

**J&K Agro Industries Development Corporation Ltd. Gole Pully,
Talab Tillo Jammu.**

E-mail Id – dmpsjammu@jkagro.com

E NIT No. 36 of 2023-24 JK Agro (Agriculture Inputs)

NO: -Agro/DM/PSJ/2275-78

DATED:- 28.07.2023

For and on behalf of J&K Agro Industries Development Corporation Limited, bids are invited from Registered Principal Manufacturers/Authorized Dealers having valid license/ Registration for annual rate contract of following HiTech Greenhouse. J&K Agro industries Development Corporation is having a procurement and sales division which procures and supplies Agricultural machineries to Agri. and allied Departments to meet the demands of various Govt Deptts during the financial year. Corporation intends to finalize the Procurement Purchase arrangements through this E-tender. After completing the process of Annual Rate Contract through E-tendering, the Corporation places the supply order to successful bidder as per the specification and brand as received from the intending departments.

S. No	Name of item.	Amount of CDR	Cost of Tender Documents	Date and time of opening of bids (online)
1.	Supply, Installation and commissioning of Semi Hitech Greenhouse for annual rate contract on turnkey basis and L1 basis	Rs. 50,000/-	Rs 2360/- (non-refundable)	08.08.2023

• NOTE:- The above mentioned products must also fulfill all the specification given as in Annexure “C, D & E”

1. The Bidding Document Consisting of qualifying information , eligibility, criteria, Specification, set of terms and condition of contract and other details can be seen/downloaded from the departmental website www.jktenders.gov.in as per the schedule of dates given below:-

1	Date of Issue of NIT	28.07.2023
2	Period of downloading of bidder documents	28.07.2023 to 07.08.2023 till 16:00 Hrs
3	Bid submission Start date	28.07.2023
4	Bid submission End date	07.08.2023 at 16:00 hrs
5	Date and time of opening of Technical bids (online)	08.08.2023 at 15:00 hrs
6	Date and time of opening of Financial bids (online)	After the complete Technical Evaluation of documents of all participated bidders

2. Bids must be accompanied with cost of tenders’ documents in shape of Bank Receipt in f/o J&K Agro Industries Development Corp. Ltd bearing J&K Bank Acc No CD-0097010100000962, IFSC Code- JAKA0TNHALL, Earnest money/bid security in the shape of CDR/FDR Pledged in favour of Managing Director J&K Agro Industries Development Corporation Limited.
3. The date and time of opening of bid shall be notified on website www.jktenders.gov.in and convey to the bidder automatically through an e-mail message on their mail id. The bids of responsible bidders shall be opened online on same website in the office of **Managing Director J&K Agro Industries Development Corporation Limited. (Tender receiving authority).**

4. **The earnest money shall be fortified if:**
 - a) Any bidder/ tenderer withdraw his bid/ tender during the period of bid validity or make any Modifications in the terms and conditions of the bid.
 - b) Failure of Successful bidder to execute the agreement within 07 days after fixation of contract.
5. **Instruction to bidders regarding e-tendering process.**
 - 5.1 Bidders are advised to download bid submission manual from the "Downloads" option as well as from "Bidders Manual Kit" on website www.jktenders.gov.in to acquaint bid submission process.
 - 5.2 To participate in bidding process, bidders have to get 'Digital Signature Certificate (DSC) as per Information. Technology Act-2000. Bidders can get digital certificate from any approved vendors.
 - 5.3 The bidders have to submit their bids online in electronic format with digital Signature. No bid will be accepted in physical form.
 - 5.4 Bids will be opened online as per time schedule.
 - 5.5 Bidders must ensure to upload scanned copy of all necessary documents and complete address and contract no. with the bid. Besides, original/Photocopies of documents related to the bid are submitted physically only by L-1 bidder.

Note: - Scan all the documents on 100 dpi with black and white option.

6. **The department will not be responsible for delay in online submission due to any reasons.**
7. Scanned copy of **cost of tender document** in shape of Bank Receipt and Earnest Money/Bid Security in shape of CDR/FDR pledged to **Managing Director J&K Agro Industries Development Corporation Limited** must be uploaded with the document of the bid.
8. Bidders are advised to use "**My Documents**" area in their user on www.jktenders.gov.in portal to store such documents as are required.
9. **The technical Bid must consist of following information and documents.**
 - 9.1 All bidders shall include the following information and documents with their bids:-
 - (a) Copy of Place of registration and principal place of Business, with complete address and contact details.
 - (b) Copy of Principal manufacturer certificate/dealer certificate.
 - (c) Copy of GSTIN No. Number
 - (d) Copy of PAN Number.
 - (e) Copy of Latest GST return file shall be furnished.
 - (f) Annual Turnover 50 lacs from last 05 years.
 - (g) Copy of EMD/FDR.
 - (h) Copy of cost of document (COD) in the shape of bank receipt.
 - (i) Certificate of ISI /BIS standard
 - (j) CIPET Certificate of Polysheet.
 - (k) Notarized Affidavit as per annexure-A
 - (l) Notarized Affidavit as per annexure-B
 - (m) **Bidder should also mention the MRP of the product he/she is bidding for on the letter head of the firm of concerned bidder.**

9.2 All documents relating to the bid shall be in the English Language.

10. A) If the bidder does not quote rate/rates for any item/items in BOQ the bidder will not be able to claim those items.
- B) The Tender documents duly signed with seal on each page in token of acceptance of all terms and conditions of Tender should also be enclosed.

Note: In case the above mentioned documents are not enclosed, the tender can be rejected as per the decision of the Purchase Committee.

1. General conditions of contract:-

1. **The firm shall have to certify that the rates quoted by them are the lowest rates and has not quoted rates lower than these rates to any Govt. Deptt. /Agency in J&K for the similar items. If at any stage it is proved that the prices charged by tenderer are higher than the**

prices quoted to other Departments or higher than the prevailing market rates in JK UT the tenderer shall be liable for prosecution under law and the excess amount charged thereof shall be recovered from your bill/securities etc. All the bills shall be settled at the market rates only vetted by Purchase committee.

2. In case the firm fails to supply ordered items, within the stipulated period, the CDR/ Security Slip shall be forfeited and supplier shall have no claim for its refund / release in any manner. Besides, the firm shall be black-listed for future business with JK AIDCL.

3. Guarantee / Warrantee:

The material should be guaranteed for a period of 12 months against any manufacturing defects. In case of any complications/ defects, the complained has to be attended immediately and defective items shall be replaced at your cost. Failure in the compliance of this can cause in the forfeiting of the Security Deposit. The bidder should mention the location of the work shop and should be in a position to service the equipment at site.

4. F.O.R:-

Rates quoted shall be inclusive of all taxes (GST) and F.O.R. Jammu/Kashmir Division of the concerned indenting department at Zone/ Sub-Division/block/tehsil/District level.

5. Validity of Rates:-

The rates quoted by the suppliers shall remain valid up to one Financial year and inclusive of all taxes and thereafter shall be extended on mutual agreement.

6. Dealership Certificate and Test Report.

The firms, which are not Principal Manufacturer and are submitting tenders, are required necessarily to attach a valid Dealership Certificate from Principal manufacturer and certificate from ISI/BIS Mark any other recognised institute authorised by Govt. of India.

7. Payments:-

Payments shall be made after receiving from the indenting Deptt. and on receipt and verification of the material by the indenting Deptt. Only 90% payment shall be released to the supplier/firms and 10% payment shall be reserved for 12 months from the date of Installation of Hitech Greenhouse.

8. Agreement:

The successful firms shall have to execute an agreement in the prescribed format within seven days from the date of intimation to this effect.

9. Delivery schedule

The Semi Hitech Greenhouse should be installed within 15 days or as per the terms of Supply Order. In case of delay in the supply beyond the stipulated time, 0.25% per day penalty of value of the ordered material shall be imposed subject to max of 10% billed amount or as the Managing Director, AIDCL may deem fit and / or forfeit the Earnest Money / Security Deposit.

10. ARBITRATION

In case of dispute of any nature arising while servicing the ordered items, the matter shall be referred to the Managing Director, JK AIDCL whose decision as arbitrator shall be binding for the resolution of the dispute. In case the matter cannot be resolved further, in that situation, the

legal institution / Courts of the J&K State shall be the alternative forum for dispute resolution.If there is any deviation from the specification of the product (test reports), all the penalties in such case will be applicable on the supplier/ bidder only.

11. Submission of offer

The tenders shall be opened on the date mentioned in above table 2 at same office in presence of the tenderers who wish to be present or any subsequent date convenient to Purchase Committee.

12. Managing Director, JKAIDCL reserve the right to accept or reject any or all tenders in part or full without assigning any reason thereof.

13. As soon as the acceptance of tenders is conveyed to the successful firm the contract shall be final and binding upon the successful firm and agreement deed shall have to be executed with the Corporation by the supplier within 7 days from the date of issue of letter of acceptance.

14. The Purchase committee reserves the right to accept or reject any tender, part of a tender or all tenders with the permission of MD JKAIDCL without assigning any reason.

15. The tenderer along must also submit a soft copy of its latest Income Tax/GST return

16. Tender without payment of tender cost shall be rejected.

17. The offer should be signed by the authorized person and his full name and status should be indicated below his signature.

18. The tender should be accompanied with the Technical literature/Boucher/Pamphlets of the products.

19. Corporation reserves the right to carry out market survey also to assess the lowest market rate of the items. However, the lowest market rate shall be offered to tenderer for acceptance on rate contract basis and the bidder shall have no objection for it.

20. Force Majeure:-

If the completion of the supply is delayed by strikes, lockouts, fire accidents, war or any other cause beyond the control of the supplier and the supplier satisfies the Corporation by a documentary proof in that respect, a reasonable extension in the time limit may be granted by the Corporation without effecting or decreasing/increasing the basic price as per force Majeure clause of the agreement. However, damages caused due to strikes, rain or snow shall not constitute an act of God.

21. The terms and conditions of the corporation is final and is binding on the part of the bidder. No terms and conditions will be accepted from bidder side.

22. Third Party Inspection:-

The corporation reserves the right to get the material, machinery and complete line inspected by third party to ensure the material supplied in exactly as per specification mentioned in the tenders' documents for those particulars machine/items.

23. The supplier/firm must has its own office/workshop in the Territory of J&K UT for the purpose of any damage and repairing.
24. The supplier/firm have an minimum experience of manufacturing of Semi Hitech ,Hitech greenhouse/Polyhouse/Greenhouse amounting to Rs.15 lacs or more per year from last three financial year (Copy of supply order and work completion certificate along with satisfactory performance certificate from the concerned department).
25. If the volume of business is huge than the department have a option to split the quantity between the tenderer on L1 basis.
26. Before issuance of supply order to the supplier/firm. The supplier/Firm has to deposit the Performance Security @ 5% of the work done and the same shall be released after the completion of the work.
27. **An Affidavit on Rs.10 non judicial stamp paper that price charged for supplies under contract shall under no circumstances exceed the lowest price at which the contractor sells identical description to any Govt. Department/Institution/Public Enterprises/Undertaking during the period of contract as per Performa attached in Annexure-A.**
28. **An Affidavit on Rs.10 non judicial stamp paper that the company/firm has not been neither black listednor de-barred from participation in tender by any of the Govt.Department/Organisation/ PSU etc as per Performa attached in Annexure-B.**

Note: In case the above mentioned documents are not enclosed, the tender can be rejected as per the decision of the Purchase Committee.

-Sd-

Divisional Manager (P&S)
Member Secretary,
J&K Agro Ind. Dev. Corpn.Ltd.
Procurement & Sales Division, Jammu

Copy to.

1. Managing Director, JKAIDCL, Jammu for Kind information please.
2. Director Finance JKAIDCL, Jammu for Kind information please.
3. General Manager CFP, Baribrahmana for kind information please.
4. Divisional Manager, P&S, Kashmir for kind information.
5. Office File.

JK AGRO INDUSTRIES DEVELOPMENT CORPORATION LTD.

Annexure-A

Affidavit Certificate

I/We _____ (Name, Designation and Address)
here by declaring that price charged for quoted item/items under this contract, our firm has no
circumstances exceeded **lowest price** of identical goods given to any Govt.
Department/PSUs/Institutions/Organizations etc during current year.

Signature of Authorized Signatory _____

Name _____

Designation _____

Name of the Firm/Company _____

Full Address _____

Stamp _____

Place: _____

Dated: _____

JK AGRO INDUSTRIES DEVELOPMENT CORPORATION LTD.

Annexure-B

Affidavit Certificate

I/We _____ (Name, Designation and Address)
here by declaring that our firm/company has not been neither **blacklisted nor de-barred** from
participation in tender by any Govt. Department/PSUs/Institutions/Organizations etc. I/We had
supplied the goods during the last three years.

Signature of Authorized Signatory _____

Name _____

Designation _____

Name of the Firm/Company _____

Full Address _____

Stamp _____

Place: _____

Dated: _____

TECHNICAL SPECIFICATION

Annexure-C

S. No. as per BOQ	Product	Dimensions	Qty.
1	Greenhouse Size	12m x 6 m = 72 Sq. mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	6mtr x 4mtr	
	Greenhouse width	6 m.	
	Greenhouse length	12 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
2	Greenhouse Size	12.5 x 8 m = 100 Sq. mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8mtr x 4mtr	
	Greenhouse width	8 m.	
	Greenhouse length	12.5 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
3	Greenhouse Size	20m x 8m = 160 Sq.mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	6	
	Greenhouse length	20 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
4	Greenhouse Size	22.5m x 8 m = 180 Sq.mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	8 m.	
	Greenhouse length	22.5 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
5	Greenhouse Size	20m x 40 m = 800 Sq.mtr.	01 No.
	Number of bays	2 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	20 m.	
	Greenhouse length	40 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
6	Greenhouse Size	28m x 44 m = 1232 Sq.mtr.	01 No.
	Number of bays	3 Nos.	

	Bays width	8 mtr x 4 mtr	
	Greenhouse width	28 m.	
	Greenhouse length	44 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
7	Greenhouse Size	36m x 44 m = 1584 Sq.mtr.	01 No.
	Number of bays	4 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	36 m.	
	Greenhouse length	44 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
Without Buffer Room, Air Circulation Fan and Control Panel			
8	Greenhouse Size	12m x 6 m = 72 Sq. mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	6mtr x 4mtr	
	Greenhouse width	6 m.	
	Greenhouse length	12 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
9	Greenhouse Size	12.5 x 8 m = 100 Sq. mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8mtr x 4mtr	
	Greenhouse width	8 m.	
	Greenhouse length	12.5 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
10	Greenhouse Size	20m x 8m = 160 Sq.mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	6	
	Greenhouse length	20 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	
11	Greenhouse Size	22.5m x 8 m = 180 Sq.mtr.	01 No.
	Number of bays	1 Nos.	
	Bays width	8 mtr x 4 mtr	
	Greenhouse width	8 m.	
	Greenhouse length	22.5 m.	
	Side Height	3.0 m.	
	Centre Height	5.0 m.	
	Shape	Aerodynamic	

Structure Specification Semi Hitech with Buffer Room, Air Circulation Fan and Control Panel

Annexure D

1. Structure

Frame: All Structure, Rafters, Purlins, Trusses are galvanized and design as per IS 875 standards. All GI steel pipe are as per IS 1239/3601/4923 standard.

For maximum Indian wind load conditions, **structural trusses will be provided for absolute strength wind load 120 km/hr**

All pipes of standard ISI standard with 2mm thickness.

GI pipe 50mm x 50mm (verticals) / 47mm x 47mm (trusses) / 25mmx 25mm /50mmx 25mm purlins (square pipe IS standard IS 1239 class B anti-corrosive, humidity resistance pipe with IS 47361968/ISO 65-1973 zinc coat as approved with respective unit weights as per IS Codes Structure shall be designed for maximum Indian wind load conditions, Structural system shall be provided for absolute strength.

GI square pipe : IS standard, Anti-corrosive, Humidity resistant pipe with zinc coat.

1. Trusses: 38mm x 38mm
2. Column: 50mm x 50mm
3. Cross bracing: 32mm x 2mm
4. Purlin: 50mm x 25mm

Vertical support distance: min 4000mm.

a) **The inter row and Intra row distance of pipe:** 8 m x 4 m.

b) **Nuts and other metallic parts:**

This budget includes all the elements required to join and watertight the components such as fittings, clamps, screws and nuts plated against corrosion.

2. Cladding Material

High quality UV stabilized 5 Layered ISI mark Green Pro LDPE Sheet 200 micron thick with driplock (anti drip) diffused, anti dust, anti condensed and properties.

Light transmission 86% Anti Drip Diffusion – 55%

3. Poly Locks Poly lock profile will be made up of aluminum section fixed with zigzag spring of GI material with 12 gauge to withstand the maximum wind load.

4. Gutter The gutter will be placed between to trusses will made up of 1.2mm GI sheet in the direction of length and placed at the height of 3m.

5. Entrance room & Door One entrance room of size 2 m x 2 m x 3 m (L x W x H) need to be provided and covered with UV stabilized 200 micron film. Two hinge doors of size 2m width & 2m height double door with sliding and made of half polycarbonate.

6. Shading Net With Fitting accessories

UV stabilized White color shading net inside Poly house 50% with nylon support cables, pulleys, side support with clamps, plastic clamps etc. manually operated.

Pulleys assembly with nuts & bolts will be provided.

Curtain rings& Curtain clamps with respect to standard specification will be provided.

7. Side Ventilation: The Side walls opening of the structure serve as lateral ventilation and can be regulated by the operation of roll-up curtains with manual Chain pulley system (imported)

These are operated with chain mechanism.

The side Curtain is protected with 19mm flap controller to avoid Flapping from Wind. Curtain Box are provided at each corner of the side curtain length.

8. Fogging facility

Four-way foggers (droplet size less than 50-100 micron is giving better results) having operating pressure of 2.5 kg/cm² fixed on 16mm laterals (2.5 kg/cm²) are to be installed just below the shade net with sufficient overlapping to get uniformly in distribution of vapours for getting uniform climatic condition.

Foggers can be operated only at very essential conditions. Never operate before 10.30am and after 3pm. At a stretch, forger can be operated only for 5 sec through Timer Controller Etc. (with Grid 3mtr x 3mtr), Working pressure 4 bar at this pressure, the average droplet size 50 µm, Type of Fogger : Cross way nozzle ,hanging type Fogger discharge range- 28 LPH With suitable Motor & Centrifugal pump ISI mark, Pressure meter- 10 bar one, Return gutter, control valve assembly, Water storage tank -1000 Ltr ISI mark.

9. Slow Axial Flow fan belt driven: 54"

Specification: (Imported) equipped with high efficiency 1.5 HP motor, belt driven, GI metal body, GI material louver arrangement, 44000 air flow m³/h, 1400 RPM GI wire mesh protection on the front side, to remove the hot air from the polyhouse noise level < 60 Db, single phase

Dimension: 1380mm H x 1380mm W x 400mm T For 800 sqm : Fan 48" – 4 Nos.

For 1232 Sq.mtr : Fan 48" – 06 Nos.

For 1584 sqm : Fan 48" – 8 Nos.

For 180 sqm : Fan 48"-02 Nos.

For 160 sqm : Fan 48"-02 nos.

For 100sqm : Fan 48"-02 Nos.

For 72 sqm : Fan 48"-01 No.

10. Control Panel

For Temperature, Relative Humidity control system including field sensors, switchgear, power & signal cabling & wiring: Control Panel will programmable based & site settable Temperature (20 to 50°C & RH (30 to 80%).

Temperature Controller:

Specifications: Digital display for displaying measured values and another 4-digit LED display for displaying settings, Touch operation, Platinum sensor probe Pt- 100, Set point lock within the setting panel to protect setting changes, Level lock to ensure that the parameter can be read but cannot be changed, Sensor failure indication, Display resolution 0.1°C Accuracy 0.1°C, Automatic hysteresis control. Wide selectable temperature ranges from 0°C to 100°C, 4.4 KVA load can be directly connected to the powered output, Input- 200-240 VAC, 50 Hz. Single phase, ambient 5°C -50°C, RH upto 90%.

Humidity Controller

Specification: Digital Display, On/Off control for Humidifying, Hysteresis / Differential 1% - 9%, Delay timer 0-240 sec, Direct / Reverse selectable, Lock functions to prevent miss operating, Feather touch operation, Fast response sensor – line resistance<10Ω, Display Accuracy - indicating value ±0.2% ±1digit.

Cyclic Timer for Humidity specific for fogging, misting system, controlled by timer to reduce water logging condition in the Green House.

Specification: 0-999 Min/sec On, 0-999 Min/sec OFF, automatic cycling. Accuracy quartz, Power output can be directly drive misting unit load upto 2.5 KVA, Input 200 V to 240 VAC, Phase-Single, 50 Hz, Ambient 4°C to 50°C, RH upto 90%.

Control system for the green house to operate and switch/control the GH equipment's to achieve the set Temperature & Relative Humidity parameters. Supply, suitably install, wire up with signal cabling and use appropriate temperature sensor (0.1°C resolution, + 0.2 °C accuracy) and RH sensor (1 % resolution + 5% accuracy) and or transducers to give signal inputs for the digital controller, which, based on the approved logic will operate the following equipment's (Based on the set point)

11. Air Circulation Fan

To maintain humidity/air circulation inside the Poly house air circulation fan will be provided. Specification: S. Steel body, Impellor Dia.- 475 mm, RPM : 1370 at 50 Hz, cfm= 2970, Air Capacity: 5046 m³/h, Power : 0.33 hp, Minimum (Imported)

For 800 sqm : Air Circulation Fan 22" – 4 Nos.

For **1232 Sq.mtr** : Air Circulation Fan 22" – 6 Nos.

For 1584 sqm : Air Circulation Fan 22" – 8 Nos.

For 180 sqm : Air circulation Fan 22"-02 Nos.

For 160 sqm : Air circulation Fan 22"-02 nos.

For 100sqm : Air circulation Fan 22"-02 Nos.

For 72 sqm : Air circulation Fan 22"-01 No.

12. Civil Foundation Work/ Ground Preparation: The surface must be prepared with slope of 1-2% on the gutter length (North-South). On the gable width- it is recommended to keep the structure flat or upto 0.5% maximum slope. The Foundation is isolated from the Soil by which protects the foundation pipe from corrosion and harm

Foundation Pipe Telescopic method foundation will be provided The principle pillars are connected to the foundation pipes of Dia. 38 mm x38mm 1.2 Mtr Long x 3mm thick Galvanisation 300 GSM / sqmtr.

The foundation hole is of Dia. 300 mm and depth of 750 mm. the distance between foundations is 4 mtr on the gutter length and 8 mtr on the gable front.

13. Electrical fittings / Wiring

Electrical wiring for Fan & Pad & Humidity in the Green house with high quality ISI approved fittings with copper multi strand twisted Fire Resistant Grade (ISI make) wires stds. Of safety with proper M.C.B. with appropriate electrical points of 5/15 Amps combined (Havells / Anchor / RR Kable / Polycab make)

14. Miscellaneous Items:

Miscellaneous like Stainless steel wash basin with all fittings, aluminum ladder, Plumbing polymer pipes- with all fittings – (ISI or equivalent) to be provided for proper functioning of system.

Flexible expendable polymer hose with different water discharge streams in each area

Structure Specification Semi Hitech without Buffer Room, Air Circulation Fan and Control Panel

Annexure E

<p>1. Structure Frame: All Structure, Rafters, Purlins, Trusses are galvanized and design as per IS 875 standards. All GI steel pipe are as per IS 1239/3601/4923 standard. For maximum Indian wind load conditions, structural trusses will be provided for absolute strength wind load All pipes of standard ISI standard with 2mm thickness. GI pipe 40mm x 40mm (square pipe IS standard IS 1239 anti-corrosive, humidity resistance pipe with IS 47361968/ISO 65-1973 zinc coat as approved with respective unit weights as per IS standard Structure shall be designed for maximum Indian wind load conditions, Structural system shall be provided for absolute strength. GI square pipe: IS standard, Anti-corrosive, Humidity resistant pipe with zinc coat. a) The inter row and Intra row distance of pipe: 8 m x 4 m. b) Nuts and other metallic parts: This budget includes all the elements required to join and watertight the components such as fittings, clamps, screws and nuts plated against corrosion.</p>
<p>2. Cladding Material High quality UV stabilized 5 Layered ISI mark, LDPE Sheet 200 micron thick with driplock (anti drip) diffused, anti dust, anti condensed and properties. Light transmission 86% Anti Drip Diffusion – 55%</p>
<p>3. Poly Locks Poly lock profile will be made up of Galvanized Iron section fixed with zigzag spring of GI material with 12 gauge to withstand the maximum wind load.</p>
<p>4. Shading Net With Fitting accessories UV stabilized Green color shading net inside Poly house 50% with nylon support cables, pulleys, side support with clamps, plastic clamps etc. manually operated. Pulleys assembly with nuts & bolts will be provided. Curtain rings& Curtain clamps with respect to standard specification will be provided.</p>
<p>6. Side Ventilation: Side ventilation of insect net of 40 mesh, rolling curtains on two sides with manual gear operated arrangement The side Curtain is protected with Nylon rope with suitable hook arrangement are provided at each column of the side curtain length. Fabric UV stabilized (minimum 150 GSM) will be used for side apron which will be of 1.5m above</p>
<p>7. Fogging facility Four-way foggers (droplet size less than 50-100 micron is giving better results) having operating pressure of 2.5 kg/cm² fixed on 16mm laterals (2.5 kg/cm²) are to be installed just below the shade net with sufficient overlapping to get uniformly in distribution of vapours for getting uniform climatic condition. Foggers can be operated only at very essential conditions. (with Grid 3mtr x 3mtr), Working pressure 4 bar at this pressure, the average droplet size 50 µm, Type of Fogger : Cross way nozzle ,hanging type, Cool Pro Fogger discharge range- 28 LPH With suitable pump of 1HP ISI mark, Pressure meter- 10 bar one, Return gutter, control valve assembly, Water storage tank -300 Ltr ISI mark.</p>
<p>8. Grouting Telescopic: Columns fitted over ground bolted to insert pipe of 60mm/50mm*2mm thick compatible GI pipe, length of insert 1 to 1.1m of 30 cm x 30cm x 60cm size in 1:2:4 PCC of CM ratio</p>
<p>9. Electrical fittings / Wiring Electrical wiring for the Green house with high quality ISI approved fittings with copper multi strand twisted Fire Resistant Grade (ISI make) wires stds. Of safety with proper M.C.B. with appropriate electrical points of 5/15 Amps combined (Havells / Anchor / RR Kable / Polycab make)</p>