

TENDER SCHEDULE

ESTABLISHMENT OF STATE-OF-THE-ART PLUG TYPE VEGETABLE SEEDLING PRODUCTION PROJECT ON TURNKEY BASIS

A

1. INTRODUCTION:

Department of Horticulture, Government of Telangana, initiating a project for the Establishment of State-of-the-Art Plug Type Vegetable Seedling Production Facility. The Project is completely on Turnkey Basis & the Bidder is held responsible for Planning, Designing, and Creation of Infrastructural Facility with all the necessary Equipments & Machines for their working and maintenance etc.

2. SCOPE OF FACILITY:

Department of Horticulture, Government of Telangana is planning to Establishment of State-of-the-Art Plug Type Vegetable Seedling Production Facility near Hyderabad covering an area of 4-6 ha with an Annual Production Capacity of 80 Lakh Vegetable Seedlings and subsequent enhancement of capacity by 80 Lakh Seedlings every six months upto three years. This facility is integrated with State-of-the-Art Production Unit comprising of the Green House, Hardening House to be operated with minimum human interface.

The Expression of Interest is invited for suitable proposal along with necessary details with an estimated cost for the setting of such unit with Three Years Seedling Production Running Module. The Interested / Specialized Organizations / Firms, who are involved and having experience in Designing, Executing, Running and Maintenance of such Projects only, may participate with their best attractive proposals.

B

3. PROJECT MAIN TECHNICAL REQUIREMENTS FOR INFRASTRUCTURE:

All Synchronized & Automation Units will be equipped with series of Machines and Transportation System for the production of Plug Type Vegetable Seedlings round the Year.

S. No.	Technical Details of Project	Units
1.	<p data-bbox="289 485 1230 520">AUTOMATION SYSTEM UNIT FOR PLUG TYPE SEEDLINGS</p> <p data-bbox="289 562 589 598"><u>a) Diffuser & Mixer:</u></p> <p data-bbox="289 640 1247 835">It will diffuse the growing medium bricks and other material by means of built in electrical driven pivot system equipped with fluffing mechanism, which reshapes all the compressed pieces back to homogenous substrates. It is simple and accurate in substrate distribution operation.</p> <p data-bbox="289 877 946 989">Size: 2438 x 1219 x 1828mm (LxWxH) Capacity: 1.4 cubic meters (brick size capacity) Diffuser time: 4 to 5 minutes</p> <p data-bbox="289 1031 716 1066"><u>b) Level Control Mechanism:</u></p> <p data-bbox="289 1108 1247 1262">It should be fixed between the mixer and auto seeder as it controls the level of material to be filled-in so that material should not over flow and should support the seed to grow better. It should permit only homogenous and even material for tray filling.</p> <p data-bbox="289 1304 695 1339"><u>c) Tray Dispenser Machine:</u></p> <p data-bbox="289 1381 1247 1535">It should be destacker machine which completely works on electrical & mechanical innovative technique. It will dispense automatically as program dispensing of fresh and reused trays. It can handle variety of trays.</p> <p data-bbox="289 1577 919 1688">Size: 1040mm x 700mm x 1314mm((LxWxH) Capacity : 360 trays per hour Operating voltage: 220 volt, 3 Phase.</p> <p data-bbox="289 1730 870 1766"><u>d) Auto Seeder (Drum/Cylinder Seed) :</u></p> <p data-bbox="289 1787 1247 1898">It should be of variable seed elevator conveyer vibration system, controlled by microprocessor based touch screen human interface with adopted software. It should also accompany with quality</p>	Complete set

roller chain with emergency stop switches. The auto drum type seeder used here should be operated with vacuum system for pickup and release of seeds in trays which are ready in process. It should be linked with electronically control pickup & release system operated on conveyer. This machine should be capable of handling different sizes of vegetable seeds right from Cabbage to pumpkin (very small to big size seed). It should drops one seed per plug. In one hour 288 trays with 198 cavities.

Capacity : 71200 seeds/hour

e) Roto fill machine/Auto tray filling machine:

Media has to be filled into the trays continuously and leveled in the trays by the rotary leveler. Depression in each cell of the tray is made by the rotary dibbler.

f) Auto switch system:

The auto switch system should be able to differentiate between seed relative size and hence grading becomes simple

g) Topping Machine:

It is used when tray is released by auto seeder and to be filled by the seed and to make level.

h) Watering Station:

It should be auto watering with microprocessor control.

i) Conveyer - TRB:

The Conveyer is capable enough to transport different size of pro-trays. Specially designed conveyer should be used between machine to machine up to Green House and finally to Hardening Chamber. Conveyer System shall consist of 20 feet long belts (depending on the length of connectivity to germination chamber).

Operation : Operating on 220 volt single phase

j) H- Support Conveyer:

This conveyer should be based on special electronic mechanism and to be operated automatically to shift the lane.

j) In glove facility:

For automatic system plug type seedling.

Size : LxWxH: 9150mm x 9150mmX 4500 mm

k) Structure should be made by:

80mm x 50mm, 50mm x 50mm & 38mm x 38mm hot dip galvanized pipe. Complete Pre-machined Structure and cladding with puff panel of 63mm with inner/outer pre quoted GI sheet 1.0 mm thick with 300 GSM.

	<p><u>Window:</u> Made of Aluminium Frame with Polycarbonate sheet 6mm and accessories, window size : 4'x4' Qty. 04 with sun shade provision.</p> <p><u>Door:</u> Sliding door made by aluminum frame with Polycarbonate sheet of 6mm and accessories, door size 7'x7' qty. 02</p> <p><u>Bay Floor :</u> Top branded Tiles Flooring</p>	
2.	<p>SEED GERMINATION CHAMBER Total Area: 1075 sq. m. Bay width: 9.6 m. No. of bays: 4nos. G.H. width: 38.4m G.H. length: 28m. Gutter height: 4.0m. Ridge height: 6.5 m. Shape: Gothic arch Double Door Room: 3m x 3m.x2.43m. (lxwxh)</p> <ul style="list-style-type: none"> Expansion of similar size germination chamber for every six months should be taken up i.e., in a span of 3 years 6 No.s of germination chambers of 1075 Sq.mts. <p><u>Main features:</u></p> <p>1 Complete Pre-machine fabricated Structure and cladding with Polycarbonate sheet of 8 mm thickness of UV stabilized material:</p> <p>All Structural material including Rafters, Purlins and Trusses should be of hot dip galvanized and to be designed to withstand the wind load upto 130 km/hr.</p> <p><u>Frame Work and Skelton of the Structure:</u></p> <p>The entire assembly should be without any welding joint. All main parts are hot dip galvanized with zinc cover of 360 GSM</p> <p>a) Columns: Hot Dip Galvanized Rectangular Profile, tubular Structures b) Corner Columns: Double Column, Hot Dip Galvanized Rectangular Profiles c) Gutters: Hot Dip Galvanized Steel</p>	

- d) Arches: Hot Dip Galvanized Steel Pipes
- e) Arch Column Clamp: Galvanized Steel Sheet
- f) Crop Bar: Galvanized Pipe
- g) Cross and Reinforcements:
- i) Corner Reinforcement: Hot Dip Galvanized Rectangular Profile
- ii) Column-Arch Reinforcement: Galvanized Pipes
- iii) Column- Column Galvanized Pipes
- iv) H -Reinforcement Galvanized Rectangular Profile
- v) X-Reinforcement Galvanized Pipes
- vi) Crop Bar-Arch Reinforcement Galvanized Pipes

Pipe sections to be used for different Structural Member or equivalent will be as below, given structure size in OD:

- a) Pillar: 80mm × 50mm × 2mm thickness hot galvanized rectangular tubes. Distance between pillars on lateral line: 2m. Distance between pillars on central line: 4m.
- b) Arc: 50mm × 50mm × 2mm thickness.
- c) Ridge: 40mm/41mm.
- d) Crop Bar: 41mm × 41mm × 2mm thickness.
- e) Trusses Tie: 32mm tube structural member will be fitted with zinc plated nuts & bolts. Frame is made by 50x50x2mm hot galvanized rectangular tubes.
- f) Gutter: 4m. Long, 248mm wide and 1.5mm thick molding hot galvanized steel plate
- g) Roof beam: 40x30x2mm hot galvanized rectangular tubes
- h) Bolts and Nuts: Galvanized bolts and nuts

Nuts, bolts and other metallic parts: Includes all the elements required for joining and water tight components (such as fittings, clamps, screws and nuts plated against corrosion).

DESIGN LOADS:

- a) Wind Load Resistance: 130 km/hour
- B) Accessory Load Resistance: 10 kg/sq. m.

B) Computerized Micro-climate Control System:

Computerized micro control system to sense, control and monitor the following parameters:

Temp, Light, R.H, CO₂, VPD, Diurnal temperature difference.

Computer Hardware:

This should be in wall enclosure 50x40x18 cm, inclusive of:

- * Membrane keyboard with 2-line LCD display mounted on the front of the wall enclosure.
- * Single board computer with 20 x an. In/40 x AC out.
- * Power supply for computer system and low voltage controls.
- * RS 485 connection for I/O network and PC connection.
- * Alarm relay module with single alarm output.

Accessories:

- 1 box with meter interface.
- 1 user manual in the English language version 10.0.

Server / PC with Office and Supervision for colour operator terminal functions:

The PC network should consist of one Server/PC. A PC serves as colour operator terminal using the Server / Client Functions of Windows XP Professional.

The Server/ PC is equipped with Office and Supervision for extended colour operator functions, using the Server / Functions of Windows XP Professional. Via the PCs, it is possible to present settings, measurements and calculations of the Maximizer computer in alphanumeric and graphical form via the Office program and Supervision. Furthermore Office collects and stores the historical data of the Maximizer computer system.

For this Server / PC configuration we have included the following:
1 box with Maximizer - PC interface board for connection of the Maximizer to a PC.

1 CD-ROM with Priva Office DIRECT basis program including:

- Supervision
- Communication with 1Maximizer CPU for Supervision.
- operator software for 1 PC's
- operator software for 1 users simultaneously
- * Gadgets used for Environmental control parameters should be versatile and should be easily operated by Horticulture Officer.

Maximizer climate control software:

All Climate compartment control should be based on sensors made up of Combel Scientific Canada (Mandatory), with multi-day average radiation sum program to achieve an average ambient temperature during one or more 24-hour periods

Measuring box, measuring and controlling of temperature and humidity

Heating net control of 5-way modulating mixing valve and on/off controlled circulation pump

Control of side vent motor based on running time
Control program with temperature settings to start the fan system

On/off control of exhaust fan step

On/off switching air inlet control with input for safety contact to release the exhaust fan step

Inside curtain control with shading/energy functions

Control of misting pump

Control of misting valve for humidification

On/off control of air circulation fans

B) High luminous flux par lamp 400 watts qty. 24 per Germination chamber.

C) Forced Cooling System / Evaporative cooling system : To be designed for 150000 CFM inside the growing area.

D) Centralized Heating system : 2.4 KW with circulatory fans of 12

E) Complete facility with Pest Monitoring System (Firm has to specify the equipment they are going to install)

F) Water Applicator:

For irrigating the plants, 1 boomer holding span rail/rod in a bay. Water boomer nozzles span is adjustable height-wise. Adjustable range of water applicator span: From Lowest 1.67 m. (up to a normal human eye height) to nearly 4.5m.

	<p>G)Internal Screen:- Motorized Internal Screen mechanism using Gear Motor with Inbuilt limit switch for smooth control, Rack & Pinion, Support Aero wheel, Handspike driving shaft, Rolling axes, Pull Rod Clamp, Directing clamp, aluminium pipe for more long life & light in weight. Retraction mechanism supported on polyester wire having with high abrasion strength-which results smooth operation & long durability. Aluminum Thermal screen specially designed for heat retention inside the chamber.</p> <p>H) Roof screen/Shading System: 50% (Shading) color green, manually roll able by gear mechanism.</p> <p>1 Side Ventilation: - Automatised opening & closing mechanism with Gear box facility, driving shaft, Rack Arc & Pinion, Shaft support plate, covered with 40mesh Nylon net inside the chamber. Generally used during power failure. Window lift up to 1m wide & length of the chamber</p> <p>J) Plant work Stations for accommodation of 2384 seedlings trays (size 29"x18" LxW), plant work station made by GI frame with 360 GSM aluminium frame. Complete set (Plant work stations shall be for all the germination chambers that will come up for every six months i.e., a set of six Nos. in 3 years)</p> <p>K) Foundation wall: For chamber WIDE BASED 2' below earth's surface.2' above earth's surface, as kick-board 9" wide, Frame base block height 3'x9"x9"each with plinth protection 3'wide 6" thick.</p> <p>L) Floor: Made of stone chips 2", over that, rodi up to 2" over that cement plaster with ratio of rodi, sand, cement, 4:3:1 tiled with full white anti slippery hard material. complete set</p>	
3.	<p>PRIMARY HARDENING CHAMBER FACILITY / NVGH</p> <p>Area: 2304 Sq. m. Bay width: 9.6 m. No. of bays: 5nos. G.H. width: 48m. G.H. length: 48m. Gutter height: 3m. Ridge height: 4.5m. Shape: Gothic</p> <ul style="list-style-type: none"> Expansion of similar size germination chamber for every six months should be taken up i.e., in a span of 3 years 6 Nos of germination chambers of 1075 Sq.mts. 	01

Structure detail :

- 1 All Structures, Rafters, Purlins, Trusses are hot dip galvanized 360 GSM and design to take a wind load up to 130 km/h.

Specification:

- Hot dip galvanized Steel Structure: Using galvanized tubular structure or equivalent sections.
- **Pipe sections to be used for different Structural Member will be as below or equivalent :**
- Columns: 80 mm × 50 mm
- Trusses: Bottom cord 42 mm x 2mm; Truss Members 48mm x 48mm Bracing 25 NB, B-class GI steel pipe; structural member will be fitted with zinc plated nuts & bolts without welding.
- Purlins: using specially designed profile 32 mm ×2mm thick.

2) Nuts and other metallic parts: Includes all the elements required for joining and water tightens components (such as fittings, clamps, screws and nuts plated against corrosion).

All Nuts and Bolts where ever used should be of Hot Dip GI with 360 GSM

Cladding:

Cladding on roof , 220 / 230 micron UV stabilized poly film (branded firms like tuflex and Ginegar) having 85% light transmission, multilayer and all sides cover by 70:30 UV stabilized shade net and Roof screen 50:50 % , This is attached with the structure by the spring & GRP profile & GRP clamps which click into it. Later on, the spring can be clipped out in order to fit new plastic. The profile does not get distorted and the profile can also be used again. 50% shade net is of White coloured Mono x Mono 125 GSM.(As per location requirement)

Pre Entry Room & Doors:

- 1 **Ante Room / Vestibule:** The hardening chamber will have a specific Pre Entry Room of size - 3 m. × 3 m. × 2.43m. (L×W×H), where all the other spare items can be stored/ dumped out.

B. Sliding Doors: 1.5 m. wide & 2m. tall single door complete with polycarbonate sheet glazing, top & bottom tracks, jambs, flashings & installation hardware.

Water Applicator System: For irrigating the plants, 1 boomer holding span rail/rod in a bay, Water boomer nozzles span is adjustable height-wise. Adjustable range of water applicator span: From Lowest 1.67 m. (up to a normal human eye height) to nearly 4.5m. (Boomer specifications of International standards)

Plant work Stations: For accommodation of 5000 seedlings trays (size 29"x18" LxW), plant work station made by GI 360 GSM frame with aluminum frame. Complete set (Plant work stations shall be for all the Primary Hardening chamber facility that will come up for every six months i.e., a set of six Nos. in 3 years)

Foundation wall for Hardening Chamber WIDE BASED 2' below earth's surface. 2' above earth's surface, as kick-board 9" wide, Frame base block height 3'x9"x9" each with front side wall plinth protection 3' wide 6" thick.

Pathway for personnel movement except plant work station area
Pathway made of stone chips 2", over that, rodi up to 2" over that cement plaster with ratio of rodi, sand, cement, 4:3:1 with anti skid. Complete set (it should be with brick red color water proof painting)

5	<p>FERTIGATION SYSTEM:</p> <p><u>Automation Fertigation System Nutrifit dosing unit for connecting with the seed Germination chamber and Hardening chamber</u></p> <p>1 Nutrifit dosing unit with the following technical specifications:</p> <ul style="list-style-type: none"> - type: Nutrifit 12-25 AB.pH. - mixing tank system: content of 110l net with overflow connection. - level protection: minimum level detection switch in mixing tank. - number of dosing channels: 2 for fertilizer on EC-value and 1 for acid on pH-value. - dosing valve and fertili: fertili with electrical quick action valve 124-DN5-24VCA-5W with fertili nozzle Ø2.7mm. - dosing capacity per channel: 30-300 litres/hour of fertili or acid solution at 3.0 Bar. - pump capacity net: 9.0 m³/hr net at 4.0 Bar: 11.0 m³/hr net at 3.5 Bar - pump type : Grundfos CHI 12-25. - mains voltage pump: 3-phase, 380-415VAC-50Hz - Power consumption pump: 2.8 kW. - EC measurement: 2 EC-sensors with thermostat element 3kΩ/25°C for temperature compensation of the EC-value. - pH measurement: 2 pH electrodes max. 10 bar, high pressure with coaxial cable 3 meters and BNC-connectors, holders for bayonet mounting. - dimensions inlet and outlet: water pressure operated inlet valve 2" with float bellow and PVC inlet Ø63 mm and outlet Ø50mm. - frame construction: corrosion free materials. - electrical cabinet : manual switch, motor soft starter and thermal protection for pump. - integrated I/O-network materials: <p>* 1x power supply unit 9510 with ring core transformer to supply two voltages: 24VAC-205VA for control outputs, fans, relays, and</p>	01
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	<p>24VDC-75W for electronic circuits and modules</p> <p>For I/O-network functions will be built in:</p> <p>*1x module EC interface for connection of two EC sensors</p> <p>*1x module pH interface with two BNC connectors, suited for connection of two pH sensors</p> <p><u>Configuration:</u></p> <table> <tr> <td>Water system</td> <td>1</td> </tr> <tr> <td>Litre counter measurement</td> <td>1</td> </tr> <tr> <td>EC/pH measurement and control</td> <td>1</td> </tr> <tr> <td>Fertiliser stock solution tanks</td> <td>3</td> </tr> <tr> <td>Dosing channel control</td> <td>3</td> </tr> <tr> <td>Water treatment recipe</td> <td>2</td> </tr> <tr> <td>Control of irrigation valve.</td> <td>2</td> </tr> </table>	Water system	1	Litre counter measurement	1	EC/pH measurement and control	1	Fertiliser stock solution tanks	3	Dosing channel control	3	Water treatment recipe	2	Control of irrigation valve.	2	
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6	<p>STERILIZED SOILLESS MEDIUM WITH CHEMICALS / FERTILIZERS</p> <p>Growing media- Coco peat ,Vermiculite, & perlite Fertilizers – Water soluble NPK & micronutrient and others. Chemicals- pesticides/fungicides etc.</p>	For 8 million seedlings (proportionate increase for every set of increase in Germination & Primary Hardening chamber)														
7	<p>SPECIALLY DEVELOPED IMPLANTATION TRAY:</p> <p>Made by High impact polystyrene material/multi cell plastic tray, Each set for 99 seedlings.</p>	2,00,000 as per the cycle requirement and expansion for every six months														
8	<p>NT-90 INSULATED TRAY:</p> <p>To accommodate one set of implantation tray. Each set for 198 seedlings.</p>	60000														
9	<p>PACKING ROOM :</p> <p>Size: LxWxHc:s 32m x 12m x4m:3m</p> <p>Structure made by</p> <p>80mmX50mm & 50mmx50mm hot dip galvanized pipe 360 GSM. Roof cover by pre quoted GI sheet 0.5 mm thick.</p> <p>Side cover by mesh SS (304 no,) 40 mesh</p>	01														

	<p>Door: sliding door made by aluminum frame with Polycarbonate sheet 6mm and accessories, door size 4mx2m qty. 02</p> <p>Foundation wall for Packing room WIDE BASED 2' below earth's surface.2' above earth's surface, as kick-board 9" wide, Frame base block height 3'x9"x9" each with front side wall plinth protection 3'wide 6" thick.</p> <p>Floor: made of stone chips 2", over that, rodi up to 2" over that cement plaster with ratio of rodi, sand, cement, 4:3:1 and should be anti slippery. Complete set</p>	
10	<p>STORE ROOM :</p> <p>To accommodate the raw material like: Growing medium/Trays/ Chemicals fertilizers etc safely in this shelter.</p> <p>Size: LxWxHc:s 32m x 12m x 4m:3m</p> <p>Structure made by: 80mmX50mm, 50mmx50mm &38mmx38 mm hot dip galvanized pipe.</p> <p>Complete Pre-machined Structure and cladding with puff panel 63mm with inner/outer pre quoted GI sheet 0.5 mm thick.</p> <p>Window : made by aluminum frame with Polycarbonate sheet 8mm and accessories, window size : 4'x4' Qty. 04 with sun shade provision</p> <p>Door: sliding door made by aluminum frame with Polycarbonate sheet 6mm and accessories, door size 4mx2m qty. 02</p> <p>Foundation wall for Store room WIDE BASED 2' below earth's surface.2' above earth's surface, as kick-board 9" wide, Frame base block height 3'x9"x9" each with front side wall plinth protection 3'wide 6" thick.</p> <p>Floor: made of stone chips 2", over that, rodi up to 2" over that cement plaster with ratio of rodi, sand, cement, 4:3:1. Complete set</p>	01
11	<p>WORKING STATION:</p> <p>Using heat proof technology, easy to install/ dismantle. Size: 12 x 12 x 3 mts wall thickness</p>	01

12	RAW MATERIAL PROCESSING AND TRAYS WASHING STATION: Size : 8 x 8 mts	01
13	POWER BACK-UP UNIT: Generator operating capacity 60 KVA make kirlosker with Automatic on/off panel. Shelter with RCC (1:4:6) platform for Generator	01
14	SUPERVISION AND OPERATIONAL CHARGES: Includes skilled, un skilled and artisan manpower and supervision by expert's team	For three years complete production
15	OVER HEAD WATER RESERVOIR : CAPACITY : 20000 ltr	02 sets
16	EQUIPMENT & TOOLS Each & every essential tool/apparatus for all related activities.	Complete set
17	Solar Panel System - for 5HP motor running capacity	1 set

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4. MANDATORY CRITERIA FOR TECHNICAL QUALIFICATION:

- 1 The bidder shall submit EMD of Rs.7.00 Lakhs in the shape of Fixed Deposit Receipt (FDR) drawn in favor of the Telangana State Agro Industries Development Corporation Limited (TSAIDC Ltd.). The details of bid security must be provided. The bid security of the unsuccessful bidders will be released after issuing supply order to the successful bidder and the bid security of the successful bidder will be released after execution of the order. The bids that are not accompanied by the aforesaid bid security will not be accepted. Only the bidders are registered under NSIC/DGS&D will be exempted to pay/submit Earnest Money Deposit. The relevant valid certificate for availing this exemption to be enclosed with the offer.

The Tender Schedule shall be sealed and superscribed at the top of sealed cover **“TENDER SCHEDULE FOR ESTABLISHMENT OF STATE-OF-THE-ART VEGETABLE SEEDLING PRODUCTION PROJECT ON TURNKEY BASIS”** invited vide **Memo No. RKVY/12/2015 dated 13-03-2016.**

- 2 Quoted price: To facilitate format evaluation, the bidder shall quote the price of items separately along with relevant papers for supporting the quoted price such as catalogue, user list etc. failing which the bid shall be treated as non-responsive at the discretion of the purchaser.
- 3 The documents submitted to the bidder shall remain valid for a period of **90 (ninety)** days. Bid not confirming to this provision shall be treated as non-responsive.
- 4 The rate shall be quoted for all duties, taxes and other levies payable by the bidder (other than VAT) shall be included in the item rate. VAT should be quoted separately (TIN No. must be furnished).
- 5 Bidders must supply the items at their own cost. All machineries/equipments are to be supplied for; Project Area Delivery of goods shall have to be completed and commissioned (in functional condition) within **90 days** from the date of issuing supply order.
- 6 Installation and commissioning charges, if any, inclusive of expenses of foundation work etc. are to be mentioned separately against each machine. In case of no mention, the same will be considered as inclusive of installation cost wherever applicable.
- 7 Rates should be quoted clearly both in words and figures separately for each item without which the quotation shall stand rejected.

- 8 The warranty of the project shall be as per the prevailing warranty policy/certificate of manufacturer (wherever necessary) for the items and warranty period shall not be less than 12 months from the date of commissioning of items at site & operations of facility for one month with all material (without seed) is a part of the project. They must have ready stock for spare part items and for further ten years.
- 9 The firm must have prior experience to handle minimum one such State-of-the-art Vegetable Seedling Production Project & two running in respect of Designing, Planning, Execution, Running and Maintenance with its actual successful performance from last more than 3 years. The Work Orders with Performance Certificate for such installations to be enclosed with the offer.
- 10 Detailed specification with model, size, code no., catalogue, and name of manufacturer should be furnished.
- 11 The firm must have the following ISO certification: ISO 9001:2008, ISO 14001:2004, & ISO OHSAS 18001:2007.
- 12 Up-to-date Sales Tax Clearance Certificate, Income Tax Return of last two years, and PAN No. duly attested must be furnished along with the offer.
- 13 Organization must have Ph.D., qualified scientist's minimum for the following disciplines: 1) Horticulturist, 2) Biotechnologist, 3) Vegetable Expert 4) Plants Protection Expert, 5) Fruit Expert 6) Electronic and instrumentation expert 7) Irrigation expert and 8) Civil Engineering expert mainly their CV to be enclosed with the offer.
- 14 The bidder should have a wide experience of designing, supply and running of the project in all manners includes all machine fixing, orientation, synchronization, adjustments, MEP works etc. The firm should have a proper plan of safety measures at construction site under ESH guidelines.
- 15 Nursery production price of each plant (without seed) should be quoted, growing medium is soil less with inert material to get pure seedling by using this infrastructure. All the other materials & practices by the company doing this project.
- 16 All the material put to use should be of ISO certification.

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5. GENERAL TERMS AND CONDITIONS OF TENDER SCHEDULE:

1. There should not be any overwriting. Corrections, if any, should be made with dated initial of bidder. Bidder shall submit quotation separately in each item.
2. The price quoted shall be fixed and not subject to adjustment/variation during the performance of the contract.
3. The bidder shall furnish the warranty for all the items at the time of delivery and commissioning. The purchaser shall reject the items not enclosed by warranty certificate from the manufacturer. The warranty certificate should be duly signed and sealed.
4. The machineries are to be supplied ready to operate, complete with motor, starter and any necessary gadgets including catalogues, troubleshooting manual etc. without which the same will be considered as incomplete supply.
5. List of spare parts with current prices to be required during operation of the machines and addresses of the source of spare parts availability including contact no., e-mail etc. are to be provided in a separate sheet.
6. All payment shall be made in Indian Rupees only.
7. The quotation will be opened on the day of last date of submission at **3:30PM** in the office of the undersigned on **02-05-2016**. The bidder or his authorized representative may attend the bid opening.
8. Every page of the bidding documents purchased from the purchaser are should be signed by the bidder.
9. The undersigned reserves the right to accept or reject any quotation and to cancel the instant bidding process and reject all quotation at any time prior to award of contact, without thereby incurring any obligation to the affected bidders of grounds for the purchaser action.
10. All the employees, workers, daily paid workers, staff in any manner, is under the 100% responsibility of the company/organization doing this project. This Department or any other department of Telangana state in no manner is responsible for any such payment.
11. In case of Importers, they must enclose the Original Specific Authorization Letter for the Models quoted by them in the Tender Schedule from the Principal Manufacturing Company.

12. The Offerer(s) shall have a full-fledged Manufacturing Unit / Assembling Unit with skilled workers for the quoted items.
13. Performance Guarantee Deposit of Rs.50,00,000/- (Rupees fifty lakhs only) in the form of Demand Draft shall be paid before entering into agreement on Rs.100/- Non-Judicial Stamp Paper.
14. Negotiations will be held as per the decision of the Technical Committee.
15. The Suppliers who import the above equipment have to submit the Xerox copies of Invoice, Bill of Lading, Packing List, Certificate of Origin and Shipping Advice in proof of Import for each consignment they import.
16. The Tender Schedule Price Quote of only those offerer(s) whose Technical Bids are qualified will be opened with due intimation to them.
17. The **AGREEMENT PERIOD WILL BE UPTO THREE YEARS** from the date of agreement i.e., 3 years of Production period. No escalation charges will be paid for supply of items during the agreement period.
18. The supplies made shall be invoiced on VAT invoice with Serial No. of invoice printed on it. No invoice other than tax invoice will be accepted. VAT applicable, if any, shall be clearly mentioned in the tax invoice.
19. The approved firm shall supply the ordered equipment as per terms and conditions within the stipulated time indicated in the Purchase Order.
20. In the case of Annexure-II, the items supplied must be covered with warranty for minimum of three years (or more as per manufacturer's terms & conditions) from the date of supply against any defective manufacturer / workmanship etc., repairs / replacements / servicing shall be attended free of cost within the warranty period.
21. The loading and unloading charges, if any, should be borne by the supplier only.
22. The firm shall provide detailed operational and maintenance manuals at the time of supply of the equipment.
23. The offerer has to quote the price only as per the technical specifications given in the Tender Schedule.
24. Telangana State Agro Industries Development Corporation Limited (TSAIDC Ltd.,) reserves the right to inspect the manufacturing / other premises of supplier and his principal/s during the Tender Process or before supply or before payment in order to satisfy that the supply is as per the quality and specifications of equipment indicated in this Tender Schedule.

- 25 Telangana State Agro Industries Development Corporation Limited (TSAIDC Ltd.) reserves the right to award the Tender Schedule either in part or full or follow any other suitable procurement procedure. TS AGROS at its sole discretion and without assigning any reason thereof, reserves the right to accept / reject any or all schedules at any stage of the Tender Process.
- 26 In case of any dispute or difference arising out of the Agreement between the two parties relating to any aspect of the agreement, the parties should attempt to settle the dispute through mutual and amicable discussions. If the dispute is not settled through such discussions, the matter shall be referred / settled as per provisions of Arbitration and Conciliation Act, 1996.
- 27 It is further to be agreed by both the parties that all differences and disputes if not resolved as above, shall be got remedied through the Court of Law of Hyderabad jurisdiction only.
- 28 Tender can be rejected if any stage of the procurement process, it comes to knowledge that any offerer is involved in any fraudulent practice or misrepresentation of the facts or tried to influence the selection process or indulged in any corrupt activities in competing with others.
- 29 The manufacturer/ importer shall be liable for blacklisting and further prosecution, if they fail to adhere to the above conditions.
- 30 The approved firm shall enter into an agreement with the Corporation duly incorporating all the above terms & conditions.
- 31 The equipment shall be supplied to the Horticulture Department at required destinations. The offerer shall provide all information as per this Tender Document. TS AGROS shall evaluate only those schedules that are received in the required format and are complete in all respects.
- 32 Cost to cost production shall be done by firm along with maintenance upto 3 years and handover to the Department after 3 years of production.
- 33 Firm shall produce seedlings and handover to Department for distribution as per the indents, Crop, Variety, Quantity shall be decided by Department from time to time based on demand from farmers.
- 34 Firm shall abide by the Department for the modifications & instructions given as and when required during 3 years production period tenure.
- 35 All the terms and conditions mentioned in the Tender are subject to modification at any given point of time.

E) INSTALLATION, COMMISSIONING & VALIDATION

1. All tools, equipment and machinery required for the installation and commissioning work has to be arranged by the successful firm only.
2. The period stipulated for completion of supply, installation, commissioning, validation and training of personnel shall be 90 days from the date of receipt of Purchase Order.
3. Penalty for delay in work will be levied @ 0.5% of the total value of Work per week upto a minimum of 5% in case of default in work completion within the stipulated time.

F) INSURANCE.

The contractor shall insure all goods for all risks to the extent of value of goods specially mentioning that the claim amount under the policy shall be payable to TS AGROS. The contractor shall borne the insurance charges for all risks for the goods for the period up to expiry of warranty and manpower working with the firm at the site.

G) WARRANTY

The performance guarantee period shall be 10 Years from the actual date of supply / commissioning of equipment in all respects. The same shall have to be communicated in writing to Telangana State Agro Industries Development Corporation Limited based on the actual date of completion of all works.

H) CERTIFICATION PROCESS FOR PAYMENT

a) EQUIPMENT / MATERIAL RECEIPT CERTIFICATE

Issue of material receipt note / goods receipt notes at site by TSAIDC unit stating that all the Equipment is received as per the specification. (List to be enclosed) duly certified by the Technical committee.

b) INSTALLATION & COMMISSIONING CERTIFICATE

Installation and Commissioning Certificate has to be issued by TSAIDC and handover to Department of Horticulture through technical committee appointed by the Commissioner of Horticulture.

c) COMPLETION CERTIFICATE

Completion Certificate will be issued by Horticulture department officials along with TSAIDC through the technical committee after complete validation and training to the personnel of Horticulture Department.

I) TERMS OF PAYMENT

Payment shall be released as indicated below, subject to receipt of funds from Commissioner of Horticulture. 50% payment will be released after entire equipment and material delivered and duly certified by the Technical Committee along with Horticulture Department Officials and TSAIDC Ltd.,. 25% payment will be released on installation & commission of the unit. Remaining 25% payment will be made in three installments every year upto three years.

J) SPECIAL INSTRUCTIONS TO THE FIRMS

1. The firms should submit technical specifications / brochures / information, users list etc. along with offer.
2. The supplier should conduct working demonstration of the equipment and train the working personnel of Department of Horticulture of concerned Production Unit.
3. List of fast moving spares and its selling price should also be enclosed. List of accessories which are recommended to be purchased separately for each item should be clearly mentioned in the offer.
4. The successful supplier will make a pre-delivery presentation about the details of equipment being supplied both to the Officers of TS AGROS and the Horticulture Department / Technical Committee.

Place:
Date :

**SIGNATURE OF THE OFFERER
WITH SEAL**

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6. EVALUATION MATRIX

Following requisites are mandatory to bidder.

S.No.	Main Criteria
1	<p>Experience:</p> <p>The firm should have prior experience in handling minimum one (mandatory) such State-of-the-art Vegetable Seedling Production Project in respect of Designing, Planning, Execution, Running and Maintenance with its actual successful performance. The work order along with performance certificate from client for the project should be appended with the offer.</p> <p>And apart from above minimum 02 other such under govt. projects, which are in-hand/under progress at the site is essential to be presented in form of work order with their proposal. Orders for such installations will also count as proof of having proven expertise.</p>
2	<p>Financial Strength (Turnover of company over each of last three years)</p> <p>a. The Bidder will have to submit audited Balance sheets for past three years, along with Certificate from the Auditor to show that the turnover is from Construction business of Greenhouses/Vegetable Seedling Production Unit/Protected Cultivation, if the Company is engaged in other businesses also.</p> <p>b. Bidder is requisite to have Solvency Certificate of value up to 10 crore for execution of the project. Copy of this certificate from their bankers should be enclosed with the bid.</p>
3	<p>Technical competency for running of Horticulture Project</p> <p>The Bidder shall have adequate number of in-house technical staff of crop scientists in different disciplines like: 1) Horticulturist, 2) Biotechnologist, 3) Vegetable Expert, 4) Plants Protection Expert, 5) Fruits Expert 6) Irrigation expert 7) Civil Engg expert mainly Details/CV of them should be attached with the offer 8) Software programmer specialist to handle the computerized control system is mandatory.</p>
4	<p>Methodology and work plan proposed</p> <p>Scaled Design/Drawing with CAD (Computer Aided Design)</p> <p>The Bidder shall provide work plan with detailed specification of</p>

	materials/equipment used for implementing the Project. Scaled high level technical drawings for entire project including greenhouses, polyhouses, automation unit and other building areas to be submitted.
5	<p>Registration of R&D Centre by DSIR, Govt. of India (Not in Tissue culture).</p> <p>The Firm should be approved as SIRO by DSIR, Government of India, and having their own running R&D/Technology Development Centre for the similar activities under protected cultivation at different levels in India. The proof of the same to be a The firm should have appended with the proposal.</p>
6	<p>The Organization should have mentioned their experience/expertise in growing different horticulture crops, in number of years. The firm, who will have the maximum/utmost/highest experience with successful results, will be preferred.</p>
7	<p>The firm should have NSIC registration.</p>
8	<p>The bidder should have the following ISO Certifications: ISO 9001:2008, ISO 14001:2004, & ISO OHSAS 18001:2007</p>
10	<p>High core Technical Presentation on Entire Project Plan</p> <p>The bidder has to give a detailed technical presentation in front of technical committee to assess the expertise of the company.</p>

F

7. DISQUALIFICATION:

The Tenderer may, at its own sole discretion, at any time during the Tender process, disqualify any interested party from the Tender process if:

- (a) If the response to the Tender is submitted after the deadline for submission.
- (b) If the Interested Entity has made misleading or false representation in the forms, statements, attachments submitted in proof of eligibility.
- (c) If the Tender Schedule is not accompanied by required documentation.
- (c) If the Interested Entity failed to provide clarifications related there to, when sought.
- (d) If the Interested Entity is found to canvass, influence or attempt to influence in any manner, the qualification or selection process, including without limitation, by offering bribes or other illegal gratification.

Notwithstanding anything written above or elsewhere, the Tenderer may disqualify the Interested Entity without assigning or disclosing any reason thereof.

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8. OVERVIEW OF THE QUALIFICATION PROCESS:

- Interested companies/firms are required to submit the response to the Tender in order to register their interest in participating in the qualification process. The envelope containing the Tender Schedule should be superscribed "**Tender Schedule for the STATE-OF-THE-ART VEGETABLE SEEDLING PRODUCTION PROJECT ON TURNKEY BASIS**" for **Technical Bid and Financial Bid separately**.
- The Sealed Tender Document should contain the information about the Interested Entity as listed in the Eligibility Criteria with supporting documents and authenticated. In addition the entire submission should also be copied on to a CD. The Sealed Tender Document (hard and softcopy) should be submitted by Post/Courier/Hand Delivery to:

**The Vice Chairman and Managing Director,
TSAIDC Limited, Hyderabad**

- The last date for submission of Tender Schedule is **02-05-2016**. In case of the designated day being declared to be public holiday, the same maybe extended to next working day. The Tenderer reserves the right to accept/reject any or all offers submitted in response to this advertisement without assigning any reason whatsoever.
- A Committee of the Tenderer will adjudge the parties' capabilities and shortlist the respondents on the basis of information submitted in support of the Eligibility Criteria mentioned above. Such short-listed interested parties will be required to make a detailed presentation about their understanding of the requirements and their capabilities vis-avis the requirements.
- The Tenderer also further reserves the right to issue Request for Proposal (RFP) only to the short -listed vendors, based on the responses and the requirements of the Tenderer. The decision of the Tenderer in this regard shall be final.

9. OTHER CONDITIONS:

The Interested Entity shall bear all costs associated with the preparation and submission of its response to Tender, and in connection with the short-listing process prescribed in the preceding paragraphs. The detailed information in Annexure - I, II & III shall be provided by the Firm.

* * * * *

ANNEXURE - I
CONDITIONS OF ELIGIBILITY FOR APPLICANT
(Attested copies wherever relevant to be enclosed)

1	Tender Reference	:	No: TS Agros/Projects/Horti/ 2016-17 dated 18-04-2016
2	a) Name of the Manufacturing/ supplying Company with its Regn. No. (copy of the manufacturing license to be enclosed) b) Name of the Importing company with its Regn. No. (copy of the Importing license to be enclosed)	:	
3	Status of Company		
	i) Registered Company	:	
	ii) Sole proprietorship firm (Name & address of the proprietor)	:	
	iii) Partnership firm (Partnership agreement, letter of consent as authorized by other partners to attend for this Tender)	:	
	iv) Private Limited Company (Certificate of incorporation and authorization from CEO if not represented by CEO)	:	
4	Registered Address of manufacturer/supplier	:	
5	Particulars of Demand draft enclosed towards cost of Tender schedule if the Tender schedule is downloaded from website		DD No. DD Date: _____ for Rs._____/ - Name of the Bank
6	Details of EMD paid DD No: Date: Bank Name: Amount:	:	
7	Brief Profile of the fir	:	
8	Import License No. (copy to be enclosed)	:	
9	Bank particulars for online transfer of amounts • Name of the Bank:		

	<ul style="list-style-type: none"> • Branch of the Bank • Account Number • RTGS No 		
10.	Specific authorization letter from the Principal manufacturing company (for importers only) (if yes copy to be enclosed)	:	
11	Whether the Company is ISO certified or not (If 'yes' copy to be enclosed)	:	
12	Proof of having sufficient no. of experienced technical teams for training & operations management (Details: names of persons, qualifications and experience)	:	
13	Annual production capacity certificate / Annual import capacity certificate	:	
14	Turnover of the above machinery during last 3 years. a.2013-14 b.2014-15 c.2015-16	:	
15	Experience / performance certificate from clients / Govt. departments/ Organizations during last 2-3 years about supply of these equipment and test reports / certificates from reputed Govt. Testing Institutes, if any.	:	
16	Details of dealers' net work and after sales service stations to be provided by firm in the area of operation.	:	
17	VAT Regn.No. / CST. No. and their validity (copies to be enclosed)	:	
18	PAN No. (copy to be enclosed)	:	
19	Audited accounts balance sheet for the last 3 years. (attested copies to be enclosed)	:	
20	Income Tax assessment Certificate for the last 3 years (attested copies to be enclosed)	:	

21	Name of contact person with address & Phone no. Email:	:	
22	a) Detailed Technical specifications of all the equipment quoted in the Price bid. (List to be enclosed)	:	
23	ISI/ ISO Certificate (copy to be enclosed) / Relevant Agencies Certificate	:	
24	B.I.S. Certificate of principal manufacturer (copies to be enclosed)	:	

(Add additional sheets as required)

NOTE:

1. All the columns of the application form shall be duly, properly and exhaustively filled in.
2. All corrections if any must be signed by the Offerer before submission itself. For filing faulty information, the Tender is liable for rejection. The Offerer should sign on each and every page of Tender Schedule and on all the additional documents submitted along with Tender Schedule.
3. The applicant can enclose additional information, if any, relevant to the application separately
4. At the time of verification of Tender Schedules, the original documents should be produced for verification.

SIGNATURE OF OFFERER WITH SEAL

ANNEXURE - II

PRICE QUOTE

S.No.	Description of the Item	Make, Model & Source	Rate Quoted
Item No. I MEDIA PREPARATION MACHINES (Design, Layout and Specifications along with Accessories shall be furnished)			
1	Diffuser and Mixer		
2	Level Control Mechanism		
3	Tray Dispenser Machine		
4	Drum / Cylinder Seeder		
5	Rotofil Machine		
6	Auto Tray Filling Machine		
7	Seed Germination Chamber for Hard Coated Seeds		
8	Conveyor Belt - TRB		
9	H-Support Conveyor Belt		
10	Guide Rail		
11	Auto Switch System		
12	Watering Station		
13	Conveyor System		
14	Topping Machine		
15	Monitoring Unit		
Item No. II GREEN HOUSE (Design, Layout and Specifications along with Accessories shall be furnished)			
1	Steel Structure with Gutter (Details to be furnished as per the present location requirement)		
2	Polycarbonate Multiwall Sheet UV Stabilized (Details to be furnished as per the present location requirement)		
3	Benching System (The dimension of each Bench shall be furnished as per the present location requirement)		
4	Overhead Auto Applicator (Details shall be furnished as per the present location requirement)		
5	Covering / Cladding (Details shall be furnished as per the present location requirement)		
6	Pad and Fan Cooling System (Details shall be furnished as per		

	the present location requirement)		
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Item No. III HARDENING CHAMBER (Design, Layout and Specifications along with Accessories shall be furnished)			
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Item No. IV PACKING AREA (Design, Layout and Specifications along with Accessories shall be furnished)			
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Item No. V SERVICE BUILDING, RESIDENTIAL QUARTERS, OFFICE ROOMS, WASHROOMS etc. (Design, Layout and Specifications along with Accessories shall be furnished)			
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- Note:** 1. For Media Preparation Machines, the following distinguishing features shall be maintained
- a. High Quality Construction and Maintenance Free
 - b. High Separation Efficiency
 - c. Available for Several Applications
 - d. Easy Operation
 - e. Movable Construction
2. Equipments used in the Green House shall be as per the Climatic Conditions of the Specific Location where the Unit going to be installed at Telangana State. Simulated sunlight shall be provided in the entire Green House. Light Spectrum Range between 350 nm to 650 nm is preferred for maximum

biomass production. Light with PAR Lamp shall be provided for Photosynthesis. Water and Pad Cooling System shall lower the Green House Temperature near the Pad by $8^{\circ}\text{C} \pm 2^{\circ}\text{C}$ from the Ambient. Heating System provides 3416 BTU per KWH, etc.,.

3. Structure shall be covered with Polycarbonate Sheet - Lexan 6 mm Multiwall UV Stabilized and it shall be secured from outside by anodized Aluminum Strip.
4. Size of the Green House shall be 900 sq.mtrs.,
5. Size of the Hardening Yard shall be 3500 sq.mtrs.,

SIGNATURE OF OFFERER WITH SEAL

ANNEXURE- III

DECLARATION ON Rs.100/- NON JUDICIAL STAMP PAPER

1. I / We have read and understood the Terms and Conditions of Tender Schedule relevant to "Tender Notice" dated _____ and I / we have submitted the Annexure in accordance with the Terms and Conditions of above Tender Schedule.
2. I / We shall not sell the products being quoted through this Tender Schedule, at a lower price either to Government / Private Parties / Farmers in the State of Telangana by way of giving any additional trade discount or incentives. If any such incident is noticed, T.S.A.I.D.C. Ltd. has right to restrict all payments to such a lower rate apart from initiating penal action.
3. The information furnished in the Annexure - I are true and factual and I / we clearly understand that our Tender Schedule is liable for rejection, if any information furnished is found incorrect and inappropriate, at any point of time.
4. The Authorized Dealer of Imported Equipment shall furnish a declaration that the products offered by us are not copied or duplicated of any other product design. In case, the Corporation authorities found our products are imitated or duplicated at any time, we are bound for any legal action to be taken on us including blacklisting our firm.
5. The Authorized Dealer of Imported Equipment shall also furnish a declaration that we do not violate any patent/trade mark rights of any other manufacturer.

**PLACE:
DATE:**

**SIGNATURE OF THE OFFERER
WITH SEAL**