



TENDER DOCUMENT



National Horticultural Research and Development
Foundation (NHRDF) Bagwani Bhawan
47, Janakpuri Institutional Area, Janakpuri, New Delhi,
Delhi 110058

Website: www.nhrdf.org. www.kvkdelhi.org

Name of the Work Purchased Articles:

**SUPPLY OF DGCA APPROVED AGRICULTURE DRONE 10 KG
PAYLOAD AT KRISHI VIGYAN KENDRA, NAFED COMPLEX, VILLAGE
& POST- UJWA, VIA- NAJAFGARH, NEW DELHI-110073**

**Part- I
TECHNICAL BID**

**Part- II
PRICE BID**

Last date for receipt of tenders : 8 December 2022 by 2.0pm
Date of opening of tenders : 8 December 2022 at 2.30pm
Cost of tender documents : Rs. 2,000/- (non-refundable)
Earnest Money Deposit -

Address for submitting tender documents :
As captioned above



National Horticultural Research and Development
Foundation (NHRDF) Bagwani Bhawan
47, Janakpuri Institutional Area, Janakpuri, New Delhi,
Delhi 110058

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TENDER DOCUMENT FOR

**SUPPLY OF DGCA APPROVED AGRICULTURE DRONE 10 KG PAYLOAD AT
KRISHI VIGYAN KENDRA, NAFED COMPLEX, VILLAGE & POST- UJWA, VIA-
NAJAFGARH, NEW DELHI-110073**

INDEX

SR. NO.	DESCRIPTIONS	PAGE NO.
1	Cover page	1
2	Tender Notice	3
3	Bid Information Sheet	4
4	Forwarding letter	5-6
5	Addresses For submission of tender documents	7
6	Supply Of DGCA Approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073	9-12
7	Organization Profile and list of documents to be submitted with the Technical Bid – (Annexure – 1)	13-14
8	Format of Undertaking to be furnished by the Tenderer on Non-Judicial stamp paper of Rs.100/- – (Annexure – 2)	15
9	Part –II (Price Bid)	16-18
10	Declaration by Tenderer	19



(National Horticultural Research and Development Foundation)

Bagwani Bhawan, 47, Janakpuri Institutional Area, Janakpuri,
New Delhi -110058 Website: www.nhrdf.org. www.kvkdelhi.org



Ref No. NHRDF/KVK/DRONE/ 2022-23/2041

Dated:25/11/2022

TENDER NOTICE

Sealed tenders are invited from reputed contractors for supply of **DGCA approved agriculture drone 10 kg payload at Krishi Vigyan Kendra, NAFED Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073.**

The terms & conditions of tender documents can be downloaded from KVK & NHRDF websites www.kvkdelhi.org & www.nhrdf.org .The interested parties may submit tender documents complete in all respect at addresses as mentioned above in Tender Drop Box upto 2 PM on 08/12/2022 along with a non-refundable fee of Rs.2000/- by Demand Draft only. Tenders will be opened on the same day at 2.30 PM in the presence of the tenderers. The Director, NHRDF, New Delhi reserves the right to accept or reject any or all tenders without assigning any reason therefor.

Director,

BID INFORMATION SHEET

1	Document Description	Supply of DGCA Approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073
2	Tender No. & Date	NHRDF/KVK/DRONE/ 2022-23/2041 & 25/11/2022
3	Last date for submission of bid to reach the NHRDF	08/12/2022 by 2.0pm
4	Bid Opening (Technical bid)	08/12/2022 by 2.30pm
5	Place of Tender Opening	NHRDF, 47, Janakpuri Institutional Area, Janakpuri, New Delhi, Delhi 110058
6	Officer Inviting Bids	Director, NHRDF, 47, Janakpuri Institutional Area, Janakpuri, New Delhi, Delhi 110058
7	Contact Details/Telephone	New Delhi - Phone: 011-28522211, 28525129, 45136697 E-mail: delhi@nhrdf.com , kvkujwa@yahoo.com
8	Tender fee (non- refundable)	Tender Fee: Participating bidders have to pay an amount Rs. 2,000/- in favour of National Horticultural Research and Development Foundation towards tender fee for each of the above work. The amount is non-refundable.
9	Eligibility Criteria	Please refer to Clause- 2(b) at page no. 8 of tender document.
10	Process for bid submission	<ol style="list-style-type: none"> 1. Only hard copies of bids shall be submitted to office 2. The participating bidders in the tender should have appropriate experience and financial capacity. 3. Two Bid System will be followed in the tender procedure 1) Technical & 2) Financial Bid
11	Rights reserved with the Department	Director, NHRDF, 47, Janakpuri Institutional Area, Janakpuri, New Delhi, Delhi 110058.
12	General Terms and Conditions	As per tender documents.

FORWARDING LETTER

From:

Email:_____

Mob. nos._____

To,

The Director,

NHRDF, Bagwani Bhawan

47, Janakpuri Institutional Area, Janakpuri, New Delhi, Delhi 110058.

Subject: - Supply of DGCA Approved Agriculture Drone 10 Kg Payload to, KVK Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073

Dear Sir,

With reference to your advertisement published in _____ on _____ / NHRDF and KVK website inviting tenders for Supply of DGCA approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi, we are pleased to submit our sealed technical and financial bids after carefully examining and understanding the terms and conditions prescribed in the tender documents and the rates have been worked out after considering the item-wise details and other clauses indicated therein.

1. Name and address of firm and date of establishment:
(Please mention telephone number/fax number/email/website/address)
2. Status of the Organisation:
(Manufacturer, authorized distributor/reseller)
3. Name of Proprietor/Partners/Directors & their permanent address along with contact number and email address
4. Address and contact numbers of registered office & branch:
5. Name & designation with specimen
Signature of authorized officials/representatives
(if required separate sheet can be attached)
6. Name & address of bankers:
7. Pan No, (attach copy) :

8. GST Regn. No. (attach copy):

9. Price offered is enclosed separately in "Schedule of Price/Quantity offered".

The demand draft No. _____ Date: _____ of the _____ Bank. amounting to Rs. 2,000/- (Rs. Two thousand only) as Tender cost and demand draft bearing No. _____ Date _____ of the _____ Bank amounting to Rs. (....) as Earnest Money Deposit drawn in favour of National Horticultural Research and Development Foundation payable at New Delhi.

We are aware that the earnest money shall be forfeited in case we refuse to supply the items in time, if assigned.

We are also aware that our offer shall be rejected in case we do not enclose the Demand Draft either for tender fee or for the earnest money and other papers as per tender documents. We assure to deliver the DGCA approved Agriculture Drone 10 Kg within the stipulated time period.

Thanking you,

Date :

Place :

Authorized Signatory
(Name and complete address of
the tenderer alongwith the seal)

**Address for sending tender documents through Registered post /
Speed Post / Courier / By hand:**

To,
The Director,
NHRDF, Bagwani Bhawan
47, Janakpuri Institutional Area, Janakpuri, New Delhi, Delhi
110058.

Terms and conditions for purchase of DGCA Approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073

1.0 INTRODUCTION

Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi is desirous for purchase of **DGCA Approved Agriculture Drone 10 Kg Payload.**

2.0 INSTRUCTIONS TO BIDDERS

2.1 The tender shall be submitted in two sealed envelopes:

Part – I : Technical Bid Proposal in sealed envelope

Part – II : Financial Bid Proposal in sealed envelope

PART - I -SEALED TECHNICAL BID IN ENVELOPE NO.1:

This envelope should contain the following mentioned information/documents in connection with Supply of DGCA approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi-110073 at above mention location:

Tender Fee of **Rs.2000/-** (Rupees two thousand only) by way of demand draft of any nationalized bank drawn in favour of

- a) National Horticultural Research and Development Foundation, **payable at New Delhi** must be deposited. The amount of EMD and Tender fee will be acceptable only by way of demand draft. Amount deposited by any other mode will not be acceptable. Any technical bid not accompanied with amount of EMD and Tender Fee through prescribed mode of payment, is liable to be summarily rejected.
- b) The tenderer should submit self-attested certificate of incorporation of the firm/company, memorandum and articles of association.
- c) Name of the bidder, address, contact numbers (office and mobile number), email address, nature of firm/company (proprietorship/partnership firm/private or public limited company, name of the Chief Executive etc. may be furnished.
- d) Letter of authorization by the competent person of the company in favour of the person signing the bid documents along with his identity card/adhar card to establish the identity of authorized person may be attached.
- e) Self-attested copies of PAN and GST registration numbers of the firm/company may be attached.

- f) Self-attested copies (in PDF format) of audited balance sheet, P&L account of last 3 years may be attached.
- g) In case the tenderer makes any deviation or makes any addition to the list of items mentioned in BOQ in the tender, which in the opinion of tenderer are necessary for proper execution of the project in question, the details of such deviation/additional items may be furnished without mentioning rates/costs etc. duly signed by the authorized person for consideration by Krishi Vigyan Kendra, Ujwa New Delhi.
- h) The above details alongwith supporting documents may also be filled in **Annexure-I** to this tender document.

The tenderer must superscribe the sealed Envelope No.1 as Technical Bid for supply of DGCA approved Agriculture Drone 10 Kg Payload to be opened on 8/12/2022 at 2.30 PM by KVK in the presence tenderers.

PART -II - SEALED FINANCIAL BID IN ENVELOPE NO. 2:

Earnest Money Deposit (EMD) Rs./- (Rupees only) Earnest Money 2% of tender cost by way of demand draft and tender fee Rs. 2000/- (Rupees two thousand only) by way of demand draft of any nationalized bank drawn in favour of National Horticultural Research and Development Foundation, **payable at New Delhi** must be deposited. The amount of EMD and Tender fee will be acceptable only by way of demand draft. Amount deposited by any other mode will not be acceptable. Any technical bid not accompanied with amount of EMD and Tender Fee through prescribed mode of payment, is liable to be summarily rejected.

- a) The amount of EMD of unsuccessful tenderers shall be returned within a 30 days' period of time without payment of any interest.
- b) In case of successful tenderer, the amount of EMD will be retained by NHRDF and shall be adjusted against the security deposit which will be 5% of the total value of the project cost.
- c) The tenderers should submit rates against each item along with break-up as per BOQ in the financial bid. The financial bid should be submitted without any condition.
- d) The tenderers are advised to undertake at their discretion a reconnaissance of the site to familiarize themselves with the site conditions before preparing the bid documents at their own cost.
- e) **The two sealed envelopes of Technical and Financial Bids should be put in another sealed master envelope super-scribing tender "supply of DGCA approved agriculture drone 10 kg payload at Krishi Vigyan Kendra.**

The tender should reach

- a) National Horticultural Research and Development Foundation, **New Delhi by 08/12/2022 latest upto 2.30 PM.** We shall not be responsible for any delay in receipt of the tender. Late tenders shall not be considered. The Director NHRDF reserves the right to reject any or all the tenders, without assigning any reasons thereof.

3.0 GENERAL TERMS AND CONDITIONS

1. Kisan drone should be DGCA approved and registered at Digital Sky portal under appropriate category.
2. The drone should have all safety features i.e. sensor based collision avoidance, terrain following, first person view camera, auto return to launch point etc.
3. The manufacture should have proper setup and infrastructure for drone manufacturing in India.
4. Type approval certificate of quality council of India or authorized testing entities shall be necessary.
5. Manufacture must have service support in the concerned state to provide after sale support, training, repair and maintenance etc. to the customers.
6. The manufacture should have all service support on pilot training.
7. The supplier shall provide the complete demonstration of working of the Agri. Drone.
8. Boarding and Lodging arrangement: The tenderers shall make their own arrangement for boarding, lodging, travel, transportation of equipment, vehicle, labourers, local transport etc. required for supply of Drone.
9. Time period for Supply – The supply of DGCA Approved Agriculture Drone 10 Kg Payload should be completed in all respect within 10 days from date of supply order.
10. Liquidated damages: Time is the essence of the contract. Liquidated damages shall be imposed @ 0.5% of the tender amount for each week of delay subject to a maximum of 5% of total agreed cost.
11. Signing of Agreement: The successful tenderer shall be required to sign an agreement on non-judicial stamp paper of Rs. 100/- before commencement of the supply.
12. Incomplete/late submission of tender: Incomplete tender or tender received after the prescribed last date and time shall not be considered under any circumstances.

13. Financial / Payment Conditions:

No request for the advance will be entertained by the NHRDF. Payment will be made after successful supply and demo of drone.

14. Dispute: In the event of any dispute, the effort will be first made to amicably resolve the dispute. In case the dispute still remains unresolved, the same shall be referred to the sole arbitration of the Director, NHRDF, New Delhi and his decision shall be final & binding on both the parties to the agreement. The arbitration proceedings shall be held in accordance with Indian Arbitration Act. The venue of the arbitration shall be at New Delhi.

15. Acceptance/Rejection of tender: Director NHRDF, New Delhi. reserves the right to reject any one or all the tenders without assigning any reason thereof.

16. Submission of Final bill: The final bill should be submitted within a week of satisfactory delivered of the supply of agri. drone.

17. EMD 1% + 4% i.e. 5% will be retained with NHRDF for defect liability period of 2 years from the date of handing over the drone to NHRDF.

4. **SPECIAL CONDITIONS OF CONTRACT:**

4.1 The tenderer shall nominate and authorize one of its officers for liaising with KVK/NHRDF personnel in connection with the supply of drone.

4.2 The tenderers shall be solely responsible for the safety, loss, theft, break down etc. of their equipment and safety of the manpower and shall get the same appropriately insured.

4.3 Only brief specifications have been given in the BOQ. However, all the works shall be executed as per relevant codes of practice as may be applicable. The bidder shall include the procedure in their methodology and shall execute works as approved Director NHRDF at KVK, Ujwa.

4.4 All rates quoted shall be inclusive of all duties, taxes, octroi etc. as may be applicable. GST shall be paid as applicable on production of documentary proof. No extra claim shall be payable. Director NHRDF. shall however deduct taxes at source, as may be applicable and shall provide a certificate in lieu thereof.

5.0 **SCOPE OF Agri Drone:**

The tenderer shall carry out and supply the agri drone in every respect in accordance with this contract and with the directions of and to the satisfaction of the Client. The client may in absolute discretion and from time to time issue written instructions, details, directions and explanations which are hereafter collectively

referred to as” instructions” reflected either in the minutes or in any other form in regard to:

- a. Manufacture must have service support in the concerned state to provide after sale support, training, repair and maintenance etc. to the customers.
- b. The supplier shall provide the complete demonstration of working of the Agri. Drone.
- c. Supplier of drone should impart training to KVK staff for handling of drone time to time.

6.0 **Validity of Tender:** Tender will be valid for a period of 1 months from the date of submission.

The Director, shall have a right to delete any item of work from the scope of contract and Contractor shall not make any extra claim on this account. The sale support provider comprised in such NHRDF instructions provided always that verbal instructions, directions and explanations given to the contractor or his representative upon the works by the Client shall, if involving a variation, be confirmed in writing by the contractor within 7 days, and if not dissented from in writing within a further 7 days by the client such shall be deemed to be the Client instructions within the scope of the contract.

Annexure - 1

ORGANIZATION PROFILE AND LIST OF DOCUMENTS TO BE SUBMITTED WITH THE TECHNICAL BID

Particulars of Tenderer

Name of the Bidder firm / company	
Office Address: Telephone number: Mobile: E-mail ID:	
Registration No. & Nature of the firm i.e., whether	
Government Organization or Autonomous Body or Cooperative Organization or a Proprietorship firm or a Partnership firm	
Name and contact person details of all partners/Directors/ members the bidder on the date of submission of bid. (Separate sheet may be attached)	
Certificate of Incorporation, Memorandum & Article of Association and certificate of incorporation of company etc as applicable	
Name of Authorized contact Person	
Contact details of Authorized Person	
Telephone no.	
E-mail ID:	
Photo ID Card No.	
Self-attested copy of PAN Card of the firm	
Self-attested copy of documents in support of the minimum eligibility criteria stipulated in the bid document.	
Proof of payment of tender fee.	
Proof of payment of EMD.	
Particulars of bidder as prescribed	
Declaration as per specified format	
Letter of authorization issued by the competent authorised of the firm in favour of authorised signatory for signing the bid documents.	
Self-attested copy of proof of GST registration number of the firm	
Self-attested copy (in PDF Format) of duly audited P&L Account and balance sheet of last 3 financial years	

**(FORMAT OF UNDERTAKING TO BE FURNISHED BY THE
TENDERER ON NON-JUDICIAL STAMP PAPER OF RS. 100/-)**

M/s _____ hereinafter referred to as Supplier having its registered office _____, is in the business.

That the Contractor has requisite technical competence and experience to successfully execute above project.

That the party undertakes that, it shall supply DGCA Approved Agriculture Drone 10 Kg Payload at Krishi Vigyan Kendra, Nafed Complex, Village & Post- Ujwa, Via- Najafgarh, New Delhi in accordance with prescribed quality specifications and terms and conditions as laid down by the Director, NHRDF.

The supplier also undertakes to indemnify KVK, Ujwa for any costs, risks, responsibility and losses that may be incurred on account of any action or inaction on the part of the party.

Further the supplier also confirm that their firm/company has not been black-listed by any Govt./Public sector undertaking/organisation/institute for committing any irregularities or involved in any fraudulent activity in connection with supply, installation and execution of any project.

Sign this ____ day of _____ in the year ____ through its _____ authorised signatory Shri _____ at _____.

Name/Signature/Seal of Authorised signatory

For and on behalf of

M/s _____

Witnesses:

1.

2.

PART – II
PRICE BID

Specification of Agriculture Drone

Payload Capacity	10 Kg capacity as payload
Tank Capacity	10 Litre
Frame Type	Foldable
Flight Types	<ol style="list-style-type: none"> I. Autonomous (with control form Ground control station using Google or other equivalent Maps, Software to be used like Mission Planner or equivalent having waypoint navigation system) II. Loiter (Semi auto with control from Ground control Station)
Radio Frequency	2.4 GHz or any other approved Unlicensed band (ETA required)
Radio Control Range	In LOS up to 2km
Video output and control range	In LOS up to 2km with provision of live video streaming HDMI 1080p@ 30 fps
Flight time with payload	up to 20 minutes with discharging load
Total take-off weight of drone including payload	<p>Max Up to 25 kg</p> <p>In small category as per DGCA norms.</p>
Material of Construction	<ol style="list-style-type: none"> I. For main body connection Arms: Carbon fiber composite used with metallic fasteners and waterproof adhesives. II. For Landing Gear: Aluminum with powder coating, resistant to chemicals or any other similar material with Tensile strength minimum 200MPa. III. For Tank: Chemical resistant material like HDPE, PP (Poly Propylene) IV. For Tubes and connectors: Chemical resistant material like PVC (Poly Vinyl Chloride), Nylon V. Nozzle Tips: Stainless steel or Ceramic VI. Pump: PP or Nylon with BLDC motor. VII. Propeller: Carbon X (Polyamide + Carbon fiber) or Carbon Fiber composite VIII. Battery: Lithium Ion or Lithium Polymer
Number of propellers/Motors/Arms	<p>Hexacopter with 6 Number of propellers/Motors/Arms</p> <p>Factor of Safety need to be at least 1.5</p>

	(Arms load bearing capacity should be at least 1.5 times the calculated load coming on each arm/propeller/motor)
Flight altitude range	Up to 1500 m above mean sea level (MSL) and
	Up to 10 m above ground level (AGL)
Hovering accuracy	±0.8 m vertical and ±0.5 m horizontal with GPS Positioning
Maximum wind speed resistance	25 Km/Hr or 14 Knots
Required Obstacle detection & Collision avoidance	<ul style="list-style-type: none"> I. Range of Detection: Minimum 10 meters II. Sensors: Radar in Terrain Following & Collision Avoidance III. Optional: For extra control there should be provision to add camera. IV. Rerouting: Drone must have capability to reroute itself or give control to pilot. V. Object size to be detected: Minimum 1meter x 1 meter VI. RADAR based Obstacle Avoidance in flight modes: Autonomous, Loiter both.
Required Terrain following (altimeter)	Up to 12 meters
Provision for Camera mounting (Live streaming)	RGB camera for HD video transmission
Nozzle Type	High pressure nozzles with flat jet
Nozzle Qty	Minimum 4 Numbers
Safety features	<ul style="list-style-type: none"> I. Communication link failsafe, II. tank failsafe, III. Battery failsafe, IV. Geo Fence failsafe, V. Range failsafe.
Drone approvals and legal compliances	DGCA approved, UIN enabled
Documents requirement	<ul style="list-style-type: none"> I. DGCA approval certificate for the drone quoted in this Tender. II. ETA approval certificate for the Data transmission system used in drone.
Operating temperature range	0 – 50°C
Required conditions:	DGCA acknowledged company. (Name mentioned in approved drone list as on Digital Sky website)
	Company shall provide assistance in obtaining the UIN (Unique Identification no)

	Dedicated Technical support.
	3 rd Party Insurance should be there. Accidental cover, Hull all risk, Pilot cover and payload cover
	Company should provide necessary training/workshop for operating the drone.
	Company should have delivered DGCA compliant drone of same category to any Government Department or Institute Related to Agriculture. Need Acceptance of that Department/Institute.
Warranty	At least 2 Yearz
Service	<ol style="list-style-type: none"> I. All maintenance, service and spares should be available in India. II. Time: for at least 3 years from purchase of Drones III. Provision of Upgradation should be available if required in future.

Note :Rates are inclusive of all material tools plant, labour and transportation charges & GST.

Total _____

GST _____

Grand total _____

(In words _____ **)**

Authorised Signatory
 (Name and complete address of
 the tenderer alongwith the seal)

DECLARATION OF THE TENDERER

I/WE HEREBY DECLARE THAT I/WE HAVE MADE MYSELF/OURSELVES THOROUGHLY CONVERSANT WITH SUPPLY OF DGCA APPROVED AGRICULTURE DRONE 10 KG PAYLOAD. THE TENDER WITH CONDITIONS AND SPECIFICATIONS ETC. FOR THIS WORK HAVE BEEN CAREFULLY STUDIED AND UNDERSTOOD BEFORE SUBMITTING THIS TENDER. I/WE UNDERTAKE TO USE ONLY THE BEST MATERIALS APPROVED BY THE EMPLOYER WILL BE SUPPLY AND TO ABIDE BY HIS/THEIR DECISION

Authorized Signatory
(Name and complete address of
the tenderer along with the seal)