**Section II: Schedule of Requirements**

**A. Summary of Requirements**

UNOPS requirements are comprised of John Deere agricultural tractor and MoldBoard Plough/reversible. The agricultural tractor and MoldBoard Plough/reversibleare to be supplied and delivered to Ethiopian Institute of Agricultural Research (EIAR), Ethiopia.  Tools, parts and accessories should be to be supplied with the equipment. **Manufacturer recommended standard accessories, field kits, tools and spare parts shall be listed and quoted separately. Please provide the recommendation of the manufacturer**. Moreover, the equipment requires additional services like installation and warranty.

The client specifically requested John Deere tractors and implements. The client has John Deere tractors and implements in their fleet and they require the selected equipment for standardization purposes

**Technical specifications for Goods and Comparative Data Table**

The following are the minimum requirements for the equipment

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No** | **UNOPS minimum technical requirements** |  | Is Bid compliant? Bidder to complete |
|  |  |  | **This column must be completed fully by bidders** |
| 1 | **John Deere Tractor** | **16** |  |
| 1 | 4WD type, heavy duty tractor to be used for agricultural purpose and suitably out fit in the agricultural production area of Ethiopia, where the climate varies from 0 0C – 50 0C and work site from sea level to an altitude of 2500 meters above sea level |  | Yes  No |
| 2 | Emission level: Tier II |  | Yes  No |
|  | **Performance** |  |  |
| 3 | Double differential diesel engine wheel tractor |  | Yes  No |
| 4 | Maximum engine torque @ 1500 rpm 490-608NM or above |  | Yes  No |
| 5 | Rated engine power 135--145 HP |  | Yes  No |
| 6 | Maximum PTO power @ rated engine speed 85 KW or above |  | Yes  No |
|  | **Engine** |  |  |
| 7 | Number of cylinders -4-**6**, Four stroke cycles, independent cylinder head & wet type liner |  | Yes  No |
| 8 | Fuel Injection -Direct injection diesel engine, vertical in – line |  | Yes  No |
| 9 | Cooling system – water cooled tropicalized radiator should be fitted |  | Yes  No |
| 10 | Aspiration - turbocharged |  | Yes  No |
| 11 | Air cleaner- Dual, dry element type air cleaner with pre-cleaner |  | Yes  No |
| 12 | Dual high capacity fuel filter |  | Yes  No |
| 13 | Vertical exhaust pipe with muffler |  | Yes  No |
|  | **Electrical System** |  |  |
| 14 | Battery capacity- 12V 150 AH or manufacturer standard or cold Cranking Amperes (CCA) not less than 960 CCA |  | Yes  No |
| 15 | Charging: Alternator- 12Volt |  | Yes  No |
| 16 | Regulator- electronic, integral |  | Yes  No |
| 17 | Starter: output-> 3 5KW(4 8HP) or standard by the manufacturer |  | Yes  No |
| 18 | Operation- Solenoid |  | Yes  No |
| 19 | Lights- Head lights, side lights, brake lights, direction indicators, rear work lamp |  | Yes  No |
| 20 | Other- Horn, trailer socket |  | Yes  No |
| 21 | **Instrument** |  | Yes  No |
| 22 | Gauges:- Coolant temperature, engine oil level, engine RPM, engine hour meter, fuel gauge, front wheel drive and differential lock indicator should be fitted |  | Yes  No |
| 23 | Warning Lights:- Battery charge, engine oil pressure, brake oil level, parking brake flashing, fuel sediment restriction & dry air cleaner restriction should be fitted |  | Yes  No |
|  | **Clutch** |  |  |
| 24 | Type: Manufacturer standard |  | Yes  No |
| 25 | Hydrostatic control and automatic play adjustment |  | Yes  No |
| 26 | Clutch lining material- cerametallic |  | Yes  No |
| 27 | **Transmission** |  |  |
| 28 | 16 forward and 8 reverse speeds or better |  | Yes  No |
| 29 | Shifting mechanism synchromesh and manual change lever |  | Yes  No |
| 30 | Gear shifting lever at the right hand side of the operator/ side shift type |  | Yes  No |
| 31 | Max Road speed not less than 40 km/hrs |  | Yes  No |
|  | **Power Take off(PTO)** |  |  |
| 32 | Independent and multi-speed type |  | Yes  No |
| 33 | Multiple discs, oil bath clutch with hydraulic servo control |  | Yes  No |
| 34 | Hydraulic and hand lever actuation |  | Yes  No |
| 35 | PTO speed necessarily should be with 540/1000 rpm |  | Yes  No |
| 36 | Number of splines should be 6 (six), standard type |  | Yes  No |
|  | **Rear Axle** |  |  |
| 37 | Shall have a crown wheel & pinion with bevel gear type |  | Yes  No |
| 38 | Differential lock: mechanical, or better |  | Yes  No |
|  | **Brake** |  |  |
| 39 | Service brakes: oil bath disc type with hydrostatic/ hydraulically actuated |  | Yes  No |
| 40 | Parking brakes: hand lever operated and mechanical independent control |  | Yes  No |
| 41 | Trailed hydraulic and/or pneumatic system |  | Yes  No |
|  | **Wheel & Tyre** |  |  |
| 42 | Radial type |  | Yes  No |
| 43 | Should be of the available and interchangeable type |  |  |
| 44 | Front & Rear tire should be as a manufacturer standard |  | Yes  No |
|  | **Hydraulic system** |  |  |
| 45 | *Linkage & Hydraulics:* |  | Yes  No |
| 46 | Sensing type: Electronic draft control, position/float control and response control and intermix |  | Yes  No |
| 47 | Maximum work pressure ( please state) |  | Yes  No |
| 48 | Lifting capacity at link ends >6000kg ( with 2 assister rams) |  | Yes  No |
| 49 | Gear type hydraulic pump |  | Yes  No |
| 50 | Three point Linkage: - Cat II Fixed or Cat II/III Quick Attach |  | Yes  No |
| 51 | Link arms & top link - Manufacturer standard, |  | Yes  No |
| 52 | fixed ball end, with telescopic stabilizers |  | Yes  No |
| 53 | Draw bar and pick up hitches - Manufacturer standard  (preferably Heavy duty swinging draw bar and height adjustable trailer and pick – up hitches draw bar and pick – up hitches  ) |  | Yes  No |
| 54 | *Auxiliary Hydraulics:* |  | Yes  No |
| 55 | Maximum oil flow 110 - 120lit/min |  | Yes  No |
| 56 | It should consist of minimum 4 spool valves with control spindle for selection of a single/ double acting, with spring – to- neutral facility |  | Yes  No |
|  | **Steering** |  | Yes  No |
| 57 | Hydrostatic with adjustable column type |  | Yes  No |
| 58 | Tilt adjustable steering wheel |  | Yes  No |
| 59 | power steering |  |  |
| 60 | Independent circuit |  | Yes  No |
|  | **4WD Front Axle** |  |  |
| 61 | Axle type- center drive/ central differential & direct transmission shaft |  | Yes  No |
| 62 | Maximum turning angle- 550 |  | Yes  No |
| 63 | Differential lock- electro hydraulic/ engagement of mechanically controlled front differential lock simultaneously with rear differential lock |  | Yes  No |
| 64 | Standard epicyclical rear reduction gears |  | Yes  No |
|  | **Cab and Seat** |  |  |
| 65 | ROPS –roll bar safety frame , steel (Not plastic/Fiber) |  | Yes  No |
| 66 | Sun canopy |  | Yes  No |
| 67 | Should be easily detachable type |  | Yes  No |
| 68 | Seat should be adjustable type – adjusted for height and distance from the steering wheel and with adjustable suspension cushioned seat / parallelogram and hydraulic dumper or spring suspension and adjustable to suit various sizes and weights of the operators |  | Yes  No |
|  | **Dimensions** |  |  |
| 69 | Overall length 4560-4970 mm |  | Yes  No |
| 70 | Width Minimum/Maximum 2060 /2569 mm |  | Yes  No |
| 71 | Height, over: - sun canopy 2860-2898 mm |  | Yes  No |
| 72 | Wheel base Minimum – 2600-2700 mm |  | Yes  No |
| 73 | Front track width Min /Max – 1598/2098 mm |  | Yes  No |
| 74 | Rear track width Min /Max – 1690/2650 mm |  | Yes  No |
| 75 | Ground clearance under draw bar 480-520 mm minimum |  | Yes  No |
| 76 | Turning Radius – With Brake – 3350mm |  | Yes  No |
| 77 | With out Brake – 4400 mm |  | Yes  No |
| 78 | Should include weights/ballasts, located in front of the tractor & on the wheels |  | Yes  No |
|  | **Capacity** |  |  |
| 79 | Fuel tank capacity - 250-300 liter |  | Yes  No |
| 80 | Engine oil sump – 5-13 liter |  | Yes  No |
| 81 | Cooling System – 15-23 liter |  | Yes  No |
| 82 | Hydraulic system/ Transmission - 35-59 liter |  | Yes  No |
| 83 | Fuel tank should be located in safe place not to be affected by heat from the engine or anywhere, not to affect other parts of the tractor and ease of maintenance |  | Yes  No |
|  | **Manual & Catalogues** |  |  |
| 84 | Bidder should provide or confirm to provide all types of manuals (Service manual, Operator manual, and Parts catalogue, all being in English) for each tractor together with the offer |  | Yes  No |
| 85 | All operation manuals required and enable to know / compute running cost of the tractor throughout its service life; such as fuel consumption, oil consumption, service hour, oil sump capacity, gear box oil capacity, differential and hydraulic oil capacity, etc graphs, tables and so on, all being complete, clear and in English Language |  | Yes  No |
|  | **Accessories, Field kits & tools** |  |  |
| 86 | Manufacturer’s recommended standard field kits, accessories and tools(including special tools) that enable the item to accomplish all the purposes specified consisting hydraulic jack, flexible type lubrication gun, different size wrenches, etc shall be provided |  | Yes  No |
| 87 | Tools with Box (Manufacturer standard service tools) |  | Yes  No |
|  | **Other requirement** |  |  |
| 88 | Service after sales-availability of maintenance facilities in Ethiopia |  | Yes  No |
| 89 | Factory recommended engine & transmission oil type should be stated |  | Yes  No |
| 90 | Assembly and demonstration on site will be handled by the supplier |  | Yes  No |
| 91 | The bidder should give training to all technicians those who work on this machine |  | Yes  No |
|  | **Warranty** |  |  |
| 92 | Warranty period of 12 months or 2000 working hours from the date receipt of the item by the buyer |  | Yes  No |
| 93 | The bidder shall have **manufacturer authorized** local agent/dealer who can provide Pre-deliver Inspection , warranty and after sales service and spare parts in Ethiopia |  | Yes  No |
| 94 | If No, can you commit/agree to arrange a local agent/dealer within 2-3 weeks after award |  | Yes  No |
|  | **Spare parts for tractor** |  |  |
| 1.1 | Engine oil Filter | 16 | Yes  No |
| 1.2 | Hydrualic Oil Filter | 16 | Yes  No |
| 1.3 | Fuel Filter element | 32 | Yes  No |
| 1.4 | Fan belt | 16 | Yes  No |
| 1.5 | Fan belt Idler Pulley | 16 | Yes  No |
| 1.6 | Fan belt tensioner | 16 | Yes  No |
| 1.7 | Water pump kit | 16 |  |
| 1.8 | Thermostat | 16 | Yes  No |
| 1.9 | Upper Radiator Hose | 16 | Yes  No |
| 1.1 | Lower Radiator Hose | 16 | Yes  No |
| 1.11 | Hose Clamp | 64 | Yes  No |
| 1.12 | Radiator cap | 16 | Yes  No |
| 1.13 | Fuel tank cap | 16 | Yes  No |
| 1.14 | Clutch disc | 16 | Yes  No |
| 1.15 | Clutch release bearing | 16 | Yes  No |
| 1.16 | Injector nozzle, set | 16 | Yes  No |
| 1.17 | Injectors repair kit | 16 | Yes  No |
| 1.18 | Injector Seal | 64 | Yes  No |
| 1.19 | Injector washer | 64 | Yes  No |
| 1.20 | fuel primer Pump | 16 | Yes  No |
| 1.21 | Gasket kits | 16 | Yes  No |
| 1.22 | Injection relay | 16 | Yes  No |
| 1.23 | Turn indicator relay | 16 | Yes  No |
| 1.24 | Fuse 5 amp | 64 | Yes  No |
| 1.25 | Fuse 10 Amp | 64 | Yes  No |
| 1.26 | Fuse 15 Amp | 64 | Yes  No |
| 1.27 | Fuse 20 Amp | 64 | Yes  No |
| 1.28 | Fuse 25 Amp | 64 | Yes  No |
| 1.29 | Head lump lens | 32 | Yes  No |
| 1.30 | Head lump bulb | 32 | Yes  No |
| 1.31 | Work lump lens | 16 | Yes  No |
| 1.32 | Work lump bulb | 16 | Yes  No |
| 1.33 | Ingnition/starter key | 16 | Yes  No |
| 1.34 | Engine oil drain plug | 16 | Yes  No |
| **2** | **MoldBoard Plough/reversible** | 16 |  |
|  | **Type** |  |  |
| 1 | Reversible mould board plough, 3-4 bottom |  | Yes  No |
| 2 | Fully mounted with three point linkage |  | Yes  No |
| 3 | Adjustable scrapers for each bottom |  | Yes  No |
| 4 | Cat 2 pin |  | Yes  No |
|  | **Construction** |  | Yes  No |
| 5 | Flat steel frame with parking stand |  | Yes  No |
|  | **Weights and Dimensions** |  |  |
| **6** | Working width 90-130-105cm |  | Yes  No |
| 7 | Ploughing depth 25 --35cm or better |  | Yes  No |
| 8 | Total weight 600-950 kg |  | Yes  No |
| 9 | MoldBoard Plough must be operable by/compatible with the offered tractor |  | Yes  No |
|  | **Manuals & catalogues** |  |  |
| 10 | Operators manual |  | Yes  No |
| 11 | Repair manual |  | Yes  No |
| 12 | Parts catalogue |  | Yes  No |
|  | **Other requirements** |  |  |
| 13 | Assembly and demonstration on site will be handled by supplier |  | Yes  No |
| 14 | Tools (Manufacturer standard service tools) |  | Yes  No |
| 15 | The bidder shall have **manufacturer authorized** local agent/dealer who can provide Pre-deliver Inspection , warranty and after sales service and spare parts in Ethiopia |  | Yes  No |
| 16 | If No, can you commit/agree to arrange a local agent/dealer within 2-3 weeks after award |  | Yes  No |
|  | **Spare parts for Moldboard plough** |  |  |
| 2.1 | Shear |  | Yes  No |
| 2.2 | Chisel |  | Yes  No |
| 2.3 | Support chisel |  | Yes  No |
| 2.4 | Land side |  | Yes  No |
| 2.5 | Moldboard extension |  | Yes  No |
| 2.6 | Screw for different size |  | Yes  No |
| 2.7 | nut for different size |  | Yes  No |
| 2.8 | Mold board |  | Yes  No |

**Note:** Bidders shall bear in mind that there are criteria in the above schedule of requirements to be completed /filled by writing the required response other than the Yes/No response**.**

* **Bidders are required to clearly complete the detailed technical criteria for each proposed product. The specification of the proposed product must correspond with the UNOPS minimum requirements indicated in part B of this document (Technical specifications for Goods and Comparative Data Table) i.e. for each product requirement, the bidder must provide the corresponding specification demonstrating alignment with the specified minimum technical requirement. In the case of deviation, the bidder is to provide an additional explanation in the remarks column.**
* **The Bidder’s specification shall be consistent with the brand and model number indicated in the product data sheet /catalogue submitted. Bidders are requested to provide manufacturer’s product data sheet /catalogue to support the bidder’s proposed product specification. Failure to provide the proposed products’ technical details in Section III- returnable bidding form (Form G) may result in the disqualification of the bid**
* **For each item, bidder must propose/indicate only one Brand, Model and Model no. Proposing/indicating more than one Brand, Model and Model is forbidden.**
* **Technically compliant bidder with lowest price will be awarded for all items. The agricultural tractors and Implements are to be used together. Thus, bidders are expected to quote for implements which are compatibility with the offered tractor.**
* **Please provide manufacturer standard list and quantities of tools , accessories and parts for the equipment that require recommend lists (and quote for these tools , accessories and parts on form F)**

**Additional required information that bidders are expected to provide together with their bid submission.**

* Manufacturer name and year of manufacture of the chosen equipment
* Country of origin of the chosen equipment
* Detailed product data sheet/ catalogue of the chosen equipment
* If a Bidder does not manufacture or produce the goods it offers to supply, he shall submit the Manufacturer’s Authorization using the form included in Section III: Returnable Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the goods to supply these goods in the country of destination

**Additional Notes:** The bidder shall have a local agent who have workshops and can provide spare parts/tools for the quoted equipment. The local agent shall provide aftersales services like, repair, maintenance and warranty services.Please provide name and contact details of the local agent in Ethiopia

* Manufacturer website if possible

1. **Delivery requirements and Comparative Data Table.**

* ***The delivery requirement stated below is applicable for all items.***
* ***Bidders should also complete the below table and insert in to the form G (Technical bid form) for submission.***
* ***Bidders should also state that the delivery requirement they have completed and inserted in the form G (technical bid form) using the below table is ‘’ applicable for all the items ‘’ they have quoted for.***

|  |  |  |  |
| --- | --- | --- | --- |
| **UNOPS Requirements** | | **Is Bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| **Delivery time** | Bidder shall deliver all/ quoted equipment to the partner within **150days** after Contract signature. | Yes  No | Insert details |
| **Delivery place and Incoterms rules** | **DAP** Addis Ababa, Ethiopia including custom clearance handling , as per Incoterms 2010 | Yes  No | Insert details |
| **Consignee details** | Federal Democratic Republic of Ethiopia, Ethiopian Institute of Agricultural Research, Addis Ababa, Ethiopia. | Yes  No | Insert details |
| **UNOPS Right to vary requirements** | At the time the Contract is awarded, UNOPS reserves the right to vary the quantity of the goods and associated services specified above, provided this does not exceed +/- 20%, without any change in the unit prices or other terms and conditions of the ITB. | Yes  No | Insert details |

**D. Inspections and tests**

The following inspections and tests shall be performed:

The vendor must have the goods inspected in the manufacturer’s works by a competent authority and submit a test certificate and also a guarantee/warranty certificate that the goods conform to written specifications.

UNOPS or its representative may decide to inspect and/or test any or all item of the goods to confirm their conformity to the contract, prior to dispatch from the manufacturer’s premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the goods on receipt at destination.

If the goods fail to meet the laid down specifications, the supplier shall take immediate steps to remedy the deficiency or replace the defective goods to the satisfaction of the purchaser.