



द्वारा : स्पीडपोस्ट / हाथों-हाथ



भा. कृ. अनु. प. –केन्द्रीय शुष्क क्षेत्रअनुसंधानसंस्थान
ICAR - Central Arid Zone Research Institute
जोधपुर (राजस्थान) 342 003 / Jodhpur (Rajasthan) 342 003
Website: www.cazri.res.in, Email: director.cazri@icar.gov.in
Phone No. 0291 – 2786485 (CAO) 2787152 (AAO) / FAX: 0291 – 2788706



F. No. 55(5)/2021-2022/Admn.IV

Dated : 17.02.2022

To

M/s.....
.....
.....
.....

Sub: Inviting Quotations for Purchase of Supply and Installation of Hydroponic System.

Dear Sir(s),

You are requested to kindly quote your lowest rates on the letter head of your firm with your all terms & condition keeping the following conditions in view, in respect of the articles as mentioned in the Schedule to Tender.

1. No advance payment will be made. However, the payment is normally made within 30 days from the date of receipt of material in good condition as per order.
2. Payment will be made by mode of e-payment to the supplier/firm after satisfactory supply of ordered material and receipt of pre-receipt.
3. The quantity proposed in the quotation may be increased or decreased at the discretion of the authority while placing the order.
4. Quotations not found according to specification will be rejected/not considered.
5. The firm should supply the printed literature, operational manual etc., if applicable. The firm should also supply a copy of the authorised dealership certificate of the item, if applicable.
6. Quotations should remain valid for 6 months from the date of quotation.
7. The rate should be on F.O.R. ICAR-CAZRI, Jodhpur basis for indigenous items.
8. The firm should indicate PAN/TIN/GST as per Govt. Rules.
9. The Rates quoted should **be clearly be indicated in figure as well as in words**. While quoting the rates, it may be clearly indicated whether the items are inclusive or exclusive of GST, Excise Duty, Custom Duty, Octroi etc. either in terms of percentage or in absolute term.
10. Delivery will have to be made normally within 30 days from the date of issue of our order or as mentioned in the supply order unless such extension is allowed by the Institute **failing which suitable penalty as indicated in the supply order will be imposed.**
11. The quotation may be sent to the office by courier/Regd. Post/Speed Post in sealed cover superscribed with **“Quotation for Supply and Installation of Hydroponic System”** due date 28.02.2022 and the same must be reach to this Office on or before **28.02.2022 upto 3.00 PM** failing which it will not be considered. The quotation should be dropped in the Tender Box placed in the Store Section (with A.A.O. IV). The Quotation will be opened on the very same i.e. on 28.02.2022 at 3.30 PM in presence of the representative of the firm if they desire to attend.
12. In case of any disputes, the decision of the Director, CAZRI, Jodhpur shall be binding on the part of the contractor/supplier.
13. Director, CAZRI, Jodhpur reserves the right to accept or reject any or all the quotation without assigning any reason.
14. All bids must be accompanied by a bid security/Earnest money deposit (EMD) @ 2% of the estimated value of the item, **if the cost of the item is more than Rs. 1.00 lac** in the form of a Demand Draft on a scheduled commercial bank in India, in favour of **ICAR Unit – CAZRI, Jodhpur**. Without EMD as above, quotation will not be considered (**Item less than Rs. 1.00 lac need not require EMD**). If the firm is registered with National small Industries Corporation (NSIC) there is no need to submit EMD (Bid Security).
15. No part supply will be allowed.
16. The items required is for the ICAR-CAZRI, Jodhpur and therefore, supply will have to be made accordingly.

P.T.O.

Asstt. Administrative Officer(s)
for Director

Schedule to Tender

S. No.	Particulars	Qty.	Place of supply
1.	<p align="center"><u>Hydroponic System</u></p> <p>Detail specification of the items: Hydroponic Unit-Leaf Station, Hydroponic system Vertical & Control system for hydroponics including supply and installation</p> <p>1. Hydroponic System (Vertical)</p> <p>The hydroponic vertical system shall meet following required specifications:</p> <p>a. A Frame -NFT System(2 Units):</p> <ul style="list-style-type: none"> - A frame stand should have 11 channels; channels of size about 4” x 2.5” and 10 feet long, openable, double-walled made of food grade virgin uPVC with 2” hole to hold plants in net pots. - Each channel should accommodate 18 plants, so total 198 plants per unit at least. - Channel should have uniform nutrient/water distribution in all channels to create uniform nutrient film around plant roots inside each channel. Channels should be openable to enable proper cleaning. System should be leak proof. - Required accessories and fitting including hydrotons, drainage and recycling pipes (uPVC), pumps of adequate cap., three-layer tank of 200L capacity placed in ground (one for each unit) with connection to automated operation system, etc. <p>b. A Frame- Spray System (2 Units):</p> <ul style="list-style-type: none"> - A Frame stand should be rust resistant and strong enough to support 11 planting channels. - Channels should be 10 feet long openable and double-walled made of food grade virgin uPVC with 5” x 4” size planter fitted on channel with 2” hole to hold plants in net pots. - Each channel should accommodate 18 plants, so total 198 plants per unit. - Channel should have high pressure mister for uniform nutrient spray around the plant roots inside each channel. Mister should be duly fitted on running pipe across the length of each channel, mister/spray pipe line shall be embedded in groove in each vertical wall of channel in such a way it can be pulled out to clean. - Required accessories and fitting including hydrotons, drainage and recycling pipes (uPVC), three-layer tank of 200L capacity, placed in ground (one for each unit) with connection to automated operation system, etc. - Whole system should be leak proof and set up nicely. <p>c. Vertical Garden (10 units)</p> <ul style="list-style-type: none"> - Six feet high vertical tower with water fall mechanism attached at base to 2x2 sq feet nutrient tank. Tower Trunk/ Pipe should be made of white colour virgin uPVC with plant holder placed in such a way 	01No.	ICAR-CAZRI, Jodhpur

that each unit should accommodate 40 plants at least. Unit should have adequate capacity pump and attached to automatic IoT based operating system. Each unit to be provided with other accessories including hydrotron, plant holder, etc.

2. Hydroponic Unit - Leaf Station

Leaf Station Hydroponic units shall meet following required specifications:

a. NFT system (2 units)

- Eight openable Double-walled channels per unit. Channel should be made of food grade virgin uPVC with 2" hole to hold plants in net pots.
- Channels to be fitted in horizontal rows along the length of existing 10 feet (L) x 4 feet (W) GI stand. So, each channel should be 10 feet in length (dimension: 4" W x 2.5" H).
- Each channel should accommodate 18 plants placed in holes made at equal distance, so total 144 plants per unit.
- It shall provide uniform nutrient solution distribution through all the channels to create uniform nutrient film around plant roots inside each channel.
- Channels should be openable to enable proper cleaning.
- Required accessories and fitting including hydrotrons, drainage and recycling pipes (uPVC), three-layer tank placed in ground (one for each unit) with connection to automated operation system, etc.
- Whole system should be leak proof and set up nicely.

b. Spray system (2 units):

- Six channels per bay or unit; channels should be 10 feet long openable and double-walled made of food grade virgin uPVC with 5" x 4" size planter fitted on channel with 2" hole to hold plants in net pots.
- Channels to be fitted in rows along the length of existing 10 feet (L) x 4 feet (W) GI stand.
- Each channel should accommodate 18 plants, so total 108 plants per unit.
- Channel should have high pressure mister for uniform nutrient spray around the plant roots inside each channel. Mister should be duly fitted on running pipe across the length of each channel, mister/spray pipe line shall be embedded in groove in each vertical wall of channel in such a way it can be pulled out to clean.
- Required accessories and fitting including hydrotrons, drainage and recycling pipes (uPVC), three-layer tank of 200L capacity. Placed in ground (one for each unit) with connection to automated operation system, etc.
- Whole system should be leak proof and set up nicely.

c. Aero bucket and Dutch bucket (60 of each):

- Aero bucket (size 12" x 9") should be long lasting, made of UV stabilized virgin plastic. Ninety buckets are arranged in 3 independent unit (each of 30 buckets) for independent operation, connected to separate tanks, pumps to desired capacity and timer so as to enable testing of three different treatments e.g., nutrient concentrations.
- Similarly, Dutch buckets of standard size made of UV stabilized virgin plastic along with uPVC pipes and fittings for 3 sets (each of 30 buckets), connected to separate tanks, pumps and timer to operate independently each set like aero-bucket.

3. Control unit system for hydroponics

Control unit to operate all above units shall meet following required specification:

- Microprocessor based IoT operation with monitoring accuracy of +/- 1 degree and should be managed remotely.
 - System should smoothly run all hydro/Aeroponic units independently on defined timing/ frequency as well as weather parameter (e.g., Temperature) based auto timing/ frequency.
 - System should have 20 channel output to operate all the units as well as at least five additional.
 - Data logging/ recording and storage for at least 6 months for each unit independently, and data retrieval as and when required. Provision of real-time viewing of operation on the screen.
 - Separate ISI standard pump of adequate capacity for each unit with required wiring to be properly placed.
 - System should be ergonomically designed, danger free and proof to electric short-circuit protection.
-
- One year warranty on the running of whole system including pumps and control systems.
 - The above all components are related to each other so installation of a complete integrated system to be done.

Asstt. Administrative Officer(s)
for Director