

NATIONAL SEEDS CORPORATION LIMITED

(A Government of India Undertaking)

**BeejBhawan, Pusa Complex,
New Delhi-110012.**



COMPETITIVE BIDDING NO. (CBE-XIII)

TENDER DOCUMENT

FOR

**SUPPLY, INSTALLATION & COMMISSIONING OF
Center Pivot Irrigation Systems**

LAST DATE & TIME FOR RECEIPT OF BIDS: UP TO 13.00 hrs of 25/5/15

DATE & TIME OF OPENING OF BIDS : AT 15.00 hrs of 25/5/15

**NATIONAL SEEDS CORPORATION LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)
BEEJ BHAVAN, PUSA COMPLEX,
NEW DELHI-110012**

TENDER DOCUMENT

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**NATIONAL SEEDS CORPORATION LIMITED
(A GOVT.OF INDIA UNDERTAKING)
BEEJ BHAVAN: PUSA COMPLEX
NEW DELHI-110012**

No.NSC/MM/2(CENTRAL PIVOT IRRIGATION)/2014-15

Dated: _____

NOTICE INVITING TENDER: CBE-XIII

FOR

SUPPLY, INSTALLATION & COMMISSIONING OF CENTER PIVOT IRRIGATION SYSTEM

National Seeds Corporation Ltd. invites sealed Tenders from reputed manufacturers/suppliers for SUPPLY, INSTALLATION & COMMISSIONING OF CENTER PIVOT IRRIGATION SYSTEM.

1. Tender documents can be obtained from the office of Dy. General Manager (Engg.) National Seeds Corporation Ltd., BeejBhawan, Pusa Complex, New Delhi-110012 on payment of Rs.2000/- (non-refundable) through demand draft in favor of the National Seeds Corporation Ltd. payable at Delhi/ New Delhi between 11:00 hrs. to 16:30 hrs. on all working days. Sale of tender document from Office will commence w.e.f 01/5/15 and will be stopped on 25/5/15 at 12.00 hrs.

OR

The tender document is also available in NSC's web site www.indiaseeds.com and Central Procurement Portal www.eprocure.gov.in. The Tenderer, downloading the Tender Document from web site, shall be required to deposit the cost of tender form by DD and submit its proof. The demand draft may be submitted in a separate envelope along with tender.

2. Complete tender along with the requisite amount of **EMD Rs. 24.0 lacs** shall be received in the office of Dy.General Manager (Engg), National Seeds Corporation Ltd., Beej Bhawan, Pusa Complex, New Delhi upto 13.00 hrs on- 25/5/15. The technical part of bids shall be opened on the same day at 15.00 hrs.in the presence of desirous tenderer(s). The Price bids of the commercially & technically qualified bidders shall be opened subsequently for which date and time shall be intimated separately.
3. Tenderers should submit both Technical bid and Price bid strictly as per instructions to tenderers given in Part-A of the tender documents.
4. Tender not accompanied with requisite amount of EMD and not submitted as per instructions contained in the tender document are liable for rejection.
5. Micro Small Enterprises (MSEs) registered with NSIC for the quoted item under single point registration scheme are exempted from payment of cost of tender document and EMD as well as entitle to avail the benefit of Public Procurement Policy for Micro and Small Enterprises (MSEs) 2012, according to the policy approved in the NSC subject to furnishing documentary proof in support of their claim along with their request.
6. The Bidders have to sign '**Integrity Pact**' with NSC.
7. NSC reserves the right to accept or reject any one or all tenders without assigning any reason.

Dy.General Manager (Engg.)

PART-A

NATIONAL SEEDS CORPORATION LTD.

SECTION - I

INSTRUCTIONS TO TENDERER

1. **ADVICE FOR TENDERS:** -The tenderers are advised in their own interest to carefully read the tender documents and understand their purport unless the tenderer specifically states to the contrary in respect of any particular clause, it shall be presumed that he accepts all the terms and conditions as have been laid down in the tender document.
2. **ELIGIBILITY CRITERIA:** -Tenderers interested to quote against this tender must quote for complete supply, installation & commissioning of Center Pivot Irrigation system as per specification and should furnish all valid required documents as per **section III ANNEXURE-A. of part -A**
3. **SUBMISSION OF OFFER:** - Offer must be submitted in the prescribed tender form provided in part "A" of the tender document at Section-III. The tenderer may attach additional sheets to the tender form wherever detailed description is necessary. Only that party should tender who accepts all the terms & conditions because conditional tender may be treated as void.
4. **DEVIATION IN SPECIFICATION:** - Normally no deviation from the specification laid-down will be accepted. However, if the tenderer feels that he can supply equivalent or better items, which shall fulfill the requirement of NSC with different specifications, the tenderer should describe as to what respect and to what extent the item offered by them deviate from the specification even though deviation may be minor and how it will meet requirement. If Bureau of Indian Standards have fixed norm or specifications for the material given in Part B Section I then supply has to be made as per ISI Standards in addition to specification laid down in Part B Section I

The tenderers are required to provide their tender with complete specifications for all materials to be supplied to compare tenders and assess the performance of the material. Salient features of the system with additional accessories fitment etc. may be clearly specified with detailed list of tools etc.

5. **DELIVERY OF GOODS:**-The delivery period so specified in **clause no.5 of section –II PART- A** will be the essence of the contract. It would be clearly understood that any delay in delivery will cause unascertainable damages to the Corporation. Only those parties should tender who are in a position to stick to the delivery prescribed. Their attention is also invited to clause-15 of section-II PART- A relating to liquidated damages which shall be binding.
6. The tenderers should give in writing the name of their authorized agency who shall represent them along with a proof of his identity and his signatures duly verified by the Bankers of the tenders.
7. **PRINTING LANGUAGE:**-The tenderers should enclose with their offers descriptive catalogues, leaflets, manuals supplementing the description. Also point out any special features/advantages of their machine quoted. All the literatures, leaflets etc. should be in English/Hindi or accompanied by English/Hindi translation in case the language is other than English/Hindi. This should be adhered to, strictly to enable objective evaluation of offers.
8. **TEST REPORT & LIST OF USERS:**-Tenderer should also enclose with their offers the test report if any from any recognized agency with respect to their quoted item. Tenderers should clearly indicate their experience of manufacturing and assembling of the items quoted by them. Test report of materials from Govt. testing Centre will be preferred in consideration of technical bid. List of users of the quoted model and its details as required in **PART A Section III Annexure A FORM FOR TECHNICAL BID clause 2.**
9. **ACCESSORIES & FITTINGS:-**

The tenderer should indicate the followings separately in summary form:

Accessories and fittings which are standard with the machine as well as such of the accessories/fittings which though not considered standard, are included in the scope of supply and included in the price bid.

- 10. SPARE PARTS:** -The supply of spare parts of machine will always be made directly by the manufacturers/ authorized agent of respective make of system to different farms of Corporation at least for a period of 5 years initially subject to revision to ensure originality of spare parts and their timely availability to the users.
- 11. QUOTATION OF PRICES:** - Tenderer shall give final firm and net per unit price free from all escalation. Request for increase in price will under no circumstances be considered after opening of the tender. For the purpose of comparison and evaluation of bids, the tenderers are required to quote their rate item-wise, job wise for entire work on turn key basis as indicated in the section – III Annexure B part A. Price of complete work i.e. material, civil work, installation and commissioning including AMC for 5 years will be considered for evaluation purpose.
- The rates should be quoted for the offered items on the basis of F.O.R. Destination inclusive of all taxes (including VAT, Turnover Tax Modvat, Service Tax etc), Duties (Excise, Special Excise, Cess etc), Other tax (Octroi etc), Packing & Forwarding charges etc. The Corporation is in a position to issue "C" Form for supplies made, if applicable. The inspection, Verification and Testing charges will be borne by NSC and hence these charges should not be included in the rate offered.
 - In case, the Corporation requires the materials at some other destination station other than specified in the tender and in case the distance of such new destination station from the supplier's place of dispatch is higher than the distance between supplier place of dispatch to the highest distance among the destination prescribed, Corporation shall be prepared to pay any extra transportation charges on proportionate basis.
 - If the rates quoted by tenderer are exclusive of sales tax, general tax, central sales tax or any other taxes or levies, which are payable in addition, the exact rate at which they are payable should be shown clearly in the tender. In the absence of clear indication that these levies are payable in addition to the rates quoted, it will be assumed that rates are inclusive of all taxes and no extra taxes will be paid. If 'C' Form or any other Form is required, it should be clearly indicated in the tender.
- 12.** Preference will be given to the manufacturers of the items and having the past experience in the similar projects.
- 13.** Bidder will be responsible to educate the farm staff and for efficient/effective operations of the systems at least for one crop season.
- 14. PRINTED TERMS & CONDITIONS OF TENDERING FIRM:** - Printed terms and conditions of the tender shall not be considered and the same shall not be binding or become part of the contract unless any of such terms is specifically laid down by the tenderer in the tender and accepted by the Corporation in writing. Except to the extent stated above, it will be deemed that the printed terms and conditions of the tendering firms have been rejected by the Corporation.
- 15. EARNEST MONEY:EMD Rs. 24.0 lacs for supply & installation of Center Pivot irrigation system as per specification.**
- By means of attaching a **Demand Draft drawn on scheduled Commercial Bank** payable at New Delhi/Delhi in favor of NSC Ltd., **CHEQUE WILL NOT BE ACCEPTED.**
EMD shall be placed in the envelope **super scribed technical & commercial bids:**
 - Exemption of earnest money deposit for Indian Manufacturers which are registered with NSIC under Single point registration scheme:** Indian manufacturers/suppliers who are Micro Small Medium Enterprises (MSME) small scale units and registered with National Small Industries Corporation under single point registration scheme are exempted from payment of earnest money deposit provided to furnish photocopy of valid registration with NSIC under the single point registration scheme, for the quoted stores in support of claim along with their request letter. This facility will, however, not be provided to those small scale units who are registered under the old registration scheme which was extended up to 30th June, 1981 only.
- OFFERS OF THE FIRMS OTHER THAN (MSME) SMALL SCALE INDUSTRIES AS DEFINED ON 'b' AS ABOVE NOT ACCOMPANIED BY EMD WILL BE SUMMARILY REJECTED. OFFERS OF THE (MSME) SMALL SCALE INDUSTRIES NOT REGISTERED WITH NSIC FOR THE QUOTED ITEM UNDER SINGLE POINT REGISTRATION SCHEME AFTER 30TH JUNE 1981 AND NOT ENCLOSING THE

VALID DOCUMENTARY PROOF IN SUPPORT OF THEIR CLAIM WITH THEIR REQUEST LETTER SHALL ALSO BE REJECTED.

NO ADJUSTMENT OF EMD FROM THE DUES, IF ANY, AVAILABLE WITH THE CORPORATION, AGAINST THE SUPPLIES MADE BY THE SUPPLIER IN THE PAST SHALL BE ALLOWED. TENDERS WITH SUCH REQUEST AND NOT ACCOMPANIED WITH REQUISITE AMOUNT OF EMD FREE FROM ANY ADJUSTMENT SHALL BE SUMMARILY REJECTED.

The public Sector Undertakings may deposit EMD in the form of FDR or Bank Guarantee issued by any Nationalised Bank of any Branch for a term of 6 months.

Any Tender not secured in accordance with **paras 15.a & 15.b above will be rejected by the purchaser as non-responsive.**

16. FORMAT AND SIGNING OF TENDER: -

- a) Tenderers are required to submit their tender as per the prescribed Proforma given in the tender document. The Tender prepared by the bidder and all correspondence and documents relating to the tender exchanged by the tenderer and purchaser, shall be written in the English/ Hindi languages. Each copy of the tender should be completed in all respect **and should preferably be bound in one column.** All pages of the tender and enclosures should be numbered consequentially and shall be signed by the Tenderer or a person or persons duly authorized to bind the Tender to the Contract. The letter authorization shall be indicated by written power of attorney accompanying the Tender.
- b) All pages of the Tender except for unamended printed literature shall be initialed by the person or persons signing the Tender with stamp.
- c) The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person or persons signing the bid.

17. PROCEDURE FOR SUBMISSION OF TENDER: - The Tenderers shall seal the tender in separate inner envelopes, duly marking the envelopes as **“Technical & Commercial Bid”** and **“Price Bid”**. These envelopes then place in **an outer envelope.**

Technical & Commercial Bid envelope shall include technical specifications of quoted item, Duly filled Tender Form-Section-I, Instruction to Tenderer, Terms and Conditions of contract as per Section-I & II of Part ‘A’ of tender document, requisite EMD, Profile of the company as per Annexure-A of Section-III Part ‘A’ along with documents as per the check list and other document if any in support of offer. **All papers should be initialed with stamp by the person or persons signing the bid.**

PRICE BID Envelope containing of prices as per clause-11 of Section-I Part-“A” in a prescribed Proforma given in Annexure-B Section-III Part ‘A’ of the tender document.

All inner envelopes shall be placed in an outer sealed envelope addressed to **Dy. General Manager (Engg.), National Seeds Corporation Ltd., Beej Bhavan, Pusa Complex, New Delhi-12** and super scribing thereon “TENDER FOR “for SUPPLY, INSTALLATION & COMMISSIONING OF CENTER PIVOT IRRIGATION SYSTEM, TENDER NO. & DATE OF OPENING, THE WORDS “DO NOT OPEN BEFORE 1500 HOURS ON 25/5/15 SHALL ALSO BE STATED ON THE OUTER ENVELOPE.

THE INNER ENVELOPE CONTAINING THE “TECHNICAL & COMMERCIAL BIDS” AND “PRICE BID” shall also be super scribed thereon **“Technical & commercial Bids”** and **“Price Bids”** as the case may be and **addressed** to the **purchaser** and **name & Address** of the **Tenderer.**

THE OUTER ENVELOPE SHALL INDICATE THE NAME & ADDRESS OF THE TENDERER TO ENABLE TO BE RETURNED UNOPENED IN CASE IT IS DECLARED “LATE “. If outer Envelope is not sealed and marked as required above, the purchaser will assume no responsibility for the **bid’s misplacement or premature opening.**

The tenders not complying with the manner prescribed herein are liable for rejection straight away.

18. MODIFICATION AND WITHDRAWAL OF TENDER: - The tenderer may modify or withdraw its tender after the tender’s submission, provided that written notice of the modification or withdrawal is received by the purchaser prior to the deadline prescribed for submission of tenders.

- 19. DEADLINE FOR SUBMISSION OF TENDERS:-** Tender must be received by the purchaser/Corporation at address specified under Clause 17 above, no later than time and date specified in the invitation for tender. In the event of the specified date for the submission of bids being declared a holiday for the purchaser, the Tender will be received upto the appointed time on the next working day.
- 20. LATE TENDER:** -Any Tender Received by the purchaser/Corporation after deadline for submission of tender prescribed by the purchaser, pursuant to NIT/Tender Document/any amendment will be rejected and/or returned unopened to the Tenderer.
- 21. OPENING OF TENDER:** - The purchaser/Corporation will open tenders, in the presence of Tenders or tenders' representatives who choose to attend at specified time & date in the NSC registered office, New Delhi. The envelope containing the "Technical & Commercial bids" shall be opened on the date of opening tender and "Price Bids" of tender only be opened based upon an examination of the documentary evidence submitted in technical & Commercial bid for the Tenderer's qualification by the tenderer, as well as such other information as the purchaser/Corporation deems necessary and appropriate, found in order, date of opening of Price bid will be informed separately.
- 22. CLARIFICATION OF BIDS:** - To assist in the examination, evaluation and comparisons of tenders, the purchaser may at its discretion, ask the tenderer for clarification of its bid. The request for clarification and the response shall be in writing and no change in price or substance of the bid shall be sought, offered or permitted.
- 23. FORFEITURE OF THE EARNEST MONEY:** - Earnest Money may be forfeited.
- (a) If a tenderer withdraws its tender during the period of Tender validity specified by the Tenderer on the Tender Form:
- OR
- (b) In case of a successful Tenderer, if tenderer fails:
- i. To sign the contract in accordance with clause no. 32 (a)
 - ii. To furnish security deposit in accordance with clause no. 32 (b)
- 24. DISPUTES or DIFFERENCES:** - All disputes or differences that may arise in connection with this tender or the interpretation of any of its terms or in any other way related to this tender directly or indirectly shall be referred to arbitration in accordance with the clause 19 relating to "settlement of disputes" included in Section-II of Part 'A' of tender document i.e. General terms and conditions of the contract.
- 25. VALIDITY OF OFFER:** - The tenderer shall keep their offers open for acceptance for a **period of 120 days** from the date of opening of the tender. In case the last date happens to be a holiday, offers shall remain open for acceptance till the next working day. Tenderers with shorter validity period, subject to prior sales, immediate acceptance and any such similar conditions are liable to be rejected.
- 26. Foreign Company:** - The Indian agents bidding on behalf of any Foreign Company should be registered with DGS&D and the proof of registration should be furnished with offer. The offer will not be accepted if proof is not furnished. One agent cannot represent two different suppliers or quote on their behalf in the tender.
- 27. AWARD CRITERIA:** -Subject to Clause NO. 28, The purchaser/Corporation will award the contract to the successful tenderer whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated tender, provided further that the tenderer is determined to be qualified to perform the contract satisfactorily.
- 28. PURCHASER's RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS:-** The Purchaser/Corporation reserves the right to accept or reject any or all Bids , and to annul the tendering process and reject all Bids any time prior to award of contract, without thereby, incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenders of the grounds for the purchaser's action.
- 29. NEGOTIATION:** -There shall normally be no post tender negotiation. If at all negotiations are warranted under exceptional circumstances then it can be with L-1 (lowest tenderer) only.

30. SPLITTING OF ORDERS: -The Purchaser/Corporation may decide to split the order among two or more tenderers according to exigencies of the cases at L-1 rate.

31. REPEAT ORDER: - The validity of the tender shall be extended to a period of six months from the date of placing initial order and it shall be opened to the Purchaser/Corporation to place repeat order with the supplier on the same rates and same terms and conditions for quantities not more than 50% of the quantity in the initial purchase order. Repeat Order can be exceeded more than 50% of P.O's quantity and beyond six months on need basis with the prior consent of the supplier.

32. CONTRACTS:-

a) **SIGNING OF CONTRACT** :-The successful tenderers within 15 days from date of issue the Purchase Order, shall sign and date agreement as per the format given in Section -V of part "A" of the tender document, wherever the value of terms ordered is more than Rs. one lakh and furnish it to the purchaser. The terms and conditions contained in Section-II of Part 'A' of the tender document will be considered to be part of agreement, any variation in the terms and conditions as may be suggested by the tenderer and accepted by the Corporation will be part of the agreement. The cost of stamping for agreement shall be borne by the successful tenderer. However, to expedite execution of the agreement, the Corporation shall purchase the stamp paper on behalf of the supplier and send typed agreement for signature of the suppliers. The cost of stamp paper shall be recovered from the supplier payments.

b) **SECURITY MONEY:** - The Successful Tenders within 15 days from date of issue of supply order shall furnish the **Composite Bank Guarantee** in accordance with the condition of the contract. The guarantee can be furnished @10 % of the value of the supply order in shape of Demand Draft or in form of Composite Bank Guarantee. Prescribed Performa for Composite Bank Guarantee is given in Section IV of Tender Document. Such deposit shall be for the due **performance of the supply order, contract & performance of the system after commissioning.**

Failure of the successful tenderer to comply with the requirement of clause 32 (a) & 32 (b) shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD, in which event the purchaser/Corporation may make the award to the next lowest evaluated bidder or call for new bids.

33. REFUND OF EARNEST MONEY:-

(A) Unsuccessful tenderers: In case of unsuccessful tenders who do not, withdraw their offers before the receipt of final decision, the earnest money if deposited by means of a Bank Draft shall be returned, without interest after the finalization of tenders or after expiry of validity period of the respective offer, whichever is earlier by means of RTGS/crossed cheque drawn on a scheduled bank payable in New Delhi and the Corporation will not be responsible for reimbursing to the tenderers the Bank's commission for encashing the same.

(B) SUCCESSFUL TENDERERS:- (i) The successful tenderers shall sign agreements as per the format given in Section -V of part "A" of the tender document and shall deposit the security money within 15 days from the date of issue of purchase order, deposit by demand draft or furnish Composite bank Guarantee in the manner indicated in clause – 4 of section- II Part -A .

(ii) After the successful tenderer has completed formalities as stated above, the earnest money deposit will be refundable to him/ them. No interest shall be allowed on earnest money.

34. PRE-CONTRACT INTEGRITY PACT:- Successful Tenderers whose supply /work order of value of Rs. more than one crore then they have to execute PRE-CONTRACT INTEGRITY PACT in the prescribed Performa given in Section VI part "A" of the Tender Document.

-----Note: (Duly signed with stamp on each & every page of Section- I i.e. "Instruction to Tenderer" to be placed in the envelopes marked "Technical & Commercial Bid").

NATIONAL SEEDS CORPORATION LTD.

SECTION – II

GENERAL TERMS AND CONDITIONS OF THE CONTRACT

1. **Transfer and subletting:** -The supplier shall not sublet, transfer, assign or otherwise part with the contract to any person, firm or Company directly or indirectly or any part thereof without the previous written permission of the Corporation.
2. **Indemnity:**-The supplier shall at all times indemnify the Corporation against all claims which may be made in respect of the said items for infringement of any right protected by patent, registration of design or trade mark provided always that in the event of any claim in respect of an alleged breach of a patent registered design or trade mark being made against the Corporation, the Corporation shall notify to the supplier of the same and the supplier shall be bound, but at his own expenses, to conduct negotiations for settlement or prosecute any litigation that may arise there from. In the event of the Corporation becoming liable to any amount on any aforesaid account the supplier shall make good the amount so payable and the expenses incurred on that behalf.
3. **Signing of Agreement:** -The supplier shall within 15 days from the date of issue of purchase order execute the agreement on non-judicial stamp paper as per prescribed Performa, in the tender document, with the Corporation.
4. **Composite Bank Guarantee Bond:** -Successful bidders are required to deposit security money in the form of cash (by Demand Draft) on any scheduled commercial Bank Payable at New Delhi/ Delhi in favour of National Seeds Corporation Ltd. or furnish composite bank guarantee bond for execution of order, performance of the system during the warranty period. The guarantee bond shall be to the tune of 10% value of the contract and shall be furnished as per Performa attached at Section-IV Part 'A' of the tender document within 15 days from the date of issue of purchase order. The composite bank Guarantee Bond should be valid upto 20 months. It should be issued by any nationalized bank of any Branch. The authorized signatory of the firm should furnish the affidavit stating that the composite Bank Guarantee has been taken from the concerned branch of the Bank for the purpose enumerated therein.

The composite Bank Guarantee will be discharged by the Purchaser/Corporation and returned to the supplier not later than 20 months following the date of completion of the supplier's performance obligation, including any warranty obligations, under the contract.
5. **Delivery:** - The supplier shall undertake to complete the supply, installation and commissioning of system at sites within **150 days from the date of issue of supply order provided vacant space by the farm for execution of the job is made available** or otherwise specified. However, the Job may be completed early also for which no extra benefit or relaxation in payment terms shall be allowed to the supplier/ suppliers. The date of receipt of goods as specified in the prescribed receipt i.e. G R note issued and the certificate of installation and commissioning issued by the consignee shall be final for the purpose of calculating delivery period.
6. **Place of Delivery:** - Place of delivery shall be as per. "Destination of supply of Center Pivot Irrigation system" of the Tender Document.
7. **Pre -Delivery Inspection:** - The Corporation at its discretion may depute their representative for the inspection of the material at the works of the firm or same can be inspected at site. However, supplier shall give at least 10 days to the Purchaser/Corporation to inspect the machine/equipment to confirm their conformity to the contract. For the purpose of the inspection, the supplier or its subcontractor(S) should provide reasonable facilities and assistance –including access to drawing, tools, tackles, production data, labour etc to the inspection team at no charge to the purchaser/corporation. The expenditure incurred by NSC's nominee such as TA & DA shall be borne by the Purchaser/Corporation.

In case the suppliers give a notice and fail to offer the machine/equipment for inspection up to the dates fixed for this purpose, the expenditure incurred on TA/DA of the Corporation's nominee shall have to

be borne by the supplier and such failure will not entitle the supplier to ask for any extension for delivery period.

During Inspection, machine/equipment found fail to conform to the specification, the purchaser/ Corporation may reject them and supplier shall either replace the rejected Goods or make all alterations necessary to meet specification requirements free of cost to the purchaser/Corporation. The date of receipt after removal of defects will be construed as date of receipt for the purchase of calculating delivery period for the purpose of clause 5 of section II of Part "A" .

8. Changes in specifications: - The Corporation/ purchaser should require any changes in specifications, the supplier shall use his best endeavor to comply with the Corporation's/ purchaser's wishes subject to fair adjustment of prices and delivery schedule where appropriate.

9. Right to Terminate or Alter the Contract: - If at any time during the terms of this contract the plan of the Corporation/purchaser changes for any reason beyond the control of the Corporation/ purchaser, the Corporation shall have the right to terminate or alter this contract by sending a notice of such intention to the supplier by hand through a responsible officer. The supplier shall allow such officer to prepare an inventory of such material as is complete and ready for dispatch. Such officer shall also prepare an inventory of the raw materials which the supplier has already arranged for using in manufacturing the items to be supplied. The Corporation/ purchaser shall accept delivery of the material that are complete and ready for dispatch and may award compensation to the supplier for the raw material already procured or may in its option allow the suppliers to utilize the raw materials and make it ready for dispatch within such period as may be reasonable.

10. Marking: - The supplier shall comply with the requirements of Indian acts relating to merchandise and rules made there-under for marking of all the goods supplied. Equipment number will be written on the top of the two sides of every equipment. Identification number /mark will be informed separately along with the purchase order or later.

11. Packing: - The supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract.

12. Insurance: -The supplier shall comply shall dispatch all the consignments duly insured for all transit risks according to the dispatch instruction given by the Corporation. To avoid complications that may arise at the time of settlement of claims by underwriters for transit losses, the insurance coverage should be arranged by the supplier as under:

a) In case of indigenous supplier 'all transit risks' insurance shall be arranged commencing from their works to the warehouse of the purchaser/Corporation.

b)The supplier is responsible to give safe delivery of the equipment at F.O.R. as per section IV i.e. Dispatch Destination of Part 'B' of the tender document. For any loss/damage etc., during transit, the supplier shall have to lodge the claim with the insurance and pursue the same till it's settlement.

13. Claim of Sale Tax: -Where sale tax is claimed and provided as payable in the supply orders. Payments of the same will not be made unless the following certificate is given along with the bill.

Certified that sales tax claimed in this bill is legally payable by Corporation / purchaser and has been paid/will be paid by us to the sales tax authorities, our sales tax registration NO. _____ Central/State _____

14. Warranty:-

(a) The supplier warrants that the goods supplied under this contract are new,unused of the most recent and incorporate all recent improvements in design, manufacturing and materials unless provided otherwise in the contract. The supplier further warrants that the Goods supplied under this contract shall be free from all defects and faults in material, workmanship and manufacturing and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type of items/stores ordered and in full conformity with the contract specifications and samples.

(b) The supplier shall if required, replace the goods or such portion thereof as is rejected by the Corporation free of cost at the ultimate destination or at any other place or at the option of the Corporation, the supplier shall pay to the Corporation/purchaser the value thereof at the contract prices and such other expenditure and damage as may arise by reason of the breach of the conditions herein specified.

(c) All replacements that the Corporation/Purchaser shall call upon the supplier to deliver or perform under this warranty shall be delivered or performed by the supplier within two months (promptly and satisfactorily). If the supplier desired to take over the defective items/stores, it shall be done within one month from the date of replacement. Thereafter, Corporation/purchaser shall not be responsible to keep the defective items/stores.

(d) The equipment shall carry 15 months warranty commencing from the date of receipt of equipment at the site or 12 months from the date of commissioning of equipment whichever is earlier. The warranty period for replaced parts will extend only to 12 months from the date of its replacement but for fast moving parts the guarantee shall be extended to the remaining period of equipment warrantee.

15. Liquidated damages:-

1. If the supplier fails to deliver any or all the material covered by the contract, the Corporation reserve the right in addition to the legal remedies to cancel the contract as a whole or any portion thereof and hold the supplier liable for all the damages, sustained by virtue of said cancellation and failing to perform the contract.

2. In the event of Corporation exercising its right to cancel the contract or any portion thereof as stated in the proceeding clause, the Corporation shall be entitled to obtain the remaining equipment of the same specifications as offered by the supplier or on any other specifications that may be available or have the same fabricated by its own agency. In such an event, the Corporation shall be entitled to recover from the supplier the amount which the Corporation may have to incur over the above price which was payable to the supplier.

3. It is emphasized by Corporation and understood by the supplier that the period of delivery stipulated in the contract is the essence of the contract. It is admitted by the supplier that any delay in the delivery will cause damages to the Corporation. In the event of the supplier's failure to have the store delivered by the due date specified in the acceptance of tender, the purchaser may with-hold any payment until the whole of the stores have been fully supplied and delivered at the ultimate destination and may deduct or recover from the supplier as liquidated damages (and not by way of penalty) of sum at the rate of **1/2% (half percent)** of the price of any stores which the supplier has failed to deliver as aforesaid for each and every week or part of thereof during which the stores may not be delivered, subject to **maximum 10% of the value of undelivered material** provided however, that if the delay shall have arisen from any cause which the Corporation may in his discretion allow such additional time as it may consider to have been required by the circumstances of the case.

16. Default & Risk purchase:-

(a) Should the supplier fail to have the stores ready for delivery as aforesaid, or should the supplier in any manner or otherwise fail to perform the contract or should it fail to complete the supply in time according to the specifications or should it have winding up order made against it or make or enter into any arrangements or composition with its creditor or suspend payments (or being a company should enter into liquidation either compulsory or voluntary) the Corporation shall have power under the hand of Chief Executive, to declare the contract at the end at the risk and cost of the supplier in every

way. In such case supplier shall be liable for any liquidated damages for delay as above provided and for any expenses, losses or damages which the Corporation/purchaser may be put to incur or sustain by reason of, or in connection with supplier's default.

(b) The cancellation of the contract may be either for whole or part of the contract at Corporation's option. In the event of the Corporation/Purchaser terminating this contract in whole or in part, it may procure upon such items and in such manner as it deems appropriate supplies similar to these so terminated and the supplier shall be liable to the Corporation for any excess cost for such similar supplies provided that the supplier shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

17. Force majeure:-

17.1 Notwithstanding the provisions of Clauses 15 & 16, the supplier shall not be liable for forfeiture of its liquidation damages or termination for default, it and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force majeure.

17.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Corporation/Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

17.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 48 (Forty Eight) hours. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

18. Terms of payments:-

- A. All invoices shall be prepared in quadruplicate in the name of National Seeds Corpn. Ltd. (Delivery Destination) mentioned in the purchase Order and shall be signed by the supplier or his authorized agent. Every invoice shall bear a certificate that.

"The material covered by the invoices has been inspected by the supplier before delivery and conforms in every way to the contract specification and is packed in accordance with the contract requirement and further that no invoice has been prepared previously in respect of the articles charged in the particular invoice".

Invoice should have CST, State ST, VAT Nos. printed on them (If applicable), In the Tax invoice, cost and Tax, (VAT) amount shall be mentioned separately, in case sale tax claimed and bear a certificate as per clause no. 13 above. Invoice to be sent in duplicate to concerned consignees and two copies to NSC, H.O.

- B. Unless otherwise specified in the contract, 75% of the invoice value (excluding installation and commissioning charges) would be paid by NSC against proof of delivery of the material at destination i.e. G.R. Note from destination along with duly verified copy of original invoice packing list, challan and upon fulfillment of other obligation stipulated in the contract. Small Scale ancillary unit having single point registration certificate issued by MSME's registered with NSIC shall also be paid 80% of the invoice value. 15% payment shall be made after commissioning satisfactory performance during trial and test. All payment shall be made through RTGS after making necessary deduction if any towards liquidated damages, outstanding, short supply section pro-rata basis or as decided by the Corpn. The supplier is requested to provide information namely Bank name, location of branch & Name of City, Nature of Account, Bank Account No., IFSC code no., MICR code no. Permanent Account No (PAN) In Annexure "B" Section III.

Balance 10% or 05% of the invoice value along with performance security plus retention money shall be made one Month after commissioning as composi Bank guarantee is available.

19. Settlement of disputes:-

All disputes in relation to the tender, the contract or the interpretation of any of their terms or implementation thereof or arising out of or concerned directly or indirectly with the contract shall be referred to the arbitration or a single arbitrator to be appointed by the Chairman-cum-Managing Director of the Corporation/purchaser and in the absence of CMD, the highest Executive Officer of the Corporation shall make such appointment. The venue of arbitration shall be at New Delhi. The court of law at the New Delhi/Delhi alone will have jurisdiction in the matter of any disputes whatsoever.

The arbitrator shall have powers to enlarge time for making & publishing the award with the consent of the parties. The parties will have no objection to the appointment of the arbitrator on the ground that the arbitrator had dealt with the matter of any earlier stage. If the claims involved in a dispute are of more than Rs.1/- lakh the arbitrator shall make a speaking award as per provision of Arbitration & Reconciliation Act 1996.

In case the supplier is a Public Sector Undertaking, the above clause shall not be applicable and in that event the following clause shall apply.

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Govt. of India, In charge of the Department of Public Enterprises. The arbitration & conciliation Act, 1996 shall not be applicable to the arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal and Affairs, Ministry of Law and Justice, Govt. of India. Upon such reference, the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary when so authorized by the Law Secretary whose decision shall bind the parties finally and conclusively. The parties to the disputes will share equally the cost of arbitration as intimated by the Arbitrator.

20. Corrupt Gifts & Payments of Commission:-

Any bribe, commission, gift or advantages given promised or offered by or on behalf of the supplier, his agents or representative or agent of the Corporation/or any person on his behalf in relation to the execution of this or any other contract with the Corporation shall in addition to the criminal liability under the Law enforce, subject the supplier to cancellation of this and other contracts with the Corporation and also to payment to any less resulting from any such cancellation to the extent as is provided in case of cancellation under "DEFAULT AND RISK PURCHASE" and the Corporation shall be entitled to deduct the amount so payable from any money otherwise due to the supplier under this or any other contract or may recover the same by appropriate proceedings.

It is understood and agreed by the contractor that the prices charged for stores/supplies under the contract shall under no circumstances exceed the lowest price at which the contractor sells the stores of identical description to any other State/Central Govt. /Public Sector undertaking during the period of the contract. Affidavit should be given by the supplier on Rs100 non judicial stamp paper. Same is to be placed in the "Technical & Commercial Bid "

Note:(Duly signed with stamp on each & every page of "Section II i.e. General Terms & Condition of the Contract "to be placed in the envelopes marked "Technical & Commercial Bid").

NATIONAL SEEDS CORPORATION LTD.**SECTION – III****TENDER FORM****To**

The General Manager (MM),
 National Seeds Corporation Ltd.,
 BeejBhawan, Pusa Complex,
New Delhi-110012

FROM

Sub: Tender No. _____ for supply of _____

Sir,

- i) I/We _____ have read the tender documents as issued by National Seeds Corporation Ltd., (hereinafter called Corporation) and hereby agree to abide by the said instructions, terms and conditions contained therein.
- ii) I/We also agree to keep the offer contained in the tender open for acceptance for a period of **90 days** from the date fixed for opening the same.
- iii) I/We also agree to extend the validity of this tender for a further period of **six months** from the date of placing the initial order to repeat the order on same rates, terms and conditions for any additional quantities up to 50% likely to be required during this period.
- iv) I/We offer to supply the equipment as detailed in the schedule attached herewith at the rates quoted by me/us and hereby bind myself/ourselves to complete the delivery, installation and commissioning of center pivot irrigation system within a period of **150 days** from the date of placing of order.
- v) Bank Draft No. _____ dated _____ for Rs. _____ (Rupees _____) drawn in the Name of National Seeds Corporation Ltd., New Delhi towards payment of the earnest money, enclosed.

OR

- a) We are Small Scale industry under M SME registered with District Industries Center (Govt. Of India) for item _____ under single point registration scheme after _____ (photocopy of the Registration Certificate is enclosed). Our Registration No. is _____
- vi) The full value of the earnest money shall stand forfeited without prejudice to any other rights or remedies if:

- (a) I/we withdraw the offer before a final decision of the tender is taken, provided that such a withdrawal is made within 90 days from the opening date of tender.
- (b) I/we do not execute the contract agreement & / **Composite Bank Guarantee** within the stipulated period after acceptance of my/our tender will be known to me/us.
- vii) I/We also understand that until a formal agreement is prepared and executed, acceptance on this tender shall constitute a binding contract between us subject to modifications as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work. Valid on _____
- viii) I/we have read the arbitration clause in Section-I & II of Part 'A' of tender document, relating to instructions to tenderers and general conditions of the contract and I/we hereby agree that any dispute of whatsoever nature that may arise in connection with this tender shall be decided under these agreement clauses.
- ix) This tender is being submitted at New Delhi and will be opened and decided at New Delhi and it is agreed that Civil Courts at Delhi/New Delhi alone will have jurisdiction to deal with any legal proceeding that may arise in connection with this tender or subsequently.
- x) Company profile as per prescribed Performa given in Annexure 'A' & of Section III of Part 'A' of the tender document is kept in a separate cover marked 'Technical & Commercial Bid'. Rates are quoted in the prescribed format given in Annexure 'B' of Section III of Part 'A' of the tender document and are kept in the separate cover marked 'Price Bid.'
- xi) I/We have read and understand that my/our financial bid shall be opened only if bid found qualified based on technical & commercial bid and the firm is found suitable during spot verification by NSC's Officers or any third party deputed by NSC.
- xii) I/We have read and understand the specification for the items and the terms and conditions contained in the tender document and agree to which by the same and against which the bids are submitted in the separate cover marked 'Technical & Commercial Bid & Price Bid.'

Signature: -----

Stamp of the company :-

Place: -

Name Of Authorized Signatory: - -----

Date:-

E-mail Id: -----

Phone No : -----

Mb. No. :- -----

Complete Postal Address: -----

NATIONAL SEEDS CORPORATION LTD.**SECTION - III****Annexure-A**

(To be submitted to NSC in the envelope marked 'Technical & Commercial Bid')

FORM FOR TECHNICAL BID**To****FROM**

The General Manager (MM),
National Seeds Corporation Ltd.,
BeejBhawan, Pusa Complex,
New Delhi-110012

Sir,

Profile of our Company is as under:

1. Particulars of the company/ firm where registered:-

Name of the company with full address, contact number and e mail	Type of the firm i.e prop./ pvt. Ltd./ Ltd. etc. with its registration no.	Name and contact no. of Prop./ partners/ Directors etc

***Attach the necessary valid document in support of above**

2. Orders of similar quantum executed as prime supplier to Government Deptt on quoted model over the last three years.

Year	Name & Address of Purchaser	Quantity supplied	Purchase Order No. & Date	Value (Rs.in lakhs)	Stipulated period of Supply installation and commissioning	Actual date of Supply installation and commissioning	Remarks explaining reasons for delay if any.
1	2	3	4	5	6	7	8

***Attach copies of Purchase Orders and proof of successful commissioning.**

3. Information regarding Bid Capacity (Orders in hand to be executed ,under execution for next 3 months and spare able capacity) as on the date of this bid.

4. Availability of infrastructure

Name of Building	Size (Sq. m)	Annual Profit/ loss (Rs. In Crore)

5. Availability of Equipment

Item of Equipment	Available no. and capacity	Owned/ leased/ to be procured	Age/ condition	Remarks

6. Availability of Personnel

Type of Employee	No.	Qualification	Experience

7. Qualification and experience of key personnel proposed for administration and execution of the contract. Attach biographical data

Position	Name	Qualification	Experience in the proposed position	Contact no.

8. Financial statement including Annual report: (i.e. Balance sheet and profit & loss account) duly signed by Statutory Auditor of last 3 years along with copies. Average Annual Turnover in last three years should not be less than 10 times of quoted value of offer:

Financial year	Annual Turnover (Rs. In Crore)	Annual Profit/ loss (Rs. In Crore)	Remarks

9. Registration:

TIN/VAT No.	CST No.

10. Income tax Details:-

PAN No	Returns for Last Two Years (attached)	
	Year	Copy

11. EMD :-

Banker Name	Draft No.	Amount

12. Particular of Banker:-

Name and address of Banker	Type of Account	Account No.	IFS Code	MICR Code

13. MSEs' registration details (NSIC registered unit):

Registration No.	Category of Firm General/SC/ST	Validity Period	Registered Item/Items	Quantitative Capacity	Monetary Limit

14. Information on litigation history in which the Bidder is involved.

Other party(ies)	Employer	Cause of dispute	Amount	Remarks involved showing present status
1	2	3	4	5

--	--	--	--	--

15. A undertaking on Rs 100, Non judicial stamp paper stating that the firm is not black listed by any Govt. Department/Institution/Public Enterprises/Undertaking and no arbitration case is lying pending with this office as on date as per Performa attached in annexure A-1.
16. An affidavit on Rs 100 non judicial stamp paper that Price Charged for stores/Supplies under the contract shall under no circumstances exceed the lowest price at which the contractor sells the stores of identical description to any Govt. Department /Institution /Public Enterprises/Undertaking during the period of contract as per Performa attached in Annexure A-2.
17. Evidence of Access of Finance Required (With Valid Proof):-
18. Authorization for Signing Bid (With Valid Ltr).

I hereby certify that all the information mentioned above are true and in case any information is found to be incorrect, my bid may be treated as rejected by NSC management.

Thanking you,

Stamp of the Company

Place: -

Date:-.

Signature: -----

Name Of Authorized Signatory: - -----

Complete Mail Address: -----

Phone No.: -----

Mb. No. :- -----

E-mail Address: - -----

Note: -(All particulars are to be filled properly & correctly if required extra sheet can be attached).

NATIONAL SEEDS CORPORATION LTD.

Check list of enclosures for Technical & Commercial Bids:

1.	EMD.	{ }
2.	Certificate of registration of the firm.	{ }
3.	Partnership Deed if Partnership firm.	{ }
4.	Authorization /Resolution for signing of bid if it is limited Company or partnership firm.	{ }
5.	An affidavit of ownership if proprietary firm/sole traders.	{ }
6.	A copy of PAN No & Income-tax Return for the current year & previous year.	{ }
7.	Copy of VAT/TIN& CST Registration No.	{ }
8	Test report of the quoted model by recognised agency.	
9.	Business performance certificate from customers for quality and timely supply preferably from Govt. Organization.	{ }
10.	If representative participating, letter of authorization to participate in the tender opening/negotiation of rate	{ }
11.	Affidavit certificate that not blacklisted and no arbitration case pending in this office.	{ }
12.	MSME registered with NSIC Certificate with proper validity for item of rate offered.	{ }
13.	Other document if any in support of the tender.	{ }
14.	Each and every concerned pages of tender document should be signed with stamp of authorized signatory of tenderer.	{ }
15.	Affidavit no circumstances exceeded lowest price of identical goods to Govt. / Sami Govt. Organizations.	{ }
16.	Balance Sheet for last Three years.	{ }
17.	Average Annual Turn Over of the firm in last three years should not be less than Ten times of quoted value of the Offer.	{ }
18.	Evidence of access to financial resources.	{ }
19.	Offered Qty - _____ (Letter of request)	

Note: - In absence of any above document, tender may be consider for rejection, to be submitted to NSC in the envelope marked "Technical Bid"

NATIONAL SEEDS CORPORATION LTD.

SECTION - III

Annexure-A-1

Affidavit Certificate

I /We _____ (Name, Designation and Address)
hereby declaring that my firm/Company has not been black-listed by any of the Govt. Department/
Organization /PSUs /Institution etc , where I /We had supplied the goods during the
last _____ years and no arbitration case pending in NSC .

Signature of Authorized signatory -----

Name _____

Designation _____

Name of the Firm/Company _____

Full address _____

stamp _____

Place: _____

Dated: _____

NATIONAL SEEDS CORPORATION LTD.

SECTION - III

Annexure-A-2

Affidavit Certificate

I /We_____ (Name, Designation and Address) hereby declaring that price charged for quoted item/items under this contract, our firm has no circumstance exceeded lowest price of identical goods given to any Govt. Deptt./PSUs/Institutions/Organizations etc .

Signature of Authorized Signatory -----

Name_____

Designation _____

Name of the Firm/Company _____

Full address _____

Stamp_____

Place: _____

Dated: _____

NATIONAL SEEDS CORPORATION LTD.

SECTION - IV

**COMPOSITE BANK GUARANTEE FORM IN LIEU OF SECURITY DEPOSIT
AND PERFORMANCE GUARANTEE BOND, BY THE BANK**

This Bank guarantee executed on thisday of 2014by Bank (hereinafter called the Bank) which expression shall include wherever permissible its successors and assigns in favor of the Chairman- cum-Managing Director, National Seeds Corporation Ltd., BheejBhawan, Pusa Complex, New Delhi-110012 hereinafter called the Corporation which expression includes its successors and assigns at the request of M/s.....(hereinafter called the supplier) which expression shall include his successors and assigns.

"WHEREAS under the terms of supply of **Center Pivot system** etc. under this Corporation's supply/ Purchase Order NO.....dated Placed with the suppliers, supplier has warranted about the specifications and performance of the **Center Pivot system** supplied under the Corporation's order'.

OR

"WHEREAS under the terms of the contract for the supply of equipment etc. under this Corporation's Agreement No.....dated..... entered into between the Corporation and the suppliers, suppliers had warranted about the specifications and performance of the **Center Pivot system** under the contract'.

AND WHEREAS under the terms of the contract the Corporation is entitled to retain 10% of the price of the **Center Pivot system** till 3 months after the period the warranty expires.

AND WHEREAS the supplier is desirous of getting the said 10% price from the Corporation and has agreed to furnish a Bank guarantee in lieu thereof and has undertaken to execute performance guarantee bond backed by the Bank.

AND WHEREAS the bank agreed to give the bank guarantee in lieu of the 10% price and be guarantor for the composite guarantee bond.

NOW THEREFORE, this guarantee witnessed and the Bank hereby agrees guarantee.

1. If the supplier commits any breach of any of the terms and conditions of the contract or of the supply order and the Corporation declares that the Supplier has become liable to forfeiture of the security or any part thereof, the Bank hereby unconditionally and irrevocably agrees and undertakes and guarantees to pay to the Corporation on demand and without demure the amount of security money stated above without making any reference to the Supplier.
2. The Supplier has warranted to the Corporation as follows.
 - i) The supplier warrants that the goods supplied under this contract/order are free from all defects and faults in material, workmanship and manufacture and are of the highest grade and consistency in the established and generally accepted standards in materials of the type of **Center Pivot system** ordered and in full conformity of the contract/order specifications and drawings or samples, if any, and shall operate properly.

- ii) The supplier warrants that the **Center Pivot system** shall perform satisfactorily in accordance with the specifications and the norms fixed by the Corporation for a minimum period of 12 calendar months from the date of commissioning of **Center Pivot system** or 15 months from the date of receipt at the site whichever is earlier.
- iii) The supplier's warranty in respect of any complaints, defects and/or claims limited to supply and installation or replacement of parts free of charge or the repair of defective parts only to the extent that such replacement or repairs are attributable to/or arise from faulty workmanship or material or design in the manufacture of the equipment, provided defects are brought to the notice of the supplier within 12 months of their being first discovered during the warranty period and in no case after one month from the date of expiry of aforesaid warranty period. The warranty period for replaced parts will extend to 12 months from the date of replacement as envisaged by the warranty clause in this agreement/ order in respect of original supply.
- iv) The supplier shall, if required, replace or repair the goods or such portion thereof as is rejected by the Corporation free of cost at the ultimate destination or at the option of the Corporation, the supplier shall pay to the purchaser value thereof at the contract/order price and such other expenditure and damages as may arise by reasons of any breach of the condition specified in the contract/order.
- v) All replacement and repairs that the Corporation shall call upon the supplier to deliver or perform under this warranty shall be delivered or performed by the supplier as quickly as possible but in no case later than one month failing which the performance guarantee bond shall be extended till such time all claims are settled to the entire satisfaction of the Corporation.
- vi) The warranty of the supplier shall not apply to any material which would have been repaired or altered by the Corporation or on its behalf in any manner without informing the supplier in advance, if however, any such repair does not affect the strength performance or reliability the warranty shall continue to apply. Any defect caused to any part due to misuse, negligence or accident will not be covered by warranty.
3. If the supplier commits any breach of the terms relating to warranty and the supplier becomes liable to the forfeiture of the 10% of the bank guarantee or any part thereof, the bank hereby unconditionally and irrevocably agrees and undertakes and guarantees to pay to the Corporation on demand without demur and amount of bank guarantee stated above, without making a reference to the supplier.
4. The bank further agrees that the Corporation shall be the sole judge of as to whether the said supplier has committed any breach or breaches of the terms of warranty and the extent of loss, damage costs, charges and expenses caused to or may be suffered by or that may be caused to or may be suffered by the Corporation on account thereof and the decision of the Corporation that the supplier has committed such breach or has not fulfilled the conditions of warranty shall be final and binding on the supplier and the bank.
5. The bank further understand that it shall not be necessary for the Corporation to proceed against the supplier before demanding the aforesaid amount of bank guarantee from the bank or taking any proceeding against the bank and the guarantee herein contained shall be enforceable against the bank.
6. The bank undertakes not to revoke the guarantee except with the prior consent of the Corporation in writing and agree that any change in the constitution of the supplier or the bank shall not discharge the liability of the bank herein.
7. Notwithstanding anything, contained herein before the liability of the bank under this guarantee is restricted to Rs..... The guarantee of the bank shall remain into force upto **20 months** from the date of execution of this Bank guarantee or till 3 months after the expiry of warranty period whichever is later. Unless the Corporation makes a claim from the bank in writing on or before the said period all rights of the Corporation under this warranty shall be forfeited and the bank shall be relieved and discharged from all liability hereunder.

1. Witness

2. Witness

- Here fill the name and full address of The Bank

- Here fill the Name and full address of the tenderer.

NATIONAL SEEDS CORPORATION LTD.

SECTION – V

AGREEMENT FORM

AGREEMENT NO.....

This agreement is made on thisbetween the National Seeds Corporation Ltd., A Government of India Company, incorporated under the Companies Act 1956 and having its registered office at BeejBhawan, Pusa Complex, New Delhi-110012 and (hereinafter called the 'Corporation' which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and assigns) of the first part and M/s..... (Hereinafter called the 'Supplier' which expression shall include unless excluded by or repugnant to the context, be deemed to its successors and assigns) of the second part.

WHEREAS the 'Corporation' with the intention of purchasing Center Pivot Irrigation System invited offers vide Tender No..... its own behalf (hereinafter called the 'Purchaser')

AND WHEREAS the supplier submitted their tender No.....and upon consideration of the tender and after due deliberations, the Corporation placed Purchase Order NO.....dated..... with supplier, for the supplies of Center Pivot Irrigation System as per specifications, quantities and number mentioned in schedule of this agreement and in purchase order no..... dated.....

AND WHEREAS the Corporation and the supplier have agreed to all the terms & conditions as contained in Section-II of Part 'A' of the tender document for Tender No..... which shall form part of this agreement.

The supplier hereby agrees to supply and purchaser hereby agrees to purchase Center Pivot Irrigation System with specifications and details as mentioned in Purchase Order.

Settlement of Disputes:

All disputes and or differences in relation the tender, the contract of the interpretation of any of their terms of implementation hereof or arising out of or concerned directly or indirectly with the contract shall be referred to the arbitration of a single Arbitrator to be appointed by the Chairman cum Managing Director of the Corporation and in the absence of CMD, the highest Executive Officer of the Corporation

shall make such appointment. The venue of Arbitration shall be at New Delhi. The Court of Law at New Delhi/Delhi alone will have jurisdiction in the matter of any disputes whatsoever. The arbitrator shall have power to enlarge time for making and publishing the award with the consent of the parties. The parties will have no objection to the appointment of the Arbitrator on the ground that such arbitrator had dealt with the matter at any earlier stage. If the claims involved in a dispute are of more than Rs.1.00 lakh, the arbitrator shall make a speaking award.

No amendments or modifications in the terms of this agreement shall be considered valid unless it is in writing and duly signed by both the parties.

IN WITNESS WHEREOF, both the parties have here to subscribe their signature on the date and year herein above written through authorized representatives.

For and on behalf of the supplier

For an on behalf of the National Seeds Corporation
Ltd., Beej Bhawan, Pusa Complex, New Delhi - 12

Witness

Witness

1.

1.

2.

2.

3.

3.

NATIONAL SEEDS CORPORATION LTD.

SECTION - VI **PRE-CONTRACT INTEGRITY PACT**

(To be signed in case bid/contract amount exceeds Rs. One Crore)

General:-

1. Whereas National Seeds Corporation Limited represented byhereinafter referred to as the Buyer and the first party, proposes to procure goods / services through tender no. hereinafter referred to as goods, of the first part is a CPSE under Ministry of Agriculture, Government of India.

and M/s _____, represented by, _____ Chief Executive Officer (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the stores. Whereas the Bidder is a (status of the bidder) constituted in accordance with the relevant law in the matter.

2. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the completion of the contract.

Commitments of the Buyer:-

3. The Buyer Commits itself to the following:-

3.1 The Buyer undertakes that no official of the Buyer, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

3.2 The Buyer will treat all Bidders alike, and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.

3.3 All the officials of the Buyer will report to the CVO office of any attempted or completed breaches of the above commitments on the part of Bidder under Integrity Pact.

4. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is *prima facie* found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

Commitments of Bidders:-

5. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:-

5.1 The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

5.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or for bearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

5.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

5.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

5.5 The Bidder further confirms and declares to the Buyer that the Bidder is Competent to offer for stores /services in the said tender and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

5.6 The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Buyer or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

5.7 The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Buyer as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

5.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

5.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

6. Previous Transgression:-

6.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify bidder's exclusion from the tender process.

6.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

7. Company Code of Conduct:-

7.1 Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behavior) and a compliance program for the implementation of the code of conduct throughout the company.

8. Sanctions for Violation:-

8.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.
- (ii) The Earnest Money/Security Deposit/Performance Bond shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the Bidder.
- (iv) To recover all sums already paid by the Buyer, and in case of an Indian Bidder with interest thereon at 2% higher than the prevailing Prime Lending Rate, while in case of a Bidder from a country other than India with interest thereon at 2% higher than the **LIBOR**. If any outstanding payment is due to the Buyer from the Bidder in connection with any other contract for any other defense stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To encase the advance bank guarantee and performance bond/warranty bond, if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.
- (vi) To cancel all or any other Contracts with the Bidder.
- (vii) To debar the Bidder from entering into any bid from the Government of India for a minimum period of five years, which may be further extended at the discretion of the Buyer.
- (viii) To recover all sums paid in violation of this Pact by Bidder(s) to any middleman or agent or broker with a view to securing the contract.
- (ix) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to rescind the contract without payment of any compensation to the Bidder.
- (x) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Buyer, and if he does so, the Buyer shall be entitled forthwith to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such rescission and the Buyer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.
- (xi) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.

8.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder.

9. Fall Clause:-

9.1 The Bidder undertakes that he has not supplied/is not supplying the similar systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the

Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, if the contract has already been concluded.

9.2 The Bidder shall strive to accord the most favored customer treatment to the Buyer in respect of all matters pertaining to the present case.

10. Examination of Books of Accounts:-

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

11. Law and Place of Jurisdiction:-

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.

12. Other Legal Actions:-

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

13. Validity:-

13.1 The validity of this Integrity Pact shall be from date of its signing and extend till satisfactory closer of the Contract.

13.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

The Parties hereby sign this Integrity Pact at _____ on _____ .

BUYER BIDDER

CHIEF EXECUTIVE OFFICER
Company Name

Witness

1. _____

1. _____

2. _____

2. _____

PART-B

NATIONAL SEEDS CORPORATION LTD

SECTION – I
CENTRAL PIVOT IRRIGATION SYSTEM FOR RAJASTHAN FARMS

Area (approx.)	36.0 ha. each Pivot System
Total length of span including overhang and end spray	340 mtr
Field Elevation	4 mtr approx
A:	
1. Galvanized Steel Spans :	
Minimum two spans of 8-5/8" + rest 6-5/8" inch (168 mm) OD of span pipes (Heavy duty bolts used for the flanged connection between spans. Welded couplers used for extra strength)	
Type of Pivot point	Mini. 8-5/8" OD Standard Profile Pivot Point
Type of Lower Riser	Lower Elbow Fixed Flange (8-5/8" Pivot Point)
(With Long Radius Elbow for reduced friction loss)	
Collector Ring	Collector Ring 11 wire – Insul-8
(Span Cable will be 12 Ga, 11 conductor wired)	
Pressure Gauge (at Pivot point)	Standard Pressure Gauge
Crop Clearance (Ground-Truss Rod)	Standard Profile – 8 to 10 feet
Type of Control Panel	Standard Mech.
Panel with High Voltage Surge Protection and	Low Pressure Shutoff – Standard/ Low Range
Required Run Power	Approx. 7.50 - 10 kw
2 . Drive Train	
Suitable tubular Wheels and highly Corrosion resistant , Class F Insulation, 1.3 service Factor	Suitable for India conditions Speed Center Gear motors 14.9 x 24" Tire Tubeless 12" rim of reputed make
Suitable Gear Box	Suitable Genuine Gearbox-Non-Tow
3. Sprinklers/Nozzle Package :	
Type of Sprinkler Package	Dynamic Wobbling, black colour with 15 PSI Regular
Type of Drops/Height from Ground	Variable Length Hose Drop 5.5 Ft. (1.65 Mtrs.)
(UV stabilized, reinforced, Long-Life Flex Drop)	
Type of Weights	Universal Metal weight for wobbling sprinklers
Outlet Spacing	90 - 113" wide Spacing
Sprinkler Range Diameter	16-18 m Approx for Dynamic wobbling sprinkler
4. Items to be included-	
Fertigation arrangement capacity, Type-	
Capacity of Fertilizer Injection Pump	Fertilizer Air Spray, capacity 375 LPH approx
Type of Fertilizer Tank	Approx 1000 Ltrs. Tank
Type of flow meter	Flow meter optional to be quoted separately
Running Light Motor Cover 0.30 PSI END Pressure Drop/Gauge (Last Drop)	
Running Light motor Cover, end pressure drop/gauge (last drop)	
End Pressure (last drop)	1.03 Bars (14.94 psi)
Mainline 200 mm OD 6 kg/cm ² HDPE	600 m (approx...) The site may be inspected by the firm
Electric Pump Set	42 LPS, Head 40 Mtrs.
Electric control panel for pump set	Fully automatic
Suction pipe, floating type with PE pipe, NRV and foot valve. Delivery pipe work having S-type bend, gate	

valve, NRV all with heavy duty flanged connection.	
Minimum Revolution Time (h/rev)	12 hrs/day
Minimum Application Rate	5.00 mm/day
Max daily Application Rate	10.00 mm/day
B- Pump Set	Kirloskar make/equivalent and suction centrifugal pump with CI impeller of cap. 42 lps at 40 m head of water coupled with 1440-rpm TEFC electric induction motor with ISI mark foot valve. With 30 m 4 core electric cable ISI mark, TATA/SAIL brand MS pipe with S type bend, HDPE pipe of 200 mm dia of 6 kg/cm ² class as per IS. 14151. Motor control center/panel board should consist of main switch, star-delta starter, single phase preventer, phase indicating lamps, ammeter, voltmeter internally wired and encased in a ms box with anti-rust paint.
C- Generator Set	Cummins (Sudhir)/Kirloskar or equivalent generator technology suitable for 1500 rpm, 415 volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase supply, 4 wire system capacity- 62.5 KVA complete with control panel, fuel tank, battery, battery leads and AVM pads complete with all fittings and accessories.

Note:

1. Extra Nozzles for the crops for providing the irrigation at the time of pollination may also be offered separately.
2. The tools required for repair and maintenance of systems along with part catalogue may be provided along with the system.
3. The pivot point foundation will comply with the requirements set forth by Centre Pivot Manufacturer.

CENTER PIVOT IRRIGATION SYSTEM FOR RAJASTHAN FARMS

Area (approx.)	50.00 ha. Pivot System
Total length of span including overhang and end spray	400 mtr approx
Field Elevation	4 mtr
A:	
1. Galvanized Steel Spans :	
Minimum two spans of 8-5/8" + rest 6-5/8 inch (168 mm) OD of span pipe with suitable overhang and end spray to cover 400 m length (Heavy duty bolts used for the flanged connection between spans. Welded couplers used for extra strength)	
Type of Pivot point	Mini. 8-5/8" OD Standard Profile Pivot Point
Type of Lower Riser	Lower Elbow Fixed Flange (8-5/8" Pivot Point)
Hook up arrangement	With Z-bend and spool pipe with flanged connections.
Collector Ring	Collector Ring 11 wire – Insul-8
(Span Cable will be 12 Ga, 11 conductor wired)	
Pressure Gauge (at Pivot point)	Standard Pressure Gauge
Crop Clearance (Ground-Sprinkler)	1.6 m (5.5 ft)
Profile	Standard Profile – 8 to 10 feet
Type of Control Panel	Programmable solid state with facility to set different water applications for different sectors (pie) within the circle.
Control Panel with High Voltage Surge Protection and Low Pressure Shutoff – Standard/ Low Range to be provided	
Required Run Power	Approx. 7.50 - 10 kw
Power supply	380 volts, 50 c/s
2 . Drive Train	
Suitable tubular Wheels and highly Corrosion resistant, Class F Insulation, 1.3 service Factor	Suitable for India conditions Speed Center Gear motors 14.9 x 24" Tubeless 12' rim od reputed make
Suitable Gear Box	Suitable Genuine Gearbox- Non-tow
3. Sprinklers/ Nozzle Package :	
Type of Sprinkler Nozzles	Dynamic Wobbling, black colour, with 15psi regulator
Type of Drops/Height from Ground	Variable Length Hose Drop 1.65 Mts (5.5.Ft)
(UV Stabilized, reinforced, Long-Life Flex Drops)	
Type of weights	Universal metal weights for wobbling sprinklers.
Outlet Spacing	90" - 113" wide spacing
Sprinkler Range Diameter	16-18 m for Dynamic wobbling sprinkler
4. Items to be included	
Fertigation arrangement-	
Capacity of Fertilizer Pump	Fertilizer & Air Sparger, capacity 375 LPH approx.
Type of Fertilizer Tank	Corrosion resistance material like PE, 1000 ltr capacity
Type of Flow Meter	Flow meter optional, to be quoted separately.
Running Light motor Cover, end pressure drop/gauge (last drop)	
End Pressure (last drop)	1.03 Bars (14.94 psi)
Mainline 250 mm OD 6kg/cm ² HDPE	600 m (approx...) The site may be inspected by the firm

Electric pump set	58 LPS, at 40 m head
Electric control panel	Fully automatic
Suction pipe, floating type with PE pipe, NRV and foot valve. Delivery pipe work having S-type bend, gate valve, NRV all with heavy duty flanged connection.	
Minimum Revolution Time (h/rev)	12 hrs/day
Minimum Application Rate	5 mm/day
Max daily Application Rate	10.00 mm/day
B- Pump Set	Kirloskar/equivalent make consisting of suction centrifugal pump with CI impeller of cap. 58 lps at 40 m head of water coupled with 1440-rpm TEFC electric induction motor with ISI mark foot valve. With 30 m 4 core electric cable ISI mark, TATA/SAIL brand MS pipe with S type bend, HDPE pipe of 250 mm dia of 6 kg/cm ² class as per IS. 14151. Motor control Center/panel board should consist of main switch, star-delta starter, single phase preventer, phase indicating lamps, ammeter, voltmeter internally wired and encased in a ms box with anti-rust paint.
C- Generator Set	Cummins /Kirloskar or equivalent generator technology suitable for 1500 rpm, 415 volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase supply, 4 wire system capacity- 82.5 KVA complete with control panel, fuel tank, battery, battery leads and AVM pads complete with all fittings and accessories.

Note:

1. Extra Nozzles for the crops for providing the irrigation at the time of pollination may also be offered separately.
2. The tools required for repair and maintenance of systems along with part catalogue may also be provided along with the system.
3. The pivot point foundation will comply with the requirements set forth by Centre Pivot Manufacturer.

CENTRAL PIVOT IRRIGATION SYSTEM FOR RAJASTHAN FARMS

Area (approx.)	60.0 ha. each Pivot System
Total length of span including overhang and end spray	438 mtr approx
Maximum Field Elevation	4 mtr
1.Sprinklers/Nozle Package	
Type of Sprinkler Package	Dynamic Wobbling, black colour with 15 PSI Regular
Type of Drops/Height from Ground	Variable Length Hose Drop 5.5 Ft. (1.65 Mtrs.)
(UV stabilized, reinforced, Long-Life Flex Drop	
Type of Weights	Universal Metal weight for wobbling sprinklers
Outlet Spacing	113" (288 cm) wide Spacing
Sprinkler Range Diameter	16-18 m Approx for Dynamic wobbling sprinkler
A:	
1.Galvanized Steel Spans :	
Minimum 2 Spans of 8-5/8" + rest 6-5/8 inch (168 mm) OD of span pipes (Heavy duty bolts used for the flanged connection between spans. Welded couplers used for extra strength)	
Type of Pivot point	Mini. 8-5/8" OD Standard Profile Pivot Point
Type of Lower Riser	Lower Elbow Fixed Flange (8-5/8" Pivot Point)
(With Long Radius Elbow for reduced friction loss)	
Collector Ring	Collector Ring 11 wire – Insul-8
(Span Cable will be 12 Ga,11 conductor wired)	
Pressure Gauge (at Pivot point)	Standard Pressure Gauge
Crop Clearance (Ground-Truss Rod)	Standard Profile – 8 to 10 feet
Type of Control Panel	Standard Mech.
Panel with High Voltage Surge Protection and	Low Pressure Shutoff – Standard/ Low Range
Required Run Power	Approx. 7.50 - 10 kw
2 . Drive Train	
Suitable tubular Wheels and highly Corrosion resistant, Class F Insulation,1.3 service Factor	Suitable for India conditions Speed Center Gear motors 14.9 x 24" Tire Tubeless 12" rim of reputed make
Suitable Gear Box	Suitable Genuine Gearbox-Non-Tow
(With air vented expansion chamber & Lipped seal designed for Long Life)	
3. Sprinklers/ Nozzle Package :	
Type of Sprinkler Nozzles	Dynamic Wobbling, black colour, with 15psi regulator
Type of Drops/Height from Ground	Variable Length Hose Drop 1.65 Mts (5.5.Ft)
(UV Stabilized, reinforced, Long-Life Flex Drops)	
Type of weights	Universal metal weights for wobbling sprinklers.
Outlet Spacing	90" - 113" wide spacing
Sprinkler Range Diameter	16-18 m for Dynamic wobbling sprinkler
4. Items to be included	
Fertigation arrangement capacity, Type-	
Capacity of Fertilizer Injection Pump	Fertilizer Air Spray, capacity 375 LPH approx
Type of Fertilizer Tank	Approx 1000 Ltrs. Tank
Type of flow meter	Flow meter optional to be quoted separately
Running Light Motor Cover 0.30 PSI END Pressure Drop/Gauge (Last Drop)	
Running Light motor Cover, end pressure drop/gauge (last drop)	

End Pressure (last drop)	1.03 Bars (14.94 psi)
Mainline 250 mm OD 6 kg/cm ² HDPE	600 m (approx...) The site may be inspected by the firm
Electric Pump Set	70 LPS, Head 40 Mtrs.
Electric control panel for pump set	Fully automatic
Suction pipe, floating type with PE pipe, NRV and foot valve. Delivery pipe work having S-type bend, gate valve, NRV all with heavy duty flanged connection.	
Minimum Revolution Time (h/rev)	12 hrs/day
Minimum Application Rate	5.00 mm/day
Max daily Application Rate	10.00 mm/day
B- Pump Set	Kirloskar make/equivalent and suction centrifugal pump with CI impeller of cap. 70 lps at 40 m head of water coupled with 1440-rpm TEFC electric induction motor with ISI mark foot valve. With 30 m 4 core electric cable ISI mark, TATA/SAIL brand MS pipe with S type bend, HDPE pipe of 250 mm dia of 6 kg/cm ² class as per IS. 14151. Motor control centre/panel board should consist of main switch, star-delta starter, single phase preventer, phase indicating lamps, ammeter, voltmeter internally wired and encased in a ms box with anti-rust paint.
C- Generator Set	Cummins (Sudhir)/Kirloskar or equivalent generator technology suitable for 1500 rpm, 415 volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase supply, 4 wire system capacity- 100 KVA complete with control panel, fuel tank, battery, battery leads and AVM pads complete with all fittings and accessories.

Note:

1. Extra Nozzles for the crops for providing the irrigation at the time of pollination may also be offered separately.
2. The tools required for repair and maintenance of systems along with part catalogue may also be provided along with the system.
3. The pivot point foundation will comply with the requirements set forth by Centre Pivot Manufacturer.

CENTER PIVOT IRRIGATION SYSTEM FOR RAJASTHAN FARMS

Area (approx.)	75.0 ha. each Pivot System
Total length of span including overhang and end spray	490 mtr (Approx)
Field Elevation	4 mtr (approx.)
A:	
1. Galvanized Steel Spans :	
Minimum two spans of 8-5/8" + rest 6-5/8 inch (168 mm) OD of span pipe with suitable overhang and end spray to cover 490 m length (Heavy duty bolts used for the flanged connection between spans. Welded couplers used for extra strength)	
Type of Pivot point	Mini. 8-5/8" OD Standard Profile Pivot Point
Type of Lower Riser	Lower Elbow Fixed Flange (8-5/8" Pivot Point)
Hook up arrangement	With Z-bend and spool pipe with flanged connections.
Collector Ring	Collector Ring 11 wire – Insul-8
(Span Cable will be 12 Ga, 11 conductor wired)	
Pressure Gauge (at Pivot point)	Standard Pressure Gauge
Crop Clearance (Ground-Sprinkler)	1.6 m (5.5 ft)
Profile	Standard Profile – 8 to 10 feet
Type of Control Panel	Programmable solid state with facility to set different water applications for different sectors (pie) within the circle.
Control Panel with High Voltage Surge Protection and Low Pressure Shutoff – Standard/ Low Range to be provided	
Required Run Power	Approx. 7.5 - 10 kw
Power supply	380 volts, 50 c/s
2 . Drive Train	
Suitable tubular Wheels and highly Corrosion resistant, Class F Insulation, 1.3 service Factor	Suitable for India conditions Speed Center Gear motors 14.9 x 24" Tire Tubeless 12" rim of reputed make
Suitable Gear Box	Genuine Gear box- Non-Tow
3. Sprinklers/ Nozzle Package :	
Type of Sprinkler	Dynamic Wobbling, black colour, with 15psi regulator (Extra nozzle set to be supplied for irrigation of crop during pollination period)
Type of Drops/Height from Ground	Variable Length Hose Drop 1.65 Mts (5.5.Ft)
(UV Stabilized, reinforced, Long-Life Flex Drops)	
Weights	Universal metal weights for wobbling sprinklers.
Outlet Spacing	113" (288 cm) wide spacing approx
Sprinkler Range Diameter	16-18 m for Dynamic wobbling sprinkler
4. Items to be included	
Fertigation arrangement capacity, type-	
Capacity of Fertilizer Pump	Fertilizer & Air Sparger, capacity 375 LPH approx.
Type of Fertilizer Tank	Corrosion resistance material like PE, 1000 ltr capacity
Type of Flow Meter	Flow meter optional, to be quoted separately.
Running Light motor Cover, end pressure drop/gauge (last drop)	
End Pressure (last drop)	1.03 Bars (14.94 psi)
Mainline 315 mm OD 6kg/cm ² HDPE	700 m (approx...) The site may be inspected by the firm
Electric pump set	90 LPS, at 40 m head
Electric control panel for pump set	Fully automatic

Suction pipe, floating type with PE pipe, NRV and foot valve. Delivery pipe work having S-type bend, gate valve, NRV all with heavy duty flanged connection.	
Minimum Revolution Time (h/rev)	12 hrs/day
Minimum Application Rate	5 mm/day
Max daily Application Rate	10.00 mm/day
B- Pump Set	
	Kirloskar make/equivalent and suction centrifugal pump with CI impeller of cap. 90 lps at 40 m head of water coupled with 1440-rpm TEFC electric induction motor with ISI mark foot valve. With 30 m 4 core electric cable ISI mark, TATA/SAIL brand MS pipe with S type bend, HDPE pipe of 315 mm dia of 6 kg/cm ² class as per IS. 14151. Motor control Center/panel board should consist of main switch, star-delta starter, single phase preventer, phase indicating lamps, ammeter, voltmeter internally wired and encased in a ms box with anti-rust paint.
C- Generator Set	
	Cummins /Kirloskar or equivalent generator technology suitable for 1500 rpm, 415 volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase supply, 4 wire system capacity-120 KVA complete with control panel, fuel tank, battery, battery leads and AVM pads complete with all fittings and accessories.

Note:

1. Extra Nozzles for the crops for providing the irrigation at the time of pollination may also be offered separately.
2. The tools required for repair and maintenance of systems along with part catalogue may also be provided along with the system.
3. The pivot point foundation will comply with the requirements set forth by Center Pivot Manufacturer.

CENTER PIVOT IRRIGATION SYSTEM BOOM BACK TYPE FOR RAICHUR
FARM (BLACK COTTON SOIL)

Area (approx.)	50.00 ha. Pivot System
Total length of span including overhang and end spray	400 mtr
Maximum Field Elevation	4 mtr
A:	
1. Galvanized Steel Spans :	
6-5/8 inch (168 mm) OD of span pipe with suitable overhang and end spray to cover 400 m length (Heavy duty bolts used for the flanged connection between spans. Welded couplers used for extra strength)	
Type of Pivot point	Mini. 8-5/8" OD Standard Profile Pivot Point
Type of Lower Riser	Lower Elbow Fixed Flange (8-5/8" Pivot Point)
Hook up arrangement	With Z-bend and spool pipe with flanged connections.
Collector Ring	Collector Ring 11 wire – Insul-8
(Span Cable will be 12 Ga, 11 conductor wired)	
Pressure Gauge (at Pivot point)	Standard Pressure Gauge
Crop Clearance (Ground-Sprinkler)	1.6 m (5.5 ft)
Profile	Standard Profile – 8 to 10 feet
Type of Control Panel	Programmable solid state with facility to set different water applications for different sectors (pie) within the circle.
Control Panel with High Voltage Surge Protection and Low Pressure Shutoff – Standard/ Low Range to be provided	
Required Run Power	Approx. 7.50 - 10 kw
Power supply	380 volts, 50 c/s
2 . Drive Train	
Suitable tubular Wheels and highly Corrosion resistant, Class F Insulation, 1.3 service Factor	Suitable for India conditions Speed Center Gear motors 14.9 x 24" Tubeless 12' rim of reputed make
Suitable Gear Box	Suitable Genuine Gearbox- Non-tow
(With air vented expansion chamber & Lipped seal designed for Long Life)	
3. Sprinklers/ Nozzle Package :	
Type of Sprinkler Nozzles	Dynamic Wobbling, black colour, with 15psi regulator
Type of Drops/Height from Ground	Variable Length Hose Drop 1.65 Mts (5.5.Ft)
(UV Stabilized, reinforced, Long-Life Flex Drops)	
Type of weights	Universal metal weights for wobbling sprinklers.
Outlet Spacing	90" - 113" (288 cm) wide spacing
Sprinkler Range Diameter	16-18 m for Dynamic wobbling sprinkler
Boom backs	Nozzles near the drive train wheels should be located behind the drive units through special arrangement called boom backs or similar type that will prevent the wheel track area from getting wet.
4. Items to be included	
Fertigation arrangement-	
Capacity of Fertilizer Pump	Fertilizer & Air Sparger, capacity 375 LPH approx.
Type of Fertilizer Tank	Corrosion resistance material like PE, 1000 ltr capacity
Type of Flow Meter	Flow meter optional, to be quoted separately.

Running Light motor Cover, end pressure drop/gauge (last drop)	
End Pressure (last drop)	1.03 Bars (14.94 psi)
Mainline 250 mm OD 6kg/cm ² HDPE	600 m (approx...) The site may be inspected by the firm
Electric pump set	58 LPS, at 40 m head
Electric control panel	Fully automatic
Suction pipe, floating type with PE pipe, NRV and foot valve. Delivery pipe work having S-type bend, gate valve, NRV all with heavy duty flanged connection.	
Minimum Revolution Time (h/rev)	12 hrs/day
Minimum Application Rate	5 mm/day
Max daily Application Rate	10.00 mm/day
B- Pump Set	Kirloskar/equivalent make consisting of suction centrifugal pump with CI impeller of cap. 58 lps at 40 m head of water coupled with 1440-rpm TEFC electric induction motor with ISI mark foot valve. With 30 m 4 core electric cable ISI mark, TATA/SAIL brand MS pipe with S type bend, HDPE pipe of 250 mm dia of 6 kg/cm ² class as per IS. 14151. Motor control Center/panel board should consist of main switch, star-delta starter, single phase preventer, phase indicating lamps, ammeter, voltmeter internally wired and encased in a ms box with anti-rust paint.
C- Generator Set	Cummins /Kirloskar or equivalent generator technology suitable for 1500 rpm, 415 volts, 0.8 pf (lag) suitable for 50 Hz, 3 phase supply, 4 wire system capacity- 82.5 KVA complete with control panel, fuel tank, battery, battery leads and AVM pads complete with all fittings and accessories.

Note: Soil at Raichur farm is heavy black cotton. To prevent wheel track clogging and slippage, dry wheel system using boom backs should be provided. Maximum span length (distance between two towers) should not exceed 55 mtr.

1. Extra Nozzles for the crops for providing the irrigation at the time of pollination may also be offered separately.
2. The tools required for repair and maintenance of systems along with part catalogue may be provided along with the system.
3. The pivot point foundation will comply with the requirements set forth by Centre Pivot Manufacturer.

GENERAL DETAILED SPECIFICATIONS OF CENTER PIVOT IRRIGATION SYSTEM

General Working Description

- A. The unit will be a self-contained, galvanized steel structure, electrically propelled irrigation machine driven by individual, unitized drive towers supported on wheels with rubber pneumatic tires. The basic drive unit power train will consist of an electric motor that will drive the wheels through a series of gear reductions. Each tower will be electrically controlled to maintain the selected operating speed, water application and provide correct alignment.
- B. A control panel will provide operator control from the pivot point. The control panel must have an anti-corrosion coating including a zinc-rich primer. The control panel must be sealed utilizing a perimeter gasket to prevent dust entering the enclosure.

General Design Criteria

- A. All equipment furnished will be new and unused, and will be the product of a manufacturer having successful experience in the manufacture of center pivot irrigation equipment.
- B. All equipment provided will be capable of maximum interchangeability of parts. The equipment incorporated in this proposal will be the product of, and furnished by, a manufacturer who is regularly engaged in the production of such equipment for similar applications.
- C. All of the equipment will be the manufacturer's latest and proven design. Specifications call attention to certain features, but do not claim to cover all details particular to the pivot design.
- D. All electrical components of the pivot will operate from a 415 volt, three (3) phase, 50Hertz, four (4) wire power supply to be provided at the pivot per USA American Society of Agricultural and Biological Engineers (ASABE) Standard S397T or equivalent.
- E. All controls for remote electrically operated or motor driven equipment will be complete, including all necessary auxiliary relays so as to require only remote wiring and wiring connections to the equipment.
- F. Commercially plated fasteners will be used on all connections, including the drive train U-joints, center drives and wheel gearboxes.
- G. USA American Society of Testing Material (ASTM) standards or equivalent:
 - a. ASTM A635/A635M-09 – Standard Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Hot-Rolled, Alloy, Carbon, Structural, High-Strength Low-Alloy, and High-Strength Low-Alloy with Improved Formability, General Requirements
 - b. ASTM A568/A568M-09 – Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements

- c. ASTM A123/A123M-09 – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - d. ASTM B633-07 – Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel
 - e. ASTM A780/A780M-09 – Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
- H. All necessary fuses or switches required by the manufacturer for this the equipment will be provided.

Scope of supply

- A. It is the intent that all equipment as defined from the pivot point to the end of the machine in this specification shall be supplied by the irrigation pivot manufacturer/ its authorized dealer.
- B. The manufacturer or dealer of the center pivot irrigation equipment will erect the center pivot with one or more factory trained personnel as supervisor. This will include assembly of the mechanical and electrical portion of the center pivot, initial start-up and adjustment of the equipment. This portion of the manufacturer's responsibility will be concluded when the center pivot has operated continuously for one (1) field revolution with power supplied by the public power grid or a generator unit.

Instruction Manuals

System Manual may be supplied. This manual shall contain operator instructions, maintenance instructions and general technical instructions for the equipment.

Structural

- A. Steel Pipeline - The main structural water supply pipe will be minimum 12 gauge (0.109"/2.8mm minimum wall) hot dipped galvanized steel. A combination of 5", 6 5/8", 8 5/8" and 10" (127mm, 168mm, 219mm and 254mm) O. D. pipe may be used to minimize the pressure loss through the pivot. The water supply pipe outlet couplings shall be 3/4" (19.1mm) NPT steel. Pipe outlet spacing to be 75" (192cm) or 90-113" (288cm) to accommodate sprinkler equipment. System with longer span lengths, i.e. with least number of spans (towers and drive units) will be preferred.
- B. Pipe Support Structure - The pipe support structure of the pivot will be a bow string, under truss design. Vee positioned truss angles will be 0.163" x 2" x 2" (4.1mm x 50.8mm x 50.8mm) attached to wrap-around brackets welded to the pipes. The truss angles will be supported with a 0.163" x 2" x 2" (4.1mm x 50.8mm x 50.8mm) spreader angle positioned perpendicular to the pipeline. All angles and plates will be galvanized with an average minimum thickness of 3.4 mils (86.4 microns). Truss rods will be a minimum 7/8" (22.2 mm) diameter steel. The truss rods will have large radius, hot forged head ends and galvanized with an average minimum thickness of 3.9 mils (99.1 microns). All pipe support structural elements must be hot dipped galvanized to ensure maximum coating and protection.
- C. The pipe flanges should be held together by 6 - 8 bolts pattern to ensure a uniform clamping force and a robust connection.
- D. The sprinkler outlet on the water supply pipe should be a 3/4" (19.1mm) welded coupler to maintain strength and ensure a long operating life, avoiding un-necessary pipe material loss and friction losses inside the pipeline.

- E. Span Connections - The spans will be connected using separate universal joints and aluminium cuplets.
- F. Drive Unit Tower - The drive unit tower will be a four legged structure designed to withstand the forces induced when traversing rough terrain and furrowed row crops. The drive unit legs will be fabricated from minimum 1/4" x 3" x 3" (6.4mm x 76.2mm x 76.2mm) angle. Two (2) diagonal and 4-6 horizontal galvanized braces will provide rigidity and strength to the drive unit. Horizontal braces to be installed on both sides of the drive unit to ensure strength and rigidity of the tower structure during operation. The horizontal base beam at the lower end of the structure will be manufactured with 6 5/8" (168mm) O. D., minimum 12 gauge (0.109"/2.8mm minimum wall) pipe and will provide a wheel base of minimum 13.3 feet (3.52m). All angles, tubes and weldments will be galvanized with an average minimum thickness of 3.4 mils (86.4 microns).
- G. Tower Supports - Two 2 7/8" (73mm) O. D. 14 gauge (0.083"/2.1mm minimum wall) galvanized tower support assemblies will be attached between the drive unit legs (Upper Brace connection) and pipeline attachment truss-rod. The tower supports will also be tied into the truss rods with a cross-channel member. This arrangement provides a unitized support structure to withstand tension and compression forces as the towers move around the field on level and rolling terrain.
- H. Structural Component Finish - All critical structural members, including the pipe, angles, and base beam will be hot dip galvanized per ASTM Specification 123 or equivalent on all surfaces, with the exception of the Xenoy nipple and various small brackets, which will be painted or plated.
- I. Fasteners - All bolts will be Grade 5 minimum. Locknuts will be used in all structural assemblies. All fasteners will be plated for corrosion protection.

Drive Train

- A. Center Drive - The center drive will use a high efficiency, totally enclosed irrigation duty motor directly coupled to a double reduction gearbox with stainless steel stator bolts. Steel heat treated helical gears will be used for maximum efficiency and strength. The motor housing will be finned aluminum to provide additional cooling for longer life. The complete unit is designed to operate under extreme environmental conditions and is CSA International (originally Canadian Standards Association) and USA Underwriters Laboratory (UL) certified or equivalent. The center drive motors will be minimum 0.6 Hp (UL rating 0.8 Hp) and/or 1.2 Hp (UL rating 1.6 Hp) with a thermal sensitive device to protect the motor against excessive current or heat. One (1) motor at each drive unit provides input power to the two wheel gearboxes and will operate at 1800 (4 pole) or 3600 (2 pole) RPM for standard and high speed respectively. The motors will be rated at 1100 in.-lb. (124 Nm) torque with a 1.3 service factor (continuous rating 1400 in.-lb./158 Nm) and 6800 in.-lb. (768 Nm) starting torque. Amp draw will be 1.1 (for minimum 0.6 Hp) and 1.8 (for minimum 1.2 Hp).
- B. Wheel Gearbox - The pivot will be equipped with heavy duty gearboxes with a rating of 30,000 in.-lbs. (3,389 Nm) continuous output torque for a minimum of 1,000 operating hours, and capable of withstanding 150,000 in.-lbs. (16,948 Nm) instantaneous output torque without failure.

- C. Gearbox Oil - The gearboxes as shipped will be filled with oil to its normal operating level.
- D. The drive shafts will be designed to withstand the maximum torque of the drive train with no permanent deformation and will be 7/8" (22.2mm) square steel. The drive shaft will be adequately shielded to meet OSHA safety standards or equivalent. Greaseless U-joints will connect the drive train components. The U-joints will incorporate flexible urethane inserts to absorb motor shock and reduce stress from motor starts and stops. Urethane inserts anchored between cast aluminum yokes will be attached to the drive shafts with four (4) 1/4" (6.4mm) cap screws.
- E. Tires will have an R-1 agricultural traction tread design. Traction lugs will be a minimum of 1" (25mm) deep and a minimum of 1" (25mm) wide. The rims will be hot dipped galvanized in accordance to ASTM 123 or equivalent with an average minimum thickness of 3.0 mils (76.2 microns).

Control Panel

- A. Digital Control panel will be provided with the pivot. The essential characteristics include:
1. Backlit key pad
 2. Start-stop
 3. Stop-in-slot
 4. Auto reverse positions
 5. Pivot position reporting
 6. Field sector controls to change water application for different crops or soils
 7. Direction control, forward or reverse
 8. Diagnostics for easy trouble shooting
 9. Indicator lights show current pivot operating conditions
 10. Bypass switch for engine run/start
 11. Voltage display
 12. Digital hour meter
 13. Pump start/stop
 14. End gun control

Optional

Advance Pro panel

- GPS Ready enabled for GPS Position
 - VRI Speed and Zone Control programming available
 - Programmable functions based on time, date and position
 - Precisely applies water, fertilizers and chemicals
 - Flowmeter option helps track your overall water usage
 - Backlit screen display
 - Advanced sensory and auxiliary functions
 - Advanced field diagnostics
- B. The main control panel will be constructed to meet or exceed the standards for a National Electrical Manufacturers Association (NEMA, USA or equivalent) Type 3R

enclosure. All operator controls will be protected from the elements by an outside door. The main panel will also be provided with latches to accommodate a padlock. 415 volt, three (3)-phase, four (4) wire, 50 cycle or 380 volt, three (3) phase, four (4) wire, 50 cycle electrical power will be furnished to the main control panel at the appropriate amperage to match the pivot requirements. The pivot panel will be rated for 30 amps or 45 amps depending upon the total pivot amperage requirements based upon the number of spans, drive motors and optional equipment. All wiring will be color coded for ease of identification.

- C. Each main pivot control panel will include functional capability for starting/stopping, speed/depth of water applied, start/override button, forward-stop-reverse, 415/120 volt control transformer, or 380/120 volt control transformer, volt meter, fuses and main disconnect switch. Diagnostic display will identify cause for pivot shut-down from control panel, towers or end tower. Each center pivot will be equipped to automatically restart itself in the event of a power interruption, up to three (3) seconds in duration, and to shut off if the pivot fails to move for a preselected time interval. Units will be grounded in accordance with the National Electric Code (NEC, USA or equivalent), Article 250, Section H.
- D. The main pivot panel can be equipped with auxiliary contacts which will interface with auxiliary equipment. However, safety circuit wire and main power cable are to be supplied and installed by approved dealer or contractor.

Electrical

- A. The pivot electrical circuits will operate from a 415volt, three (3) phase, four (4) wire power source (including ground) or 380 volt, three (3) phase, four (4) wire power source (including ground) with a step down transformer for seven (7) conductor 120 volt AC, single phase control and safety circuits.
- B. The main power cable from the pivot box to the tower boxes will be a minimum 12 gauge stranded copper wire. All exposed wiring will be bundled and jacketed with a black, U.V. stabilized polyethylene cable jacketing material.
- C. The individual tower boxes will be constructed to meet or exceed the standards for a National Electrical Manufacturers Association (NEMA) Type 3R enclosure of the USA or equivalent International/Indian Standards if available. All wiring will be color coded.
- D. The electrical alignment system will consist of snap action (micro) switches for tower alignment and safety shutdown. The motor control or alignment micro-switch will not cycle the center drive motors more than once each ten (10) seconds. The alignment components will be mounted in the tower panel on a galvanized metal base plate to ensure a solid mount.
- E. Integral, thermal sensitive automatic reset overload protection will be provided for all 480/380 volt motors. A suppresser circuit will be provided in each tower control box to reduce arcing of switch and contactor surfaces.
- F. The collector ring will be mounted on a stainless steel J Tube that extends through the rotating swivel. A three (3) cap screw top clamp and V seals will provide a water tight seal around the tube. A collector ring cover with gasket will protect the internal electrical components against the effects of the environment.

- G. The collector ring will use eleven (11) sliding contactors rated at 600 volts and either 35 amps or 45 amps to match the control panel. To assure positive contact of the brushes to the contact point, leaf springs will be used. Slip rings will be seamless and not more than 4" (101.6mm) in diameter.
- H. Electric irrigation equipment should be designed and manufactured according to the National Electrical Code (NEC) Article 675 or equivalent including:
 - Article 430 - motors, motor circuits and controllers
 - Article 250 - grounding
 - Article 240 – over current protection
 - Article 310 - conductors for general wiring
- I. Equipment should be also designed to meet the conditions outlined in ASABE Standard or equivalent. Other Standards cited are:
 - ASABE 318 - Safety for Agricultural Equipment
 - ASABE S350 - Safety Alert Symbol for Agricultural Equipment
 - ANSI 235-1 - Specification for Accident Prevention Signs
 - NEMA 151.1 - Controls and System
 - USA National Fire Protection Association (NFPA) No. 70 - National Electric Code
- J. All electrical components and wiring should meet or exceed the requirements of the National Electric Code, Article 675, and American Society of Agricultural and Biological Engineers Standard S362.2, "Wiring and Equipment for Electrically Driven or Controlled Irrigation Machine."
- K. All part circle operating pivots should be equipped with End of Field Auto Stop/Auto Reverse units with barriers to ensure that encroachment beyond field boundaries is prevented. These devices will be mounted on a distant tower unit.
- L. Options may be specified to provide additional capability for the pivot system.

Important Notes

- (i) Center Pivot Systems are proposed to be installed at Suratgarh, Sardargarh, Jetsar Distt- Sriganganagar, Rajasthan & Jawalgera Distt-Raichur (Karnataka).
- (ii) Firm authorized representative may visit the sites before submitting the offer, if so desired.
- (iii) The bidder should be responsible for complete supply of the material and its installation to the entire satisfaction of the Corporation.
- (iv) Preference will be given to the manufacturers or their authorized representative of the items and having the past experience in the similar projects in the country.
- (v) Bidder will be responsible to educate the farm staff and for efficient/effective operations of the systems atleast for one crop season.

- (vi) Quantity can be increased or decreased on site-to-site basis.
- (vii) Quantity and location of sites can be changed at the discretion of the Corporation.
- (viii) Rates should be quoted F.O.R. destination.
- (ix) If similar projects are executed in other Government Deptt. in the past, details of the same may also be indicated along with the copy of supply orders.
- (x) Any other items, if required may also be quoted separately.
- (xi) Conditional offers are likely to be rejected.
- (xii) If required physically working of the system operational can be seen before awarding the work. Supplier will ensure the operational training of our officers/staff for smooth operation of system. It is necessary that the manufacturer/his authorized dealer must arrange training of two engineers/representatives of NSC at their manufacturing plant. The manufacturer/his authorized dealer will also arrange on site training regarding operation of the Pivot systems.
- (xiii) Supplier will depute their representative for at least one crop season. He will also be responsible for after sales service, maintenance of system at least for five years after the expiry of warranty period on 'Paid Basis' for which rates may be given separately with material.
- (xiv) The terms & conditions agreed upon in English version of agreement shall be applicable on both the parties.

Note:

1. **Manufacturer / Principal Suppliers may also quote the rates directly.**
2. **Extra nozzle for the crops for providing the irrigation at the time of pollination may also be offered separately.**
3. **The tools required for repair and maintenance of system along with part catalogue may also be provided along with the Systems.**
4. **Firms should indicate make of all the items clearly.**

NATIONAL SEEDS CORPORATION LTD**Section-III****Annexure-B****(It is to be submitted to NSCL in the envelop marked 'PRICE BID')****Format for Price Bid****Price Bid for Center Pivot Irrigation System for 75.0 ha area (RAJASTHAN FARMS)**

S. No.	Description	Unit Rate (in Rs.)	Quantity	Amount (in Rs.)	Make
1	Center Pivot Irrigation System with total span length of 490 m and suitable for irrigation of 75.0 ha area, along with Digital Control Panel as per specification given in the specification sheet. Rate to be complete with installation, training and operating cost for one crop season.		1		
2	(a) Electric pump set complete in all respects and comprising of an electric pump set consisting of suitable TEFC electric motor coupled with a centrifugal pump of 1440 rpm for operation on 380/415 V, 3 phase, 50 c/s supply of capacity 90 L/s at 40 meter head. Pump set to be mounted of MS base frame.		1		
	(b) Electric control panel having fully automatic star-delta starter, main switch, single phase preventer, digital voltmeter and ammeter, internally wired in a MS box protected with rust proof paint.		1		
	(c) Suction pipe with ISI mark NRV and foot valve, complete with all fittings and accessories.		16 m		
	(d) Suitable 4 core electric cable with aluminium conductor for internal wiring in pump house from control panel to pumpset.		20 m		
	(e) Suitable 4 core electric cable with aluminium conductor for supply from genset to pumpset control panel.		30 m		
	(f) Complete earthing arrangement of panel board and pumpset with earth wire and earth plate.		LS		
	(g) Delivery pipe work of 200 mm consisting of S-type bend gate valve, reflux valve complete with suitable flanges for connecting pumpset with delivery pipe of 315 mm HDPE		LS		
3	315 mm OD HDPE pipe of 6 kg/cm ² as per BIS 14151 & ISI marked		700 m		
4	RCC foundation for electric pumpset		LS		
5	RCC foundation/Pivot pad for Center Pivot Irrigation System		LS		
6	Diesel Generating Set of 120 KVA, complete in all respect		1		
7	RCC foundation for Genset		LS		
8	Trench cutting and refilling for laying HDPE pipe underground at 90 cm below ground level.		700 m		
9	Armoured cable for power supply from genset to Pivot Control Panel.		700 m		
10	Any other additional item				
	Total				
11	VAT/Service Tax				
	Grand total				

Note: 1) Quantity can be varied depending up on the site conditions.**2) Make of all the items may be intimated.**

Price Bid for Center Pivot Irrigation System for 60.0 hact area (RAJASTHAN FARMS)

S. No.	Description	Unit Rate (in Rs.)	Quantity	Amount (in Rs.)	Make
1	Center Pivot Irrigation System with total span length of 438 m and suitable for irrigation of 60.0 ha area, along with Digital Control Panel as per specification given in the specification sheet. Rate to be complete with installation, training and operating cost for one crop season.		1		
2	(a) Electric pump set complete in all respects and comprising of an electric pump set consisting of suitable TEFC electric motor coupled with a centrifugal pump of 1440 rpm for operation on 380/415 V, 3 phase, 50 c/s supply of capacity 70 L/s at 40 meter head. Pump set to be mounted of MS base frame.		1		
	(b) Electric control panel having fully automatic star-delta starter, main switch, single phase preventer, digital voltmeter and ammeter, internally wired in a MS box protected with rust proof paint.		1		
	(c) Suction pipe with ISI mark NRV and foot valve, complete with all fittings and accessories.		16 m		
	(d) Suitable 4 core electric cable with aluminium conductor for internal wiring in pump house from control panel to pumpset.		20 m		
	(e) Suitable 4 core electric cable with aluminium conductor for supply from genset to pumpset control panel.		30 m		
	(f) Complete earthing arrangement of panel board and pumpset with earth wire and earth plate.		LS		
	(g) Delivery pipe work of 200 mm consisting of S-type bend gate valve, reflux valve complete with suitable flanges for connecting pumpset with delivery pipe of 250 mm HDPE		LS		
3	250 mm OD HDPE pipe of 6 kg/cm ² as per BIS 14151 & ISI marked		600 m		
4	RCC foundation for electric pumpset		LS		
5	RCC foundation/Pivot pad for Center Pivot Irrigation System		LS		
6	Diesel Generating Set of 100 KVA, complete in all respect		1		
7	RCC foundation for Genset		LS		
8	Trench cutting and refilling for laying HDPE pipe underground at 90 cm below ground level.		600 m		
9	Armoured cable for power supply from genset to Pivot Control Panel.		600 m		
10	Any other additional item				
	Total				
11	VAT/Service Tax				
	Grand total				

Note: 1) Quantity can be varied depending up on the site conditions.

2) Make of all the items may be intimated.

Price Bid for Center Pivot Irrigation System for 50.0 hact area (RAJASTHAN FARMS)

S. No.	Description	Unit Rate (in Rs.)	Quantity	Amount (in Rs.)	Make
1	Center Pivot Irrigation System with total span length of 400 m and suitable for irrigation of 50.0 ha area, along with Digital Control Panel as per specification given in the specification sheet. Rate to be complete with installation, training and operating cost for one crop season.		1		
2	(a) Electric pump set complete in all respects and comprising of an electric pump set consisting of suitable TEFC electric motor coupled with a centrifugal pump of 1440 rpm for operation on 380/415 V, 3 phase, 50 c/s supply of capacity 58 L/s at 40 meter head. Pump set to be mounted of MS base frame.		1		
	(b) Electric control panel having fully automatic star-delta starter, main switch, single phase preventer, digital voltmeter and ammeter, internally wired in a MS box protected with rust proof paint.		1		
	(c) Suction pipe with ISI mark NRV and foot valve, complete with all fittings and accessories.		16 m		
	(d) Suitable 4 core electric cable with aluminium conductor for internal wiring in pump house from control panel to pumpset.		20 m		
	(e) Suitable 4 core electric cable with aluminium conductor for supply from genset to pumpset control panel.		30 m		
	(f) Complete earthing arrangement of panel board and pumpset with earth wire and earth plate.		LS		
	(g) Delivery pipe work of 200 mm consisting of S-type bend gate valve, reflux valve complete with suitable flanges for connecting pumpset with delivery pipe of 250 mm HDPE		LS		
3	250 mm OD HDPE pipe of 6 kg/cm ² as per BIS 14151 & ISI marked		600 m		
4	RCC foundation for electric pumpset		LS		
5	RCC foundation/Pivot pad for Center Pivot Irrigation System		LS		
6	Diesel Generating Set of 82.5 KVA, complete in all respect		1		
7	RCC foundation for Genset		LS		
8	Trench cutting and refilling for laying HDPE pipe underground at 90 cm below ground level.		600 m		
9	Armoured cable for power supply from genset to Pivot Control Panel.		600 m		
10	Any other additional item				
	Total				
11	VAT/Service Tax				
	Grand total				

**Note: 1) Quantity can be varied depending up on the site conditions.
2) Make of all the items may be intimated.**

Price Bid for Center Pivot Irrigation System for 36.0 hact area (RAJASTHAN FARMS)

S. No.	Description	Unit Rate (in Rs.)	Quantity	Amount (in Rs.)	Make
1	Center Pivot Irrigation System with total span length of 340 m and suitable for irrigation of 36.0 ha area, along with Digital Control Panel as per specification given in the specification sheet. Rate to be complete with installation, training and operating cost for one crop season.		1		
2	(a) Electric pump set complete in all respects and comprising of an electric pump set consisting of suitable TEFC electric motor coupled with a centrifugal pump of 1440 rpm for operation on 380/415 V, 3 phase, 50 c/s supply of capacity 42 L/s at 40 meter head. Pump set to be mounted of MS base frame.		1		
	(b) Electric control panel having fully automatic star-delta starter, main switch, single phase preventer, digital voltmeter and ammeter, internally wired in a MS box protected with rust proof paint.		1		
	(c) Suction pipe with ISI mark NRV and foot valve, complete with all fittings and accessories.		16 m		
	(d) Suitable 4 core electric cable with aluminium conductor for internal wiring in pump house from control panel to pumpset.		20 m		
	(e) Suitable 4 core electric cable with aluminium conductor for supply from genset to pumpset control panel.		30 m		
	(f) Complete earthing arrangement of panel board and pumpset with earth wire and earth plate.		LS		
	(g) Delivery pipe work of 200 mm consisting of S-type bend gate valve, reflux valve complete with suitable flanges for connecting pumpset with delivery pipe of 200 mm HDPE		LS		
3	200 mm OD HDPE pipe of 6 kg/cm ² as per BIS 14151 & ISI marked		600 m		
4	RCC foundation for electric pumpset		LS		
5	RCC foundation/Pivot pad for Center Pivot Irrigation System		LS		
6	Diesel Generating Set of 62.5 KVA, complete in all respect		1		
7	RCC foundation for Genset		LS		
8	Trench cutting and refilling for laying HDPE pipe underground at 90 cm below ground level.		600 m		
9	Armoured cable for power supply from genset to Pivot Control Panel.		600 m		
10	Any other additional item				
	Total				
11	VAT/Service Tax				
	Grand total				

**Note: 1) Quantity can be varied depending up on the site conditions.
2) Make of all the items may be intimated.**

**Price Bid for Center Pivot Irrigation System for 50.0 ha area Black Cotton Soil
(RAICHUR FARM)**

S. No.	Description	Unit Rate (in Rs.)	Quantity	Amount (in Rs.)	Make
1	Center Pivot Irrigation System with total span length of 400 m and suitable for irrigation of 50.0 ha area with boom backs suitable for operation in black cotton soils, along with Digital Control Panel as per specification given in the specification sheet. Rate to be complete with installation, training and operating cost for one crop season.		1		
2	(a) Electric pump set complete in all respects and comprising of an electric pump set consisting of suitable TEFC electric motor coupled with a centrifugal pump of 1440 rpm for operation on 380/415 V, 3 phase, 50 c/s supply of capacity 58 L/s at 40 meter head. Pump set to be mounted of MS base frame.		1		
	(b) Electric control panel having fully automatic star-delta starter, main switch, single phase preventer, digital voltmeter and ammeter, internally wired in a MS box protected with rust proof paint.		1		
	(c) Suction pipe with ISI mark NRV and foot valve, complete with all fittings and accessories.		16 m		
	(d) Suitable 4 core electric cable with aluminium conductor for internal wiring in pump house from control panel to pump set.		20 m		
	(e) Suitable 4 core electric cable with aluminium conductor for supply from genset to pump set control panel.		30 m		
	(f) Complete earthing arrangement of panel board and pump set with earth wire and earth plate.		LS		
	(g) Delivery pipe work of 200 mm consisting of S-type bend gate valve, reflux valve complete with suitable flanges for connecting pump set with delivery pipe of 250 mm HDPE		LS		
3	250 mm OD HDPE pipe of 6 kg/cm ² as per BIS 14151 & ISI marked		600 m		
4	RCC foundation for electric pump set		LS		
5	RCC foundation/Pivot pad for Center Pivot Irrigation System		LS		
6	Diesel Generating Set of 82.5 KVA, complete in all respect		1		
7	RCC foundation for Genset		LS		
8	Trench cutting and refilling for laying HDPE pipe underground at 90 cm below ground level.		600 m		
9	Armoured cable for power supply from genset to Pivot Control Panel.		600 m		
10	Any other additional item				
	Total				
11	VAT/Service Tax				
	Grand total				

**Note: 1) Quantity can be varied depending up on the site conditions.
2) Make of all the items may be intimated.**

NATIONAL SEEDS CORPORATION LTD

SECTION-II

**THE ADDRESS OF THE DISPATCH DESTINATION FOR SUPPLY & INSTALLATION
OF CENTER PIVOT IRRIGATION SYSTEM IS AS UNDER**

S.No	Name of Farm	Area in Ha	
1	Central State Farm, Suratgarh (Rajasthan)	135 (75 +60)	
2	Central State Farm, Sardargarh (Rajasthan)	200 (75+75+50)	
3	Central State Farm, Jetsar (Rajasthan)	225 (75+75+75)	