



WATER MANAGEMENT TRAINING INSTITUTE, LAHORE

No. DTI/WMP/ Dev./ Machinery 2019-20/ 3399
Dated Lahore, the 19-12 /2019

LOCAL SHOPPING

REQUEST FOR QUOTATION (RFQ)

Project Title: **PUNJAB IRRIGATED-AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT (PIPIP)**

Source of Funding: **The WORLD BANK**

The Directorate, Water Management Training Institute intends to purchase/ procure different farm machinery for its Water Management Research Farm (WMRF), Renala Khurd, Okara. It is requested to furnish your offer/quotation as per attached specifications (Annexure-I) alongwith details/ supporting documents by is 07-01-2020 till 1100 hrs. The detail of the machinery is as under:

Sr. No.	Item	Nos.
1.	Vegetable bed Shaper	1
2.	Potato Planter	1
3.	Potato Digger	1
4.	Maize Planter	1
5.	Maize Spheller	1
6.	Boom Sprayer	1
7.	Zero Tillage Seed Drill	1
8.	Mini Power Tiller	1
9.	Turbo Seeder Crop Residue Management	1

SPECIAL INSTRUCTIONS

1. Contract shall be awarded to the firm offering technical responsive bid and financial lowest price.
2. The bidder shall submit two copies of bids and clearly mention as "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the "ORIGINAL" shall prevail. Your quotation should be sealed in an envelope and addressed and delivered to the following address:

OFFICE ADDRESS:

**Directorate Water Management Training Institute, Thokar Niaz Baig,
Lahore**
Telephone 042-99233577
E-mail wmtilhr@gmail.com
(Note: Quotations sent through E-mail will not be entertained)

3. Your quotation in duplicate and in **English** language, should be accompanied by adequate technical documentation and catalogue(s) and other printed material or pertinent information (in **English** language) for the item quoted above, including names and addresses of firms providing after-sales service facilities in **Pakistan**
4. The deadline for receipt of your quotation (s) by the hiring agency at the address indicated in Paragraph 1 is 07-01-2020 till 1100 hrs.
5. **Your quotation(s) should be submitted as per following instructions:**
 - (i) **PRICES:** The prices should be quoted for supply/ delivery of farm machinery to the **Director Water Management Training Institute, Thokar Niaz Baig, Lahore at Water Management Research Farm, Renala Khurd, Okara** . Prices shall be quoted in Pak rupees inclusive of all applicable taxes and freight charges.
 - (ii) **EVALUATION OF QUOTATIONS:** Only offers determined to be substantially responsive to the technical specifications will be evaluated by comparison of their prices. In evaluating the quotations, the Purchaser will determine the evaluated price for each proposal by adjusting the price quotation to correct any arithmetical errors as follows:
 - (a) Where there is a discrepancy between amounts in figures and in words, the amount in words will govern;
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern;
 - (c) If a Supplier refuses to accept the correction, his quotation will be rejected.

In addition to the quoted price, the evaluated price shall include Value Added Tax (VAT) in **Pakistan** (in case of any exemption the firm will provide documentary evidence)

- (iii) **AWARD OF WORK:** The award will be made to the bidder offering the lowest evaluated price and that meets the required standards of technical and financial capabilities. The successful bidder will sign a Contract.
 - (iv) **VALIDITY OF THE OFFER:** Your quotation(s) should be valid for a period of forty five (45) days from the deadline for receipt of quotation(s) indicated in Paragraph 5 of this Request for Quotation.
6. The delivery of the farm machinery will be made at Water Management Research Farm, Renala Khurd, Okara.
 7. Further information can be obtained from hiring agency as described in Serial No. 2.
 8. The Purchaser intends to apply for funds from the World Bank for eligible payments under the Purchase Order resulting from this RFQ.
 9. Under World Bank Anticorruption Policy, bidders shall observe the highest standard of ethics during the procurement and execution of such contracts. World Bank will reject a proposal for award, and will impose sanctions on parties involved, if it determines that the bidder recommended for award or any other party, has engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, the Contract.
 10. Incomplete offer/offer received after the notified date & time/offer not fulfilling terms & conditions of the tender will straight way be ignored/rejected/not entertained.
 11. The firms are required to quote one offer and no optional bid will be accepted.
 12. Manufacturer's standards warranty shall be applicable-valid manufacture warranty/guarantee certificate should be supplied alongwith the stock.
 13. The purchaser reserves the right to purchase full or increase/decrease quantity upto 15% or ignore/scrapped/cancel the tender with assigning reasons to the bidders.
 14. The deduction of all relevant taxes would be applicable.
 15. The payment will be made to the Supplier out of Assignment Account of the project through a cross cheque being maintained in National Bank of Pakistan, Main Branch, Lahore on receipt of bill/invoice from the firm as the contract agreement.
 16. Inspection of stock/store will be carried out by the committee at firm's premises.
 17. The selected firm will be required to deliver required stock/items within **30 days** after signing the contract.

18. The supplier shall be liable for liquidated damages @ 0.5% per week up to ten (10) percent or part thereof, if he fails to deliver the equipment within delivery period.
19. The supplier is required to provide stamp duty @ 0.25% on total contract value before signing the Contract/Agreement.



DIRECTOR (WMTI)

TECHNICAL SPECIFICATIONS OF POTATO PLANTER**A. GENERAL**

1. Make	Local made
2. Type	Tractor rear mounted
3. Application	Ridging & planting of potato
4. Tractor Power	60 hp or above
5. No. of Rows	02
6. Ridger Tine	03 Nos.
7. Ridge spacing	762 mm adjustable \pm 10 mm
8. Power Transmission	Through ground wheel, chain, sprockets and shaft
9. Seed box capacity	300-350 kg
10. Seed rate	Adjustable
11. Conveyor	02 Nos.
12. Fungicide Applicator	Provided, through electric pump and nozzles

B. OVERALL DIMENTIONS

1. Length	1800 mm \pm 10 mm
2. Width	1950 mm \pm 10 mm
3. Height	1900 mm \pm 10 mm

C. MATERIAL SPECIFICATIONS

4. Frame	100 x 100 x 5 mm M.S. channel box 02 Nos. 100 x 45 x 5 mm M.S. channel 680 mm long & 02 Nos. 225 mm long 02 Nos. 62 x 62 x 6 mm M.S. angle for supports
5. Mast (A-frame)	M.S. flat 50 x 6 mm, M.S. sheet 10 mm, hitch M.S. plate 18 mm & M.S. round 38 mm

D. Ridger Tine

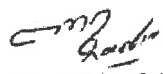
6. Tine	75 x 25 mm M.S. plate, 585 mm long
7. Ridger	Formed M.S. sheet 8 mm with M.S. casted share
8. Tine clamp	M.S. flat 12 mm with M.S. sheet 6 mm for tine box
9. Ground wheel	02 Nos. 12 gauge M.S. sheet with 125x6 mm, M.S. flat, 600 mm dia. with 38 x 38 x 5 mm M.S. angle pegs
10. Seed box	16 gauge M.S. formed sheet

- | | |
|------------------------|---|
| 11. Conveyor box | 12 & 16 gauge M.S. sheet, 150 mm dia. M.S. roller (upper) and 90 mm dia. cast iron roller (lower) |
| 12. Conveyor belt | 02 Nos. 200 mm wide, 6 mm thick rubber belt with 90 Nos. M.S. or plastic buckets |
| 13. Seed furrow opener | 40 x 40 x 5 mm M.S. box with 5 mm M.S. sheet |
| 14. Power transmission | Drive sprockets 26, 28, 30 & 32 teeth, driven sprockets 16 teeth with 6 # chain, 45 mm dia. drive shaft & 35 mm dia. driven shaft |
| 15. Bearings | 04 Nos. 6006 (lower side of conveyor)
04 Nos. 6205 (upper side of conveyor)
02 Nos. 6308 for ground wheel |
| 16. Tank | Fiber glass, 80-100 L capacity with frame fitting |
| 17. Pump | Electric driven 12 V, DC, discharge 5-10 L/min, pressure 80-120 psi with flow control valve and 02 Nos., nozzles |

E. MISCELLANEOUS

- | | |
|--------------------|--|
| 18. Paint | Double coat with primer after surface finish |
| 19. Nuts & Bolts | To be tightened with spring washers |
| 20. Bearings (New) | SKF, NTN, NSK or equivalent |
| 21. Modifications | To be carried out free of cost, if required |
| 22. Warranty | Free: 1 year for parts and service |

Director of Agriculture Ext. (Inputs Management), Lahore.
The specifications were approved by CSSC in its meeting held on 07.12.2017.


Senior Technical Officer:
Purchase Cell Agriculture
Department Lahore.

TECHNICAL SPECIFICATIONS OF POTATO DIGGER/SHAKER (CONVEYOR TYPE)

A) GENERAL

- | | | |
|----|---------------|--|
| 1. | Make | Local made except where different origins are specifically indicated |
| 2. | Type | Tractor rear mounted, conveyor type |
| 3. | Application | For digging out and shaking potatoes |
| 4. | Tractor Power | 50 H.P. or above |
| 5. | Rows | 02 Nos. |
| 6. | UJ Shaft | 01 No. provided |

B) OVERLOADED DIMENTIONS

- | | | |
|----|--------|---------------------|
| 7. | Length | 2700 mm \pm 10 mm |
| 8. | Width | 1700 mm \pm 10 mm |
| 9. | Height | 1300 mm \pm 10 mm |

C) MATERIAL SPECIFICATIONS.

- | | | |
|-----|----------------------|---|
| 11. | Main Frame | M.S. pipe 88 mm dia., 8 mm wall thickness

02 Nos., M.S. box 100x50x6 mm, M.S sheet 4 mm, M.S. flat 50x6 mm, M.S plate 12 and 10 mm 02 Nos., M.S. pipe 60 mm dia. |
| 12. | Mast (A Hitch) | M.S. sheet 12 mm & welded 4 mm M.S. sheet corner for supports of 22 mm dia. M.S. round, hitch 12 mm M.S plate |
| 13. | Depth Control System | M.S. box 42x42x4 mm (male), 55 x 55 x 4.5 mm (female) with 18 mm dia. M.S. rod for height adjustment and with supports of 02 Nos., M.S. plats 175 x 100 x 6 mm welded and bolted with main frame pipe |
| 14. | Press Wheel | 02 Nos., made from 2 mm M.S sheet attached with M.S. Pipe 60 mm dia. 3 mm wall thickness, with axle ends for bearing |
| 15. | Cutting Disc | 02 Nos., 550 mm dia., 5 mm thick with M.S. sheet hardened with bearing hub having width and depth adjustment |

16.	Cutting Blades	10 Nos., 350 x 70 x 10 mm leaf springs and 01 No. M.S sheet 390 x 255 x 6 mm at Centre, bolted with M.S square rod 30x30 mm dia. welded with 38 x 38 mm M.S square rod and bolted with main frame
17.	Wheel	400 mm dia. 100 mm wide made from M.S formed sheet 2.0 mm pressed with hub.
18.	Wheel shaft/axle	Made from 45 x 45 x 4.5 mm M.S box with axle at ends
19.	Conveyor (1 st)	2250 mm long and 1340 mm wide \pm 10 mm each 01 No., M.S. pipe 60 mm dia. with wall thickness 6 mm with M.S. shaft 38 mm and 30 mm over lapped with conveyor of flat belt 70 mm wide riveted with carbon steel rod 1112 mm dia. as space of 35 mm in two sections having 04 Nos. sprockets at end 200 mm dia. with face width 40 mm at end 04 Nos. sprockets cam type at center 04 Nos. sprockets 120 mm dia. with face width 40 mm at lower side for conveyor support
20.	Conveyor (2 nd)	1950 mm long and 1340 mm wide \pm 10 mm M.S. pipe 60 mm dia. with wall thickness 4.5 mm with M.S. shaft 30 mm dia. with same size sprockets over lapping with flat belt and spring steel rods riveted with it
21.	Belt Sheet Covers	02 Nos. 14 gauges M.S sheet
22.	Shafts	Gear box drive shafts 40 mm (min.) 1 st Conveyor shaft 40 mm (min.) 1 st Conveyor support shafts 40 mm (02 Nos.) (min.) 2 nd Conveyor shafts (min.) 35 mm & 30 mm
23.	Pulleys	Gear Box Drive 175 mm dia. 2-groove B-type (02 Nos.) 1 st conveyor drive pulley 175 mm single groove B-type combined with 175 mm single groove B-type (02 Nos.)
24.	UJ Shaft	Telescopic 800-1000 mm steel casted yoke and M.S pipe with universal joint
25.	V-Belt	04 Nos. 8688 B-type 02 Nos. 9698 B-type
26.	Bearings	Depth control/press wheel 02 Nos. 6308 with bracket Cutting Wheels 04 Nos. 6307 with bracket Gear box drive shaft 02 Nos. 6308 with bracket

1st conveyor front pipe 02 Nos. 6306 with bracket

1st conveyor drive shaft 02 Nos. 6307 with bracket

Intermediate shaft 02 Nos. 6206 with bracket

2nd conveyor:

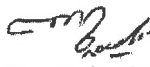
Front pipe	02 Nos. 6307
Drive shaft	02 Nos. 6306
Central shaft	02 Nos. 6206
Wheels	04 Nos. 6305
Gear Box	04 Nos. 6208

D) MISCELLANEOUS

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|--------------------|--|
| 27. Paint | Double coat with primer after surface finish |
| 28. Nuts & Bolts | To be tightened with spring washers |
| 29. Modifications | To be carried out free of cost, if required |
| 30. Bearings (New) | SKF, NTN, NSK or equivalent. |
| 31. Warranty | Free: 1 year for parts and service |

Director of Agriculture Ext. (Inputs Management), Lahore.

The specifications were approved by CSSC in its meeting held on 07.12.2017.

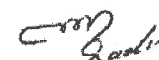

Senior Technical Officer
Purchase Cell Agriculture
Department Lahore.

TECHNICAL SPECIFICATIONS OF MAIZE PLANTER WITH FERTILIZER UNIT (PNEUMATIC)

General	
Type	Tractor mounted
Application	Sowing of seed with fertilizer
Power	60 hp or above
Number of rows	04 Nos.
Row spacing	250-900 mm (Adjustable)
Seed spacing	80-500 mm (Adjustable)
Seed box	04 Nos.
Fertilizer box	02 Nos.
Seed hopper capacity (Min.)	08 kg / box
Fertilizer hopper capacity (Min.)	80 kg/box
Seed placing mechanism	Pneumatic
Overall dimensions	
Length	1900 mm ± 10 mm
Width	2700 mm ± 10 mm
Height	1600 mm ± 10 mm
Material Specifications	
Main Frame	02 Nos. 75x75x6mm M.S. box
Mast (A-frame)	60x12 mm M.S. flat, 50x12mm M.S.flat
Hitch	65x65x6 mm M.S. box
Bed-shaper plate	2760x860x4 mm M.S. formed sheet
Furrow opener with wings	M.S. 12.5 mm of tip and M.S. plate 10mm for furrow with supports 30x30x4 mm M.S. angle and 4 mm M.S. sheet for wings with supports of M.S. angle 30x30x4 mm
Seed box supports frame	04 Nos. 37x7x4 mm M.S box
Seed drive-shafts supports	02 Nos. M.S. channel 65x30x5 mm on inner side, 02 Nos. 75x75x5 mm at side ends.
Fert. Box supports frame	02 Nos. 37x37x4 mm M.S. box
Fert. Box	02 Nos. of M.S. sheet 18 gauge (80 kg capacity)
Fert. Distributor	04 Nos.
Drive wheels	02 Nos. rims with tyre size 6.00-12 with lugs, 6 ply rating/wheel 600 mm dia. 110 mm wide, made from 14-gauge M.S. sheet with lugs
Blower frame	02 Nos. M.S. angle 45x45x4 mm with supports of M.S. sheet 3mm
Blower	01 No. (blower speed 4500rpm, 530 mm dia., width 20mm driven from PTO through flat belt, blower shaft 35 mm dia. and 195 mm length with distributor and 04 Nos. rubber pipes 36 mm inner side.
Seed box	04 Nos. fiber glass (8 kg capacity each box)
Seed plates	01 sets (04 Nos. for maize crop)
Seed drive-shaft	22 mm M.S. round
Row marker	02 Nos. 35x35x6 mm M.S. box hoe type
Miscellaneous	
Paint	Double coating with primer after surface finish
Nuts and bolts	To be tightened with spring washers
Modifications	To be carried out free of cost if required
Literature	Instruction/operating manual in English
Origin	Local made
Warranty	Free: 1 year including parts and services

DFRI, Sargodha

The Specifications were approved by CSSC in its meeting held on 29.09.2017

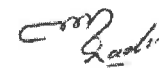

 Director General
 Punjab Agricultural
 University, Ludhiana

TECHNICAL SPECIFICATIONS OF MAIZE PLANTER WITH FERTILIZER UNIT (PNEUMATIC)

General	
Type	Tractor mounted
Application	Sowing of seed with fertilizer
Power	60 hp or above
Number of rows	04 Nos.
Row spacing	250-900 mm (Adjustable)
Seed spacing	80-500 mm (Adjustable)
Seed box	04 Nos.
Fertilizer box	02 Nos.
Seed hopper capacity (Min.)	08 kg / box
Fertilizer hopper capacity (Min.)	80 kg/box
Seed placing mechanism	Pneumatic
Overall dimensions	
Length	1900 mm ± 10 mm
Width	2700 mm ± 10 mm
Height	1600 mm ± 10 mm
Material Specifications	
Main Frame	02 Nos. 75x75x6mm M.S. box
Mast (A-frame)	60x12 mm M.S. flat, 50x12mm M.S.flat
Hitch	65x65x6 mm M.S. box
Bed-shaper plate	2760x860x4 mm M.S. formed sheet
Furrow opener with wings	M.S. 12.5 mm of tip and M.S. plate 10mm for furrow with supports 30x30x4 mm M.S. angle and 4 mm M.S. sheet for wings with supports of M.S. angle 30x30x4 mm
Seed box supports frame	04 Nos. 37x7x4 mm M.S box
Seed drive-shafts supports	02 Nos. M.S. channel 65x30x5 mm on inner side, 02 Nos. 75x75x5 mm at side ends.
Fert. Box supports frame	02 Nos. 37x37x4 mm M.S. box
Fert. Box	02 Nos. of M.S. sheet 18 gauge (80 kg capacity)
Fert. Distributor	04 Nos.
Drive wheels	02 Nos. rims with tyre size 6.00-12 with lugs, 6 ply rating/wheel 600 mm dia. 110 mm wide, made from 14-gauge M.S. sheet with lugs
Blower frame	02 Nos. M.S. angle 45x45x4 mm with supports of M.S. sheet 3mm
Blower	01 No. (blower speed 4500rpm, 530 mm dia., width 20mm driven from PTO through flat belt, blower shaft 35 mm dia. and 195 mm length with distributor and 04 Nos. rubber pipes 36 mm inner side.
Seed box	04 Nos. fiber glass (8 kg capacity each box)
Seed plates	01 sets (04 Nos. for maize crop)
Seed drive-shaft	22 mm M.S. round
Row marker	02 Nos. 35x35x6 mm M.S. box hoe type
Miscellaneous	
Paint	Double coating with primer after surface finish
Nuts and bolts	To be tightened with spring washers
Modifications	To be carried out free of cost if required
Literature	Instruction/operating manual in English
Origin	Local made
Warranty	Free: 1 year including parts and services

DFRI, Sargodha

The Specifications were approved by CSSC in its meeting held on 29.09.2017


 Director, DFRI
 Sargodha

**REVISED TECHNICAL SPECIFICATIONS OF TRACTOR MOUNTED BOOM
SPRAYER**

GENERAL

1. Type	Tractor rear mounted
2. Linkage category	I & II
3. Spray tank capacity (L)	500 ± 5 %
4. Boom width	13.7 m, 5 sections with 03 supply lines, non-sagging with brake back mechanism
5. Boom height	Adjustable, through screw rod 30 mm dia.
6. Nozzle tips (imported)	02 sets hollow cone, 0.8 L/min @ 3 bars 01 set flat fan, 0.8 L/min @ 2 bars
7. Nozzle spacing	500 mm, adjustable according to nozzle angle with 40% overlapping
8. Pump	Plunger, PTO driven, capacity (90-120 L/min.) @ pressure 40 bar
9. Pressure gauge	0-25 kg/cm glycerin filled
10. Pressure control valve	Adjustable with 03 sections independent delivery and Tank return valve with spring loaded pressure/flow regulator
11. UJ shaft	01 No.
12. Agitation	through return overflow

OVERALL DIMENSIONS (min.)

13. Length	1200 mm ± 20 mm
14. Width (folded)	3300 mm ± 20 mm
15. Height	1700 mm ± 20 mm
16. Approx. weight	275 kg ± 5 kg


MATERIAL SPECIFICATIONS

17. Frame	65x50x4 mm M.S. channel box and M.S. angle 50x9 mm with 62x12 mm M.S. plate hitch
18. Boom sliding (frame)	C-Shaped, 75x60 mm M.S. formed sheet 4 mm or Z-shaped made of M.S. sheet 6 mm
19. Boom frame spacer	125x65x5 mm M.S. channel
20. Tank	Synthetic (fiber glass with graduated scale)
Boom Sections	Spring loaded (back lash mechanism)
i. Central	01 No. M.S. box 50x38x4 mm, and 02 Nos. supports of same size
ii. Lateral	02 Nos. M.S. box 30x30 mm, 12 gauge with supports of same size
iii. External	02 Nos. M.S. box 30x30 mm, 14 gauge with supports of 25x12 mm M.S. rect. pipe 16 gauge M.S. pipe, 14 gauge
21. Accessories	Mask, Gloves, rubber washers and Tool kit (screw driver, plicer, and screw wrench 250mm)

MISCELLANEOUS

22. Paint	Double coat with primer after surface finish
23. Nuts and bolts	To be tightened with spring washers
24. Modifications	To be carried out free of cost, if required
25. Warranty	Free: 1 year for parts and service

Director General Agriculture (Ext & AR), Punjab, Lahore
The Specifications were approved by CSSC in its meeting held on 16.02.2018


Senior Technical Officer
Purchase and Agricultural
Department Lahore.

TECHNICAL SPECIFICATIONS OF ZERO TILLAGE D

A. GENERAL

1. Type	Tractor rear mounted
2. Application	For sowing of seed with fertilizer
3. Tractor power required	50 hp or above
4. Linkage category	II
5. Ground wheel	01 No. pneumatic, size 6.00-12 with lugs
6. Chains	60 #
7. Seed & fert. Metering	Fluted wheel
8. Calibration	Through levers
9. Nos. of rows	13
10. Row spacing	150 -225 mm adjustable
11. Seed & fertilizer box capacity	100 kg each
12. Furrow opener	Inverted T-type

B. OVERALL DIMENSIONS

13. Length with wheels	1700 mm \pm 10 mm
14. Width	2180 mm \pm 10 mm
15. Height	1100 mm \pm 10 mm

C. MATERIAL SPECIFICATIONS

16. Frame	M.S. box 75x75x4.5 mm
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-: 2 :-

19. Hitch support	M.S. sheet 62x12 mm
20. Mast A-frame	M.S. flat 60x12 mm
21. Mast support	M.S. 50x50x4.5 mm
22. Tine	M.S forged flat 70x15 mm
23. Tine clamp	M.S. plate 9 mm
24. Furrow opener	Cast steel with 6 mm tip hardened to HRC 40-45
D. <u>Seed & Fert. Assembly</u>	
25. Box	M.S. sheet 18 gauge with sloping bottom and agit
26. Box lid	M.S. sheet 18 gauge with handles
27. Mounting	M.S. plate 4 mm
28. Agitator	M.S. round 14-15 mm cold drawn with pegs
29. Metering units body	M.S. sheet 1.5 mm
30. Fluted roller	Brass with nylon stator and nylon bush
31. Drive shaft	M.S. round 18 mm cold drawn
32. Seed pipe	Transparent, flexible, plastic with clamps
E. <u>Power Transmission Assembly</u>	
33. Clamp	M.S. plate 12 mm
34. Arm	M.S. box 50x50x4.5 mm
35. Pivot	M.S. pipe 78 mm outer dia. 3 mm wall with bra
36. Sprocket	M.S. plate 8 mm
37. Chain cover	M.S. sheet 18-19 gauge
38. Counter shaft	M.S. round 30 mm cold drawn
39. Wheel axle	M.S. round 30 mm cold drawn

-: 3 :-

2. Counter shaft	01 No. P206
3. Fertilizer drive shaft	02 Nos. 7207
4. Seed drive shaft	02 Nos. 7207
5. Chain tensioner	02 Nos. 6202

F. MISCELLANEOUS

43. Paint	Double coat with primer after surface finish
44. Nuts and bolts	To be tightened with spring washers
45. Modifications	To be carried out at the cost of farmer without changing the basic specification, if required
46. Bearing (new)	NTN, SKF, NSK or equivalent
47. Warranty	Free: 1 year for parts and service

Director of Agriculture Ext. (Inputs Management), Lahore.

The specifications were approved by CSSC in its meeting held on 07.12.2017.


Senior Techni
Purchase Cell
Department L

TECHNICAL SPECIFICATIONS OF HAPPY SEEDER

General

Application	For Sowing of wheat crop in Rice stubble field
Type	Rear mounted
Linkage category	I & II
Number of Rows	10
Row spacing	200-225 mm adjustable
Seed and Ferti. Box	Placed above the main frame and fixed with r plates
Seed box capacity	60kg
Fertilizer box capacity	60kg
Universal shaft	Improved quality
Rotor Knives/Cutters	M.S
Gear box ratio	1:3

OVERALL DIMENSIONS

Overall width:	2387mm. \pm 25 mm
Working width:	2235mm. \pm 25 mm
Front to back length:	1525mm. \pm 25 mm
Height:	1400mm. \pm 25 mm
Weight (approx.):	660kg. \pm 10 kg

MATERIAL SPECIFICATIONS

Tines holding frame:	Ms box 63x63x6mm welded with M.S plate and bolted with side sheets
Side plates:	6mm M.S plate on both sides
Rotor shield sheet:	14Gauge welded with side plates, angle iron side and M.S strip at back side
Rotor shaft (Drum):	M.S. pipe, 2132 mm + 50 mm long, o.d. 140 with all <i>thickness</i> 6mm
Cutter blades/flails:	20pairs y type (40 blades) 2-knives welded and pivoted with high tensile bolt 12mm width on rotor in 4 rows at alternate intervals.
Knife size:	150x50x6mm (spring steel) sharp edge on both
Tines:	10Nos. semi circular in shapes of M.S Plate width, 44 mm at centre and 33 mm at bottom inverted -T25mm thick
Tine clamps:	20 Nos. of 10mm U shaped spring steel clamps and washers

Power Transmission:	Light weight gear box hinged with both sides with air vent nipple and Japanese bearings at both shafts (drive and drive through sliding collar welded with Transmission shaft of 60 mm dia of M.S sheet 18 SWG 2335mm long trapezoidal divided equal in two box halves, box size Height 250mm & Length.
Seed-cum Fertilizer Box:	M.S sheet 18 gauge with reinforced at top type locks
Boxes lids	With M.S side plates of machine on both sides Seed and fertilizer plastic tubes, transp. with clamp on both sides
Boxes mounting:	
Delivery tubes	
Seed and ferti. Metering device	
Fluted rollers	Nylon stator and brush
Roller drive shaft	M.S round 22 mm
Seed rate	Adjustable through calibrated slide level
Spur gears	02 Nos. fitted with frame with square easy sliding on seed and fertilizer shaft
Bearings:	Scaled with grease filling facility
Rotor shaft bearing	02 No. UCF-210
Gear box bearing	04 No. or more accordingly
Seed and Fertilizer Shaft bearings:	02 nos. of UCL 205
<u>MISCELLANEOUS</u>	
Paint	Double coat with primer after surface prep
Nuts and bolts	To be tightened with spring washers
Bearing	SKF, NSK-NTN, or equivalent
Origin	Local made
Warranty	Free: 1 year for parts and service
	Extended: 5 years for parts supply

Director, Wheat Research Institute, Faisalabad.

The specifications were approved by CSSC in its meeting held on 16.02.21