haryana Regional Office, Chandigarh for issue of loan sanction letter and appraisal report. For release of assistance, the priority shall be given for the projects that are completed on time. If funds are not available, the assistance may not be released.
10. **Construction of Protected Structures:** As farmer is executing the erection and supposed to supervise his/her structure during execution of work, therefore, the farmer is responsible for quality of material and in such cases, Department shall release the subsidy as per fixed norms. Farmer shall undertake installation activity after receiving sanction from DEPARTMENT and complete installation work in a maximum period of **90 calendar days**. The start of period shall be counted from the date of issue of sanction letter. The farmer shall be responsible and liable for installation of structure as per standards applicable.

If the farmer got executed installation of protected structure through the firm, in that case the firm has to provide approved structure and design to the farmer. Such structure must be approved from any authorized Govt. agency in India and abroad. However, minimum standards prescribed under point 7 above shall be followed.

The farmers are advised to complete the construction work of structures within same financial year.

11. Inspection:

- i. **GPS coordinate shall be taken of each and every site and to be mentioned in inspection proforma enclosed at Annexure-IX.**
 - ii. **First Inspection:** First inspection shall be conducted by Joint Inspection Team (JIT) of DEPARTMENT consisting of DDH (Field), DHO & HDO concerned and/ or any other nominee appointed by DGH, just after supply of material and completion of foundation work. This inspection will be conducted after call from farmer in written to DHO with assurance that the material supplied is as per component list and the foundation work is complete as per departmental specifications and quantity as per design excluding cladding material. The farmer will keep representative sample of all the components. The JIT may check any of the used material at site and farmer has to facilitate it. In case of bankable cases representative from bank shall be the member of Joint Inspection Team (JIT).
 - iii. **Final Inspection:** Final inspection shall be conducted by JIT of DEPARTMENT (DDH (Field), DHO & HDO concerned and/ or any other nominee appointed by DGH) after intimation by Farmer to DHO, after completion of structure in all respects. Farmer will remain present at the time of physical inspection to be carried out. . In case of bankable cases representative from bank shall be the member of Joint Inspection Team (JIT). The intimation of first and final inspection shall be conveyed to financing bank.
- 12. Release of assistance:** The assistance shall be released to farmer after completion of structure in all respects. **The assistance** shall be calculated based on the cost and assistance limit prescribed in point 5 above. Subsidy shall be released to the farmer beneficiary or to the bank as mentioned below:
- i. **Non- bankable projects:**
 - a) The assistance shall be released directly in the aadhar seeded bank account of beneficiary through DBT only in single instalment after completion of structure in all respects and submission of following documents
 - i. Completion certificate,
 - ii. Final inspection report
 - b) Release is subject to availability of funds. Any amount that may be withheld, due to any shortcoming, shall be released on removal of shortcomings. The penalty if any shall be deducted accordingly. Farmer shall be fully responsible for quality and quantity of material used and also for maintenance and repair thereof.
 - ii. **Bankable projects:** A stakeholders' meet on protected cultivation was held on dated 05-05-2014 in NABARD office. It was decided that in bankable projects only farmer share shall be financed and release of assistance in case of such bank financed project shall be as follows:
 - **Release of assistance from DEPARTMENT to bank**
 - **First Instalment:** DEPARTMENT will release 50% of total eligible subsidy to the bank just after issue of sanction letter in subsidy reserve fund/ account of financing bank.

- **Second Instalment:** Second instalment shall be based on satisfactory second inspection report and amount worked out on the basis of completion of structure and penalty if any. This amount is to be released to the bank after final inspection report.
- **Release of assistance from bank to beneficiary**
 - The bank shall release assistance to the farmer. The assistance shall be released as one instalment on the basis of final inspection report and insurance policy.
 - The bank will submit to DEPARTMENT the utilization certificate of subsidy released.
 - The balance lying to the credit of the subsidy reserve funds A/c will not form the part of the Demand and Time Liabilities for the purpose of SLR/CRR. Suitable instructions in this regard by the **RBI** from time to time would be followed.

13. **Farmer Liability**

- i. Land should be suitable for installation of protected structures.
- ii. The farmer will be fully responsible to maintain the structure and cultivate the crops. The beneficiary is bound to utilize the protected structure for a minimum of 8 years period after the completion of structure, failing when the beneficiary is bound to return the assistance provided to him & legal action shall be initiated against the defaulting farmer. In this regard, the concerned beneficiary undertakes the purposeful utilization of structure.
- iii. The beneficiaries should avail training regarding maintenance of structure and crop cultivation in protected structure from department of Horticulture or other reputed Institute.
- iv. The insurance of protected structure (NVP/HTGH/INH/WIT) shall be the responsibility of farmer. Department shall not be responsible for cropping plan yield, crop damage, damage to structure etc. what so ever the reason may be.

14. **Norms for Assistance on Cost of Cultivation:**

- i. The application for assistance on cost of cultivation shall be considered only after completion of structure.
- ii. **For Vegetables**
 - Only vegetables suitable for protected structure shall be considered for assistance namely vegetables which are trained on trellising. Vegetables which are grown under open conditions successfully shall not be considered for assistance.
 - District Extension Officer shall inspect the field and recommend for release of assistance.
 - The assistance shall be given in one instalment one month after plantation.
 - The assistance shall be calculated on pro rata basis i.e. number of plants per sqm.
 - The beneficiary farmer shall have to submit the following:
 - Invoice/ bill of seed or planting material in the protected structure
 - Invoice/ bill of mulching sheet
 - For other inputs bills are not required. It is presumed that farmers have applied the required inputs viz. fertilizers, insecticides, etc. However, inspecting officer shall ensure that the plants are in good condition at site.
 - Scheme wise assistance is as under:

| Unit Cost Rs. per sqm | IHD @ 50% | SCSP @ 90% |
|------------------------------|------------------|-------------------|
| 140 | 70 | 126 |

iii. **In case of flowers:**

The assistance shall be released on the basis of:

- JIT (DDH(field), DHO & HDO concerned) will inspect bulbs/planting material before sowing by the farmer
- Original copy of purchase bill and proof of source of planting material (Seed/Bulb/Tissue Culture/Imported) is to be submitted.
- To ensure that farmer shall submit PEQ certificate by CCS, HAU Hisar for availing subsidy on flower bulbs grown under protected structures (poly house/net house/walk-in-tunnels)
- Without PEQ, certificate subsidy shall not be released on any cost.
- The assistance shall be given in two instalments of 50% each. The first instalment shall be given after one month of sowing/plantation. The second instalment shall be given after three months of plantation.
- The assistance shall be calculated on pro rata basis i.e. number of plants per sqm.
- Planting Material Cost Norms grown under poly house/net house/walk-in-tunnels per sqm are as under:

| S No. | Item | Lilium | | | Rose | | | Carnation | | | Gerbera | | | Chrysanthemum | | |
|-------|--|------------------|----------------------|------------|-----------------|-----------------------|------------|------------------|-----------------------|------------|-----------------|-----------------------|------------|-----------------|----------------------|------------|
| | | Unit | Rate | Amt | Unit | Rate | Amt | Unit | Rate | Amt | Unit | Rate | Amt | Unit | Rate | Amt |
| 1 | Soil Sterilization | | | | | | | | | | | | | | | |
| | Formalin & Plastic sheet | | lump sum | 25 | | lump sum | 25 | | lump sum | 25 | | lump sum | 25 | | lump sum | 25 |
| 2 | Planting Material | 22 nos. Per sqm. | Avg. @ 13/- per bulb | 286 | 7 nos. Per sqm. | Avg. @ 20/- per plant | 140 | 22 nos. Per sqm. | Avg. @ 12/- per plant | 264 | 7 nos. Per sqm. | Avg. @ 35/- per plant | 245 | 8 nos. Per sqm. | Avg. @ 9/- per plant | 72 |
| 3 | Fertilizer | | | | | | | | | | | | | | | |
| a) | Organic (FYM/Vermi-compost/bone meal/neem cake) | | lump sum | 39 | | lump sum | 39 | | lump sum | 39 | | lump sum | 39 | | lump sum | 39 |
| b) | Chemical Fertilizers | | lump sum | 40 | | lump sum | 60 | | lump sum | 60 | | lump sum | 60 | | | |
| c) | Rice husk/ coco-peat/ inert material | | lump sum | 17 | | lump sum | 17 | | lump sum | 17 | | lump sum | 17 | | lump sum | 17 |
| 4 | Preventive Sprays | | lump sum | 3 | | lump sum | 5 | | lump sum | 5 | | lump sum | 5 | | lump sum | 5 |
| 5 | Other accessories | | | | | | | | | | | | | | | |
| | flower support system | | lump sum | 16 | | lump sum | 0 | | lump sum | 104 | | lump sum | 0 | | lump sum | 24 |
| | Total amount | | | 426 | | | 286 | | | 514 | | | 391 | | | 242 |
| | Eligible assistance | | | | | | | | | | | | | | | |
| | IHD @ 50% | | | 213 | | | 143 | 0 | 0 | 257 | 0 | 0 | 196 | 0 | 0 | 121 |
| | SCSP @ 90% | | | 383 | | | 257 | | | 462 | | | 351 | | | 217 |
| | <i>Note:</i> | | | | | | | | | | | | | | | |
| | 1. For Dahlia crop total estimated cost is Rs. 190/- per sqm and eligible assistance is @ 50% i.e. Rs. 95/- per sqm under IHD and @ 90% i.e. Rs. 171/- sqm under SCSP. | | | | | | | | | | | | | | | |

After sales service: The farmer will take care of structure and maintain for a period of 8 years and will not misuse, change/ modify/ remove/ dispose/ sale the structure.

15. **Testing of Material**: The farmers/beneficiaries may get tested their material used in protected structures from Central Institute for Plasticulture Engineering and Technology, Murthal, Distt.- Sonapat, Haryana or any other Govt. recognised institutes.
16. **Refund of Assistance**: It is assumed that Govt. assistance is provided to the desired beneficiary. In case of any misleading information/facts from beneficiary or by mistake, the beneficiary has to refund assistance amount back to the Government/DEPARTMENT.
17. **Jurisdiction**: For any kind of dispute the jurisdiction shall be of concerned district headquarter only.

CHECK LIST OF DOCUMENTS

(To be submitted by farmer to DHO at the time of application)

From: Name of farmer: _____ s/o;d/o;w/o Sh _____
VPO: _____ Teh. _____
Distt. _____
Contact No. _____

To :

District Horticulture Officer _____

Dear Sir,

Kindly find attached the self-attested copies of following documents:

| S. No. | Particulars | Document Attached (Yes or No) |
|---------------|---|--------------------------------------|
| 1. | POLYNET Registration No. | |
| 2. | Application form (duly filled and signed by applicant, no column shall be kept blank, cutting and over-writing not allowed and latest self-attested photograph of the applicant on specified space must be affixed) | |
| 3. | Copy of Ration Card/ Electricity Bill (self-attested) | |
| 4. | Cost- Estimate, specification and design of structure (duly attested and submitted by farmer) | |
| 5. | Original Copy of Land Records – (not issued before six month back) With <i>Intkal/Zamabandi,sizra</i> latest with Signature of <i>Patwari/Kanungo/Tehsildar</i> (Name of the farmer in land record must be matched with name mentioned in Identity of farmer) | |
| 6. | i) In case of Joint Land Shareholders if Any, undertaking of farmer (as per Form No 4). | |
| | ii) In case of Joint Land Shareholders only, Land Verification Report of Patwari as per form No. 5 (cutting and over-writing is not allowed in land verification report of Patwari, all columns must be filled up and signed by Patwari as per performa). | |

The case is hereby submitted for further necessary action please.

Dated:

Signature

(Name of Farmer)

CHECK LIST OF DOCUMENTS

(To be submitted by farmer to Bank for availing bank loan for protected cultivation)

From: Name of farmer: _____ s/o;d/o;w/o Sh _____
VPO: _____ Teh. &Distt. _____
Contact No. _____
To : The Branch Manager, _____

Dear Sir,

Kindly find attached the self-attested copies of following documents:

1. Furd Jamabandi (Land Ownership Records)
2. Khasra Girdawari (Cultivation Rights)
3. Irrigation facility – Good quality Water
4. Drainage facility
5. Soil Water test report from Agril Dept./Horticulture Dept
6. Electricity Facility
7. Land well connected with market
8. Progressive farmers who are already following modern agricultural technologies and have some experience/training in Green house/Poly house (or) Farmers already growing vegetables using latest technologies
9. KYC Documents
 - Identity Proof
 - Address Proof
10. Passport Size Photographs

Margin: 10% of the project cost

Repayment: 5 to 7 years

Reference: Codified Farm Credit Circular No. 01/13 dated 15.01.2013

DEPARTMENT OF HORTICULTURE
Application Form (Form-1)
(Free of cost)

To be filled by farmer

Affix self-
attested
passport
size
photograph

1. General information

- Name of Scheme: _____
- POLYNET Registration No: _____
- Applicant Category : _____ (Big Farmer/Marginal Farmer/Small Farmer/Other Farmer).

2. General Details of Farmer

- Farmer Name: _____ S/o/D/o/W/o: _____
- Category (Social Status) _____ (GEN/ BC/SBC/SC/ST/Others)
- Gender: _____ (M/F), Date of Birth: _____
- Educational Qualification _____
- AADHAR No.: _____
- Address: House No.: _____ Gali/Street No. : _____

Village: _____ Panchyat: _____ Block: _____ Tehsil :
_____ District: _____ State : _____ Pin Code :
_____ Phone No. (with STD Code) _____ Mobile No. _____

• Land detail of farmer

- i) Land address: Village: _____ Block: _____
Tehsil: _____ District: _____
- ii) Total land: _____ (acres)
- iii) Land Status: _____ (Own/Lease)
- iv) Poly house/Net house/WIT proposed area : _____ (sqm)
- v) Name of high value vegetable/flower crop to be grown:
- vi) Khasra No. & field No. with *sizra* where structure is to be installed (Land Survey No): _____

3. Bank details (Farmer where subsidy is to be transferred):

- Name of Bank: _____
- Branch Name: _____
- IFSC code: _____
- Account No. /Subsidy reserve account No: _____

4. Whether availed subsidy benefit earlier under this component: _____(Y/N)

if yes, details:

| S. No. | Type of structure | Area (m ²) | Year of installation | Subsidy amount availed (Rs.) | Name of Authority/Dept. |
|--------|-------------------|------------------------|----------------------|------------------------------|-------------------------|
| | | | | | |

5. Cost of structure: Rs. _____per sqm.

6. I/We undertake that:

- 6.1 The dimensions of the structure will fall within area as per revenue record and *sizra*.
- 6.2 The source of irrigation water is available at site.
- 6.3 The Soil & water of site are suitable for crop cultivation.
- 6.4 The proposed site for structure is free from any kind of obstacles. It has minimum distance of 6.5 m or equal to height of boundary wall/other structure whichever is higher from these structures and minimum distance of 5 m from electric pole and wires and to avoid site through which electric wires crisscross, if any.
- 6.5 My/our site is not prone to water stagnation.
- 6.6 Water table is not so high to affect foundation and subsequent cultivation at my/our site.
- 6.7 My/our site has efficient drainage facility.
- 6.8 I/and my fellow farmers agree that I/we have not availed any kind of assistance from any Govt. agency under this component.
- 6.9 That I/we have sufficient knowledge to install and run the protected structure. DEPARTMENT is nowhere responsible.
- 6.10 I/and my fellow farmers agreed to follow the minimum prescribed specifications and terms and conditions lay by Govt./DEPARTMENT.
- 6.11 I/we shall execute the work of MI component through companies/firms registered in Haryana State.
- 6.12 I/we shall intimate DEPARTMENT after completion of structure in all respects. I shall remain present and cooperate at the time of physical inspection to be carried out.
- 6.13 As per requirement of Government contribution entitlement, I/we will maintain structure for 8 years from the date of completion of structure. In case structure is not available on my field during 8 years from the date of completion of structure due to any of reasons, I shall not be entitled for any benefit of subsidies under Govt. scheme and DEPARTMENT is free to take any action against me. Further, I shall return the Govt. subsidy to DEPARTMENT

- 6.14 I/we agreed not to change/modify/remove/dispose/sale the structure during the 8 years period. I shall note that DEPARTMENT will not be responsible for any consequences like Government contribution entitlement variation due to amendments issued by Government, reduction in yield, crop damages etc. arising out of such change/modification/removal/disposal/sale/damage of the structure by me.
- 6.15 In case of any damage due to natural calamities either during construction or thereafter I/we shall be responsible, DEPARTMENT shall not be responsible in anyway.
- 6.16 I/we shall get insured my structure from insurance company and shall be responsible for the same.
- 6.17 I/we should not lodge any false complaint/claim or to create any unpleasant situation and try to settle differences and disputes if any amicably and as far as possible at local level.
- 6.18 I shall abide by the norms and guidelines.

7. I declare that whatever information I have given above is true and any misleading information from my side makes me liable to reject my case for sanction. Violation of any terms and conditions, department may take any appropriate action against me.

Date:

Yours faithfully

Signature of farmer
(Name: _____)

Encls: Documents as per checklist.

(For office use only)

| | |
|---|--|
| Application receipt No. & Date: | |
| Date of document checking | |
| Whether suitable for construction for Protected Structure? (Yes/No) | |
| Whether recommended for sanction? (Yes/No) | |
| Document & site checked by : (Name & designation: _____ Signature : _____ Date : _____ | |

DEPARTMENT OF HORTICULTURE
Sanction letter (Form-2)

To

_____ (Farmer Name)
S/o/D/o/W/o : _____ House No.: _____
Gali/Street No. : _____ Village: _____ Block:
_____ Tehsil: _____ District: _____

Memo. No. _____ **Dated:** _____

Subject: Sanction letter for installation of poly house/net house.

Ref: Memo. No. _____ **dated** _____.

With respect to above cited subject and reference the sanction is hereby issued to Sh./Smt. _____ Vill. _____, District _____ with the following details:

| Application No. | Name of scheme | Type of structure (Poly house/net house/ WIT) | Area of structure (sqm.) and dimension of structure | Total estimated cost (Rs.) | Estimated assistance amount (Rs.) |
|-----------------|----------------|---|---|----------------------------|-----------------------------------|
| | | | | | |

We issue this sanction letter based on your submission of documents. The sanction is granted subject to the following conditions-

1. You shall follow the Norms and Guidelines of Protected Cultivation Structure (Norms and guidelines for protected cultivation for the year 2018-19) as per policy which are available in the O/o District Horticulture Officer and online of department website. **Copy of specifications is enclosed.**
2. The sanction will remain valid for 90 days after date of issue, if you will not start construction work within 30 days after sanction, your sanction will be canceled.
3. The beneficiary shall follow the Norms and Guidelines of Protected Cultivation Structures as per policy.
4. Beneficiary shall intimate to the DEPARTMENT about the completion of structure.
5. Subsidy shall be released on the satisfactory inspection report of the inspection team and subject to availability of funds. If structure is not completed within 90 days DEPARTMENT is not bound to be released assistance in such case.
6. In case of non-completion of structure, your sanction and seniority shall be withdrawn.

Sign of Sanctioning Authority

CC: A copy of above is forwarded to the following for information and necessary action:

1. The Mission Director, Haryana State Horticulture Development Agency, Udhyan Bhawan, Sector 21, Panchkula, Haryana-134112

2. The Deputy Director, National Horticulture Board, Shop No. 85, Sector 40C, Chandigarh, 160036
3. Lead District Manager, _____(Bank)

Endst No. _____

Dated: _____.

To

The Branch Manager

_____ (Name of Branch),

- i. Vide your appraisal of letter no. _____ dated _____ kindly an amount Rs. _____ which is **50% amount** of the total eligible subsidy of the project has been transferred in subsidy reserve fund account. This is a subsidy which will be governed by the bank's norms & guidelines. However, the bank is advised to make liasioning with our officer while releasing assistance. The work flow of project is as given below:
 - a. The work shall be completed by the farmer within 90 days.
 - b. There shall be physical inspection of project after completion of work in all respect. You are requested to assist Joint Inspection Team (JIT) the information regarding date of visits shall be intimated to you.
 - c. The bank shall release assistance as single instalment after completion of work in all respect on the basis of final inspection report and penalty if any.
- ii. The bank will submit to DEPARTMENT the utilization certificate of subsidy released.
- iii. The balance lying to the credit of the subsidy reserve funds A/c will not form the part of the Demand and Time Liabilities for the purpose of SLR/CRR. Suitable instructions in this regard by the **RBI** from time to time would be followed.

Sign of Sanctioning Authority

(प्रारूप-3)

(अनुदान के क्लेम के लिए सूचना प्रारूप)
(कार्य पूर्ण करने उपरान्त किसान द्वारा जारी किया जायेगा)

सेवा में

जिला उद्यान अधिकारी,

----- ।

विषय:— कार्य पूर्ण की सूचना।

मैंने अपने खेत में ----- वर्गमीटर साईज का ----- (ढांचे का नाम) का निर्माण कार्य विभाग की स्वीकृति, गाईडलाईन, नार्मस एवं स्पैसीफिकेशन्स अनुसार पूर्ण कर लिया है। इसलिये निवेदन है कि विभाग द्वारा इसका भौतिक सत्यापन कर लिया जाये तथा मुझे विभागीय नियमानुसार अनुदान राशि जारी की जाये।

दिनांक:

हस्ताक्षर
(किसान का नाम)

(Form -4)

Undertaking/वचन

मैं, सुपुत्र/सुपुत्री/पत्नी श्री गांव
तहसील जिला का रहने वाला/वाली हूँ और अपने
हल्फ से निम्नलिखित ब्यान करता/करती हूँ :-

1. यह कि मैं उक्त पते का स्थाई निवासी हूँ।
2. यह कि मैंने आज तक उद्यान विभाग स पोली हाउस/नैट हाउस/वाक इन टनल के लिए कोई भी अनुदान राशि प्राप्त नहीं की है।
3. यह कि हमारी जमीन एकड़ सांझा खाते की है।
4. यह कि मैं कुल जमीन एकड़ का मालिक व काश्त करता हूँ/करती हूँ। मैं गांव तहसील जिला में खेवट नं० खसरा नं० किला नं० पर पोली हाउस/नैट हाउस/वाक इन टनल लगवाना चाहता/चाहती हूँ। उपरोक्त खसरा नं० व किला नं० पर मेरा मालिकाना हक व स्वयं काश्त करता हूँ/करती हूँ।
5. उपरोक्त खसरा नं० व किला नं० में पोली हाउस/नैट हाउस/वाक इन टनल लगाने पर मेरे किसी भी हिस्सेदार को कोई आपत्ति नहीं है। यदि भविष्य में कोई आपत्ति करता है/करती है तो मैं स्वयं जिम्मेदार रहूंगा/रहूंगी। इसमें उद्यान विभाग की कोई जिम्मेदारी नहीं होगी।
6. पोली हाउस/नैट हाउस/वाक इन टनल का डिजाईन उपरोक्त खसरा नं० व किला नं० के लिए दुरुस्त है। डिजाईन से संबंधित कोई आपत्ति आती है तो इसके लिए मेरी स्वयं की जिम्मेदारी होगी।
7. यह कि उपरोक्त खसरा नं० व किला नं० की मिटटी व पानी पोली हाउस/नैट हाउस/वाक इन टनल की खेती के लिए उपयुक्त है व इसकी गुणवत्ता की जिम्मेदारी मेरी स्वयं की है।
8. मैं उद्यान विभाग द्वारा निर्धारित मापदण्डों के अनुसार पोली हाउस/नैट हाउस/वाक इन टनल का निर्माण करूंगा/करूंगी।
9. मैं उद्यान विभाग के मानदण्डों व दिशानिर्देशों का पालन करूंगा/करूंगी।
10. मैं पोली हाउस/नैट हाउस/वाक इन टनल को 8 वर्ष तक सुचारू रूप से चलाऊंगा।
11. यह कि मेरे जमीन संबंधी कागजात व अन्य कागजात मेरे द्वारा जमा किये गये हैं व दुरुस्त हैं। मैं किसी गलत सूचना के लिए जिम्मेदार हूँ।
12. यदि भविष्य में कोई हिस्सेदार या अन्य इस पर न्यायालय में केस दायर करता है/करती है तो उसकी भी जिम्मेदारी मेरी होगी।

दिनांक

प्रार्थी

स्थान

(Form -5)

POLY HOUSE/NET HOUSE/WIT

LAND RECORD VERIFICATION FORMAT:-

| Sr. No. | Name & address of farmers | Muraba No. | Killa No. | Farmers land share | |
|---------|---------------------------|------------|-----------|--------------------|-------|
| | | | | Kanal | Marla |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

The above information is verified and correct as per the land revenue record.

Revenue Officer/Patwari

The poly house/net house/walk in tunnel shall be constructed in Killa No_____ M.No._____ Village_____ block_____ which stands in the name of Sh. _____S/o_____.

HDO Concerned Block

Annexure-III

Technical specifications of Naturally Ventilated Greenhouse

| S.N. | Items | Description/ Specification |
|-----------|---|---|
| 1. | Structure | Naturally Ventilated Greenhouse |
| 2. | Size | 500 m ² to 4000 m ² |
| 3. | Bay size | 8m x 4m, with 4 side hockey 2 mtr |
| 4. | Ridge height | 6.5m to 7m |
| 5. | Ridge Vent/Top Vent | 80-90 cm opening fixed with 40 mesh nylon insect Screen |
| 6. | Gutter height | 4 – 4.5m from floor area |
| 7. | Gutter slope | 2% slope need be provided in civil foundation work/ structure. |
| 8. | Gutter Material | 2.00 mm thick GI with 220 GSM Galvanization |
| 9. | Structural design | The structural design need to be sound enough to withstand wind speed minimum 120 km/hr minimum load of 25 kg/m ² . There should be provision for opening one portion at either side for entry of small tractor/power tiller for intercultural practices. The firm needs highlight design features and list of greenhouse clients. |
| 10. | Structure | Complete structure made of galvanized steel tubular pipes of equivalent section conforming Indian Standards having wall thickness 2mm, structural member should be joined with fasteners properly. |
| | Columns | 76mm OD, 2 mm thick |
| | Trusses | Bottom cord 60 mm OD, 2 mm thick |
| | Trusses | Top cord 48 mm OD, 2 mm thick |
| | Purlin | 48 mm OD, 2 mm thick |
| | Truss member& others | 33/25 mm, 2 mm thick |
| | Hockey | 60 mm OD, 2 mm thick |
| | Foundations | Telescopic type. The column size to be 45 cm x 45 cm x 90 cm depth of CC 1:2:4 ratio properly compacted over 10 cm layer of 1:8:16. Two holdfast to be used in perpendicular direction at 20 cm apart in concrete starting from 20 cm from base. |
| Fasteners | All nuts & bolts must be of high tensile strength and galvanized. | |
| 11. | Entrance room & Door | One entrance room of size 3m X 3m X 3m (L X W X H) need to be provided and covered with 200 micron UV stabilized transparent plastic film. Two hinge doors of size 2 m width & 2.5 m height double leaf made in plastic/FRP sheets mounted in suitable strong frame. |
| 12. | Cladding material | UV stabilized 200 micron transparent plastic films. Conforming Indian Standards (IS 15827: 2009), multilayered, anti-drip, anti- fog, anti-sulphur, diffused, clear and having minimum 85% level of light transmittance. |
| 13. | Fixing of cladding Materials | All ends/joints of plastic film need to be fixed with two way GI profiles with suitable locking arrangement along with curtain top. Wooden batons or PVC grippers need not used. |
| 14. | Spring Insert | Zigzag high carbon steel with spring action wire of 2-3 mm diameter must be inserted to fix sheet into Aluminum Profile. |
| 15. | Curtains and insect screen | Roll up UV stabilized 200 micron transparent plastic film as curtains need be provided up to 3.0 m height on all sides with manual roll up system. 40 mesh nylon Insect proof nets (UV stabilized) of equivalent size need to be fixed Inside the curtains. Anti –flapping strips is suggested to ensure smooth functioning of the curtain. |
| 16. | Shade net | UV stabilized 50% shading net with manually operated mechanism for expanding and retracting. Size of net should be equal to the floor area of greenhouse. |
| 17. | Shade net operations | Non- motorized for all sizes with manual operation system. |

| | | |
|-----|--|--|
| 18. | Drip Irrigation System with fogging & misting facility | Drip irrigation system under greenhouse need to be selected on the basis of crop spacing design on spacing 30 cm dripper to dripper (two rows per bed) 30cm x 40cm along with fogging and misting facilities. The spacing considered for calculation . The suggested bill of materials are Sand Filter 10 m ³ /hr, Hydrocyclone filter 25m ³ /hr, Screen Filter/Disc Filter 10 m ³ /hr, Control Valve 63mm, Control Valve 50mm, By-pass Assembly 1.5", Air Release Valve, 1", Non Return Valve 1.5", Throttle Valve 1.5", Flush Valve 50mm, Venturi 1.5" Assembly with manifold, PVC pipe 63 mm/4 kg cm ² PVC pipe 50 mm/4 kg cm ² , PVC pipe 63 mm/6 kg cm ² , PVC pipe 50mm/6kg/cm ² , PE plane lateral 16 mm, emitting pipe lateral 16mm - @ 0.30 m to 0.40m spacing, hanging type micro sprinkler nozzle (four-way take off assembly) for very fine water particles (foggers & mister) to be fixed in PE pipe of diameter 16mm and fittings & accessories @ 5%. <u>Note: The above list of material is indicative list for 500 sqm structure area. The material may increase/decrease based on the size of structure.</u> |
| 19. | Bottom apron | UV stabilized woven fabric 160 GSM/200 micron poly film and a height of 1 m above ground and 50 cm buried below ground (Total width 1.5 m) |
| 20. | Trellising System | Base wire 8 mm or GI Pipe 60 mm OD, 2 mm thick ii) Trellising wire 3 mm steel or 2 mm gear wire iii) Supporting wire 4 mm steel or 3 mm gear wire |

Technical specifications of Greenhouse with Fan & Pad cooling System

| Sr.No. | Items | Description/ Specification |
|-----------|---|---|
| 1. | Product | Greenhouse with Fan & Pad cooling |
| 2. | Size | 500 m ² to 4000 m ² |
| 3. | Bay size | 8m x 4m, with 4 side hockey 2 mtr |
| 4. | Ridge height | 6 m |
| 5. | Gutter height | 4 – 4.5 m from floor area |
| 6. | Gutter slope | 2% slope need be provided in civil foundation work/ structure. |
| 7. | Gutter Material | 1.8 mm thick GI with 220 GSM Galvanization |
| 8. | Structural design | The structural design need to be sound enough to withstand wind speed minimum 120 km/hr and minimum load of 25 kg/m ² . There should be provision for opening one portion at either side for entry of small tractor/power tiller for intercultural practices. The firm needs highlight design features and list of greenhouse clients. |
| 9. | Structure | Complete structure made of galvanized steel tubular pipes of equivalent section conforming Indian Standards having wall thickness 2mm, structural member should be joined with fasteners properly. |
| | Columns | 76mm OD, 2 mm thick |
| | Trusses | Bottom cord 60 mm OD, 2 mm thick |
| | Trusses | 48 mm OD, 2 mm thick |
| | Purlin | 48 mm OD, 2 mm thick |
| | Truss member& others | 33/25 mm, 2 mm thick |
| | Hockey | 60 mm OD, 2 mm thick |
| | Foundations | Telescopic type. The column size to be 45 cm x 45 cm x 90 cm depth of CC 1:2:4 ratio properly compacted over 10 cm layer of 1:8:16.Two holdfast to be used in perpendicular direction at 20 cm apart in concrete starting from 20 cm from base. |
| Fasteners | All nuts & bolts must be of high tensile strength and galvanized. | |
| 10. | Entrance room & Door | One entrance room of size 3m X 3m X 3m (L X W X H) need to be provided and covered with 200 micron UV stabilized transparent plastic film. Two hinge doors of size 2 m width & 2.5 m height double leaf made in plastic/FRP sheets mounted in suitable strong frame. |
| 11. | Cladding material | UV stabilized 200 micron transparent plastic films. Conforming Indian Standards (IS 15827: 2009), multilayered, anti-drip, anti- fog, anti-sulphur, diffused, clear and having minimum 85% level of light transmittance. |
| 12. | Fixing of cladding materials | All ends/joints of plastic film need to be fixed with two way GI profiles with suitable locking arrangement along with curtain top. Wooden batons or PVC grippers need not used. |
| 13. | Spring Insert | Zigzag high carbon steel with spring action wire of 2-3 mm diameter must be inserted to fix shade net into Aluminum Profile. |
| 14. | Co-axial fan | Co-axial fan (ISI mark) of minimum 1200 mm diameter containing 6 numbers of GI sheet blades, frame is of GI sheet materials followed by aluminum louver. 12 Fans per acre. |
| 15. | Cellulose pad for cooling | Cellulose pad of thickness 4” – 6” thick, height: 5’, width as desired equipped with anodized aluminum frame. Cooling pad complete with all necessary framing material (Aluminum) as required for distribution |

| | | |
|-----|--|---|
| | | and return, gutter, down spout cap and drip pan, plumbing kit, pump 220 Volt single phase, suspension hardware, metal flashing required to seal pad for vent opening over flow 20 mm PVC & 40mm standard sink drain. |
| 16. | Circular pump with accessories for cooling pad | Circular pump with required capacity & accessories to be provided for wetting & circulating the pad area. |
| 17. | Digital controller with sensory devices | The necessary digital controller with sensory device & accessories of standard quality (at least two units for 500 sqm area) should be provided to operate the fan & pad system to control temperature & humidity inside the Greenhouse. |
| 18. | Electric wiring inside greenhouse | Use copper wire to withstand desired load of required electrical gadgets/appliances with ISI mark. |
| 19. | Shade net | UV stabilized 50% shading net with manually operated mechanism for expanding and retracting. Size of net should be equal to the floor area of greenhouse. |
| 20. | Drip Irrigation System with fogging & misting facility | Drip irrigation system under greenhouse need to be selected on the basis of crop spacing design on spacing 30 cm dripper to dripper (two rows per bed) 30cm x 40cm along with fogging and misting facilities. The spacing considered for calculation . The suggested bill of materials are Sand Filter 10 m ³ /hr, Hydrocyclone filter 25m ³ /hr, Screen Filter/Disc Filter 10 m ³ /hr, Control Valve 63mm, Control Valve 50mm, By-pass Assembly 1.5", Air Release Valve, 1", Non Return Valve 1.5", Throttle Valve 1.5", Flush Valve 50mm, Venturi 1.5" Assembly with manifold, PVC pipe 63 mm/4 kg cm ² PVC pipe 50 mm/4 kg cm ² , PVC pipe 63 mm/6 kg cm ² , PVC pipe 50mm/6kg/cm ² , PE plane lateral 16 mm, emitting pipe lateral 16mm - @ 0.30 m to 0.40m spacing, hanging type micro sprinkler nozzle (four-way take off assembly) for very fine water particles (foggers & mister) to be fixed in PE pipe of diameter 16mm and fittings & accessories @ 5%. Note: The above list of material is indicative list for 500 sqm structure area. The material may increase/decrease based on the size of structure. |
| 21. | Footpath | 1m wide and 10 cm thick footpaths should be provided in the centre (length x width) & made of cement concrete ratio of 1:2:4. |
| 22. | Curtain wall/Apron | 22 cm brick wall of 1m height (24 cm below and 80 cm above ground level on all the four sides. The wall needs to be plastered and water proofing cement with 1:6 ratio. Provision to be made for opening & closing of ventilation |
| | Note: Optional items –system in case of power failure | |
| 23. | Curtain and insect screen | Roll up UV _tabilized 200 micron transparent plastic film as curtain need to be provided upto height 3.0 meter on all side having automatic type motor operated crank mechanism system. However provision for manual opening and closing of curtains need also be provided.40 mesh insect proof net (UV _tabilized) of equitant size need to be fixed inside the curtain. Anti – flapping strip is suggested to insure smooth functioning of curtain. |

Technical specifications of Insect Net House

| S.N. | Item | Specification |
|------|------------------------------------|--|
| 01 | Structure | Flat/Dome shape Shade/Insect Net House |
| | Size | According to requirement |
| | Shape | As per design |
| | Withstand to wind velocity | Structure may be design to withstand wind velocity upto 104 Km/hr, 120 km/ hour per hrs in high wind velocity zone. |
| | Foundation | 2mm thickness GI Pipes compatible with columns, length 1.2m |
| | Main Column | Size 76 OD, Thickness 2 mm, |
| | Purlins | Purlin GI pipes – size 48/43 OD/thickness 2 mm, length – 4 m .Purlin members – 33/32mm OD/2mm thickness, |
| | Corner/Hockey | Size 60 OD, Thickness 2 mm, Wt. per length 0.15 kg, length-0.15 m |
| | Four Way Pipe Couplers | Size 42 OD, Thickness 2 mm, Wt. per length 0.15 kg, length-0.15 m |
| | Five Way Pipe Couplers | Size 42 OD, Wt. per length 2.30 kg, Thickness 2 mm, length-0.15 m |
| | Nut Bolts | Size 3/8" |
| | Grid Size | 4x4, 8x4, 4x6 (m) with 2 mtr hockey on 4 side |
| | Gable length | 4.0 m |
| | Centre Height | Flat Structure – 4m Hut/dome type structure – centre height – 4.5 to 5m, side height – 3m with 48mm truss, 33mm truss member and 42mm purlin |
| 2. | Aluminum Profile | C type GI profile to fix shade net to the structure by means of self-tapping screws. Weight of GI profile is 280-300 gm/meter. Self-Drilling Screw be fixed on profile every 40 cm along the full length of the profile |
| 3. | Spring Insert | A coated spring is preferable compared to cold galvanized spring as a coated spring transfer less heat to the plastic and thus enhances the life of the plastic If we are using GI spring it is better to use a two inch strip of new poly film to be placed over the main plastic in the profile and then lock it with GI profile. This will help in longer life of the plastic as the rusted spring will not directly come in contact with the main plastic. Wire material should be high carbon spring steel with spring action |
| 4 | Covering material | 40 mesh insect net |
| 5 | Door | Polycarbonate/polythene sheet door with 1 m widths and 2m height and another door of 1m x 2m Box section frame is embedded inside for the strength. |
| 6 | Anti- Room | Anti-room of size 4mx 3m attached to net house |
| 7 | civil work/foundation | Cement concrete 1:2:4 block of size 40 cm x 40cm, 90 cm for embedding vertical poll/pipe of shade net, subject to revision as per requirement of site. |
| 8 | Overall slop | 1 to 1.5% |
| 9 | APRON | Use of APRON upto 1 mtr height stitched with insect net / shade net |
| 10 | Drip irrigation and fogging system | Drip irrigation and fogging system as per area of the structure. |
| 11 | Trellising System | i) Base wire 8 mm or GI Pipe 60 mm OD, 2 mm thick |
| | | ii) Trellising wire 3 mm steel or 2 mm gear wire |
| | | iii) Supporting wire 4 mm steel or 3 mm gear wire |
| 12 | Optional | Aluminum Screen Shade Net 35 to 65% minimum 75 GSM to 90 GSM plastic as top is dome top. |

Technical specifications of Tubular Structures with cable purlins Net House

| S.N | Item | Indicative Specifications |
|-----|------------------------------------|---|
| 1. | Structure | Tubular Structures with cable purlins Net House |
| 2. | Size | According to requirement |
| 3. | Shape | As per design |
| 4. | Withstand to wind velocity | Structure may be design to withstand wind velocity upto 104 Km/hr 120 km/hour per hrs in high wind velocity zone. |
| 5. | Main Column | Exterior corner 76 OD, 2.65 mm thick, height of pole 4m Exterior side/peripheral column 76 OD, 2.65 mm thick, height of pole 4m Interior column 60 OD, 2mm thick, height of pole 5 m i.e. (4 mtr. above ground level+1 mtr. below ground level) |
| 6. | Balcony | 3.5 mtr. Supported with 6mm thick anchor cable |
| 7. | Trellis System | 8mm thick (1/19) main cable at both gable ends/sides 4 mm thick base cable and 3 mm thick trellising twisted cable (4mm thickness if twisted wire thickness included) as supporting cable along with trellising chain and trellising chain holder. |
| 8. | Clamps | Clamps-triple wire connector, 6mm thick wire cable clamp |
| 9. | Nut Bolts | Tighten bolt 3/8", 120 mm; Tighten bolt 3/8", 90 mm; Tighten bolt 3/8", 100 mm, Eye bolt 3/8", 120mm |
| 10. | Spacing | 5 x 8 mtr., spacing 4 x 5 mtr. at both outer sides |
| 11. | Centre Height | 4.0 mtr. in case of flat structure. |
| 12. | Accessories | Cable hold small plate, cable hold large plate, 3" pipe plastic cup, 2" pipe plastic cup, 14mm iron pins, screen red rolls, screen pipe housing, net niddles, net oval connectors, net hook connectors, simes |
| 13. | Insect Proof Net & Shade Net | 40 mesh insect net shade net on roof, 40 mesh anti-insect net at sides |
| 14. | Entrance & anti room | Entrance – G.I. frame with poly carbonate sheet 2m x 2m size hinged type with locking arrangement. (Anti room of size 2m x 4m x 2m with double door and covering of insect net/shade net, with provision of entry and exist for tractor), 50 mm PCC flooring over 75 mm thick sub base. |
| 15. | Foundation | Outer anchor: 1.8 mtr length anchor with 1 mtr depth PCC of CM ratio (1:2:4) of 45 cm diameter. Outer pole: 50 cm length, 25 mm dia. Bent iron pin/rod in 0.5 mtr depth PCC of CM ratio (1:2:4) of 45 cm diameter. Intermediate pole: in a pit of 45 cm dia, the pole is inserted 1 mtr. Deep, rested on plates for foundation and is placed in 25 cm thick PCC of CM ratio 1:2:4 |
| 16. | Iron accessories for foundation | Anchor, bent iron pin/rod, inner column base angles/foundation plates for intermediate poles |
| 17. | Drip irrigation and Fogging system | Drip irrigation and Fogging system as per area of the structure. |
| 18. | Optional | Aluminium Screen Shade Net 35 to 65% minimum 75 GSM to 90 GSM plastic as top is dome top. |

Technical Specifications of Walk in Tunnels (5 mtr Height)

| Sr. No. | Component/ Intervention | Specifications |
|----------------|---|---|
| A | Particulars | |
| | Structure | WIT |
| 1. | Area Proposed approximate (sqm) | 400 to 600 |
| 2. | Length of Tunnel (mtr) | Upto 60 |
| 3. | Width of Tunnel (mtr) | 8-10 |
| 4. | Center height (mtr) | 5 |
| 5. | Distance between 2 arches (mtr) | 4 |
| 6. | Height of side curtain (mtr) | 2.5 |
| 7. | Bottom Apron (mtr) | 0.5 mtr |
| B | Name of the parts | |
| 8. | Foundation stub OD/mm | 60/2 |
| 9. | Column OD/mm | 76/2 |
| 10. | Bottom Chord OD/mm | 48/2 |
| 11. | Arches with W bracings OD/mm | 48/2 |
| 12. | Purlins OD/mm | 42/2 |
| 13. | Clamps and nut bolts | As per requirement |
| 14. | Cross bracings | 4 nos. & 42/2 |
| 15. | W-Bracing OD/mm | 33/2 |
| C | Entry Room | |
| 16. | Entry room size mtr x mtr | 3 x 2 x 2.5 |
| 17. | No of doors | 2 |
| 18. | Door Size | 1.2 x 2 |
| 19. | Frame of door (ISA four side to cover the gap below the door) | G.I. |
| 20. | Part of door | Square pipe with poly carbonated sheet/Bakelite sheet 5 mm |
| 21. | Flooring | Bricks flooring with 15 mm thick plaster |
| Sr. No. | Component/ Intervention | Specifications |
| D | Profiles and springs | |
| 22. | Profile | GI Profile- 300gr per running mtr |
| 23. | Zigzag spring insert | High carbon steel wire repeated action, 2.3 mm dia, GI |
| E | Polyfilm | |
| 24. | Multi-layered Polythene sheet | Fixed Properties – 200 micron thick, UV stabilized, Thermic, diffused, Anti dust Anti drip. Optional Property- Anti Sulphur for the crops where sulphur consumption is high For ex – rose cultivation (As per farmer choice) |
| | Nets | |
| 25. | Insect net to both sides Mesh | 40 mesh, UV Stabilized, 2.5 m width (height) |
| F | Specific Requirements | |
| 26. | Foundations (cm x cm x cm) | Telescopic type. The column size to be 40 cm x 40 cm x 80 cm depth of CC 1:2:4 ratio properly compacted over 10 cm layer of 1:8:16. Two hold fast to be used in perpendicular direction at 20 cm apart in concrete starting from 20 cm from base. |
| 27. | Bottom apron (micron) | UV stabilized woven polythene 160 GSM and a height of 0-5/0-6 m above ground and 50 cm buried below ground with 25 mm role up curtain. |
| 28. | Side wall curtain (mm) | Insect net 40 mesh fixed and polythene movable fitted to curtain pipe with plastic/GI clamps and rolling curtain with 25 mm supported by GI guard 20 mm OD pipes 2 mm thick on corridor pipes |

| G | MI Component (To be got executed by shortlisted firm from MI empaneled firms in the State) | |
|-----------|---|--------------------|
| 1. | Drip System | |
| i. | (PVC 50 mm x 6 kg/cm ²) | 18 mtr |
| ii. | LLDPE Lateral line CL-2 16mm | 75 mtr |
| iii. | (16mm, 1.3 to 2.4 LPH @ 30-40 cm CL2) | 600 mtr to 610 mtr |
| iv. | Ball Valve 50 mm (Teflon Seal, Plain) | 1 Nos. |
| v. | Sub-main Flush Valve 40 mm | 2 nos. |
| vi. | Sub-main line for Flushing 40 mm, 6kg | 20 mtr |
| 2. | Filteration Unit | |
| i. | Disc filter 25 m3/hr | 1 nos. |
| ii. | Ventury injector complete Assembly 1 inch | 1 nos. |
| iii. | Air Release Valve Assembly 1" | 1 nos. |
| | Any other item | as per requirement |

Remark: Sand filter/hydro cyclone filter is mandatory for structures/no. of units having area more than 2000 sqm.

Technical Specifications of Walk in Tunnels (3.5 mtr Height)

| Sr. No. | Component/ Intervention | Specifications |
|----------|---|--|
| A | Particulars | |
| | Structure | WIT |
| 1. | Area Proposed approximate (sqm) | 400 to 600 |
| 2. | Length of Tunnel (mtr) | Upto 60 |
| 3. | Width of Tunnel (mtr) | 8-10 |
| 4. | Center height (mtr) | 3.5 |
| 5. | Distance between 2 arches (mtr) | 4-5 |
| 6. | Height of side curtain (mtr) | 2 |
| 7. | Bottom Apron (mtr) | 0.5 mtr |
| B | Name of the parts | |
| 8. | Foundation stub OD/mm | 48/2 |
| 9. | Column OD/mm | 60/2 |
| 10. | Bottom Chord OD/mm | 48/2 |
| 11. | Arches with W bracings OD/mm | 43/2 |
| 12. | Purlins OD/mm | 43/2 |
| 13. | Clamps and nut bolts | As per requirement |
| 14. | Cross bracings | 4 nos. & 33/2 |
| 15. | W-Bracing OD/mm | 33/2 |
| C | Entry Room | |
| 16. | Entry room size mtr x mtr | 2 x 2/ 3 x 2/ 3 x 3 |
| 17. | No of doors | 2 |
| 18. | Door Size | 1.2 x 2 |
| 19. | Frame of door (ISA four side to cover the gap below the door) | G.I. |
| 20. | Part of door | Aluminium sheet/Poly carbonate, sheet 5 mm thick |
| 21. | Flooring | Bricks flooring with 15 mm thick plaster |
| D | Profiles and springs | |
| 22. | Profile | GI Profile- 300gr per running mtr or Aluminium Profile-200-225gr per running mtr |
| 23. | Zigzag spring insert | High carbon steel wire repeated action, 2.3 mm dia, GI |
| E | Polyfilm | |
| 24. | Multi-layered Polythene sheet | Fixed Properties – 200 micron thick, UV stabilized, Thermic, diffused, Anti dust Anti drip. Optional Property- IR Reflective Cooling, Anti Sulpher for the crops where sulphur consumption is high For ex – rose cultivation (As per farmer choice) |
| | Nets | |
| 25. | Insect net to both sides Mesh | 40/50 mesh, UV Stabilized, 2 m width (height) |
| F | Specific Requirements | |
| 26. | Foundations (cm x cm x cm) | Telescopic type. The column size to be 45 cm x 45 cm x 60 cm depth of CC 1:2:4 ratio properly compacted over 10 cm layer of 1:8:16. Two hold fast to be used in perpendicular direction at 20 cm apart in concrete starting from 20 cm from base. |
| 27. | Bottom apron (micron) | UV stabilized woven polythene 160 GSM and a height of 0-5/0-6 m above ground and 50 cm buried below ground |
| 28. | Side wall curtain (mm) | Insect net 40/50 mesh fixed and polythene movable fitted to curtain pipe with plastic/GI clamps and supported by GI guard 20/22 mm OD pipes 2-0 mm thick on corridor pipes |

| Sr. No. | Component/ Intervention | Specifications |
|----------|---|--------------------|
| G | MI Component (To be got executed by shortlisted firm from MI empaneled firms in the State) | |
| | Drip System | |
| i | (PVC 50 mm x 6 kg/cm ²) | 18 mtr |
| ii | LLDPE Lateral line CL-2 16mm | 16 mtr |
| iii | (16mm, 1.3 to 2.4 LPH @ 30-40 cm CL2) | 450 mtr to 550 mtr |
| iv | Ball Valve 50 mm (Teflon Seal, Plain) | 1 Nos. |
| v | Sub-main Flush Valve 40 mm | 2 nos. |
| vi | Sub-main line for Flushing 40 mm, 6 kg | 20 mtr |
| | Filteration Unit | |
| i | Disc filter 25 m3/hr | 1 nos. |
| ii | Ventury injector complete Assembly 1 inch | 1 nos. |
| iii | Air Release Valve Assembly 1" | 1 nos. |
| iv | Any other item | as per requirement |

The farmer constructs the structure on its own, in such cases the design and specification should be as per NCPAH norms and guidelines or any other approved source. In such case the entire responsibility of quality and durability of structure revert with farmer.

The alternate specification may be accepted if it has been approved by recognized structure engineering institution. In such cases the approved copy of structure must be attached with application form further quality and durability of structure shall be responsibility of firm and farmer must agree to the firm design and specification.

Performa for Physical Verification
(Poly House/ Net House/ Waking in Tunnel)

First Inspection Report
 (After foundation and supply of material)

| | | |
|----------------------------|---|---------------------|
| Name & Add.of Beneficiary: | | |
| Date of inspection: | | |
| S. No | Item. | Observations |
| A. | General Details | |
| 1 | Sanction Letter Issued by DHO: Number & Date | |
| 2 | Location of Structure (Khasra No. &Killa No.) : | |
| 3 | Co-ordinates of site (N, S, E & W) | |
| B. | Structure type & size | |
| 1 | Type of structure (poly house/net house/ Walk-In-Tunnel) | |
| 2 | Type of Steel Material (Tubular/Channel/Square/Rectangular) | |
| 3 | Size of structure:(Gable Length X Gutter Length) = sqm | |
| C. | Foundation inspection | |
| 4 | Length of insertion pipe | |
| 5 | Thickness of insertion pipe | |
| 6 | Size of filled material in the foundation (Length x width x depth) | |
| 7 | Structure specification and quantity (Certificate and list to be submitted by the firm that the material supplied is as per design and specification) | |
| 8 | Whether the material is complete or not. (Inspection team will check the material as per the component wise list) | |
| 9 | Galvanization of structural parts (The certificate of Galvanization of structural part is attached or not) | |
| 10 | Shape of structure (regular /irregular) | |
| 11 | Remarks:- | |

DDH/ Field**DHO****HDO
concerned****Farmer**

Annexure-IX (c)

Performa for Physical Verification
Final Inspection Report of Protected Structures (Net House)

| S. No. | Particulars | Details/ Observation |
|---------------|---|--|
| A 1. | Date of Inspection | |
| 2. | Name & Add. of Beneficiary | |
| 3. | Co-ordinates of site (N, S, E & W) | |
| 4. | Location of Structure | Khasra No. Kila No. |
| B | Components | Observations |
| 5. | Type of Structure | |
| 6. | Size of Structure:(length X length) in m |X.....=sqm |
| 7. | Main column and spacing | |
| 8. | Purlin and truss members | |
| 9. | Four way & five way Couplers | |
| 10. | Nut Bolts & clamps | |
| 11. | Centre Height | |
| 12. | Profile- | |
| 13. | Zigzag spring | |
| 14. | Insect net | |
| 15. | Entrance& Door | |
| 16. | Trellis System | |
| 17. | Foundation | |
| 18. | Bottom Apron | |
| 19. | Shade net System | |
| C | Irrigation System | |
| 20. | Filtration Unit | |
| 21. | Drip irrigation system | |
| 22. | Fogging/misting system | |
| 23. | Remarks/Recommendation:- | |

DDH/ Field

DHO

**HDO
concerned**

Farmer

Annexure-IX (d)

Performa for Physical Verification
Final Inspection Report of Protected Structures (WIT)

| S. No. | Particulars | Details/ Observation |
|---------------|---|--|
| A 1. | Date of Inspection | |
| 2. | Name & Add. of Beneficiary | |
| 3. | Co-ordinates of site (N, S, E & W) | |
| 4. | Location of Structure | Khasra No. Kila No. |
| B | Components | Observations |
| 5. | Type of Structure | |
| 6. | Size of Structure:(length X length) in m |X.....=sqm |
| 7. | Main column and spacing | |
| 8. | Main Column | |
| 9. | Purlin GI pipes | |
| 10. | Nut Bolts & clamps | |
| 11. | Centre Height | |
| 12. | Profile | |
| 13. | Zigzag spring | |
| 14. | Entrance- | |
| 15. | Trellis System | |
| 16. | Foundation | |
| C | Irrigation System | |
| 17. | Filtration Unit | |
| 18. | Drip irrigation system | |
| 23. | Remarks/Recommendation:- | |

DDH/ Field

DHO

**HDO
concerned**

Farmer

Performa for Physical Verification

Final Inspection Report of Protected Structures (Net House cable purlin)

| S. No. | Particulars | Details/ Observation |
|---------------|--|--|
| A 1. | Date of Inspection | |
| 2. | Name & Add. of Beneficiary | |
| 3. | Co-ordinates of site (N, S, E & W) | |
| 4. | Location of Structure | Khasra No. Kila No. |
| B | Components | Observations |
| 5. | Type of Structure | |
| 6. | Size of Structure:(length X length) in m |X.....=sqm |
| 7. | Guarantee & Warrantee Certificate | |
| 8. | Main Column | |
| 9. | Balcony | |
| 10. | Trellis System | |
| 11. | Centre Height | |
| 12. | Accessories | |
| 13. | Insect roof Net | |
| 14. | Shade Net | |
| 15. | Entrance & doors | |
| C | Irrigation System | |
| 16. | Filtration Unit | |
| 17. | Drip irrigation system | |
| 18. | Fogging/misting system | |
| 19. | Remarks/recommendations: | |

DDH/ Field

DHO

**HDO
concerned**

Farmer