**Ministry of Education**

**Sector: Agriculture**

**Sub-sector: Animal Production**

**Occupation: Basic Agriculture and Natural Resource Conservation Operation L-I**

* + - * 1. **Consumable materials to be used for projects per candidate**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Item description** | **Qty** | **Unit** | **Specification** |
| 1 | Soil (clay, sand, forest soil & compost) | 25 | Kg | standard |
| 2 | Water | 50 | Lit |  |
| 3 | Seedling  | 10 | No | Any available species |
| 1 | Silage  | 5 | Kg  | Standard |
| 2 | Urea  | 1 | Kg  | Standard |
| 3 | Molasses  | 1 | Kg | Standard |
| 4 | Salt  | 1 | Kg | standard |
| 5 | Seeds  | 1 | Kg | Alpha-alpha, lettuce, pigeon-pea, cow pea, etc. |
| 6 | Seedling  | 5 | No  | Any forage shrub/tree |
| 7 | Grass cut  | 1 | Kg | Any grass |
| 8 | Empty sacks  | 1 | No  | Air tight  |
| 9 | Plastic sheet  | 1 | No | standard |
| 10 | Dishwashing soap  | 1 | No  | Dishwashing soap  |
| 11 | Vinegar | 1 | Lit  | standard |
| 12 | Gloves  | 1 | No | standard |
| 1 | Sorghum seed  | 30 | G | Quality seed |
| 2 | Tomato seedling | 40 | No | Quality seed |
| 3 | Fertilizer Dap | 90 | G | DAP/NPK |
| 4 | Fertilizer Urea  | 90 | G | Urea  |
| 5 | Cork  | 1 | No  | Not malformed |
| 1 | Dry matter (grass or maize stock) | 1 | Kg |  Welted  |
| 2 | Green matter | 1 | Kg | Welted |
| 3 | Soil | 0.5 | Kg | Forest or top soil |
| 4 | Animal manure | 0.5 | Kg |  |
| 5 | Ash | 0.5 | Kg |  |
| 6 | Bamboo stick | 1.5 | M |  |
| 7 | Water  | 1 | Lit | standard |
| 1 | Planting materials (like elephant grass) | 10 | No | **Locally available** |

**Tools & equipment’s/instruments to be used for projects per candidate**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Item description** | **Quantity** | **Unit** | **Specification** |
| 1 | Wheel barrow | 1 | No | Standard  |
| 2 | Plastic pot | 2 | G | Standard  |
| 3 | Hammer | 1 | Pcs | Standard  |
| 4 | Rope (String line) | 2 | Roll | Standard  |
| 5 | Meter tape (10m) | 1 | M | Standard  |
| 6 | Shovel | 1 | Pcs | Standard  |
| 7 | Hoe | 1 | Pcs | Standard  |
| 8 | Rake | 1 | Pcs | Standard  |
| 9 | Scissor | 1 | No | Standard  |
| 10 | Pig | 20 | No | Wooden  |
| 11 | Funnel | 1 | No | Standard  |
| 12 | Sieve (mesh wire)  | 1 | No | Standard  |
| 13 | Pruning knife | 1 | No | Standard  |
| 1 | Cow  | 1 | No | Dairy cow |
| 2 | AI gun | 1 | No | Standard  |
| 3 | Nitrogen gas container | 1 | No | Standard  |
| 4 | Measuring rode/AI rode | 1 | No | Standard  |
| 5 | Glove (surgical and shoulder length glove) | 1 | No | Standard  |
| 6 | Plastic sheath | 1 | No | Standard  |
| 7 | Scissor  | 1 | No | Standard  |
| 8 | Forcipes  | 1 | No | Standard  |
| 9 | Thermometer  | 1 | No | Standard  |
| 10 | Thaw box | 1 | No | Standard  |
| 11 | Canister  | 1 | No | Standard  |
| 12 | Straw and/or semen | 1 | No | Standard  |
| 13 | Warm water in termophlax | 1 | Lit  | Standard  |
| 14 | Crush  | 1 | No  | Standard  |
| 15 | Alcohol  | 1 | Lit  | 75% alcohol |
| 16 | Hoe  | 1 | No  | Standard |
| 17 | Sickle  | 1 | No | Standard |
| 18 | Meter (10m) | 1 | No | Standard |
| 19 | Weighing scale  | 1 | No | Standard |
| 20 | Watering can | 1 | No | Standard |
| 21 | Chopper  | 1 | No | Standard |
| 22 | Watering plastic tube  | 1 | No | 5-20 meter  |
| 23 | Spade  | 1 | No | Standard |
| 24 | Shovel | 1 | No | Standard |
| 25 | Rack  | 1 | No | Standard |
| 26 | Hay fork  | 1 | No | Standard |
| 27 | Wheel barrow  | 1 | No | Standard |
| 28 | Axe  | 1 | No | Standard |
| 29 | Sharp knife  | 1 | No | Standard |
| 30 | Large flat working surface (old work bench) | 1 | No |  |
| 31 | Technical grade salt or non-iodized salt | 1 | kg | Standard |
| 32 | Container such as a wooden barrel/plastic garbage can  | 1 | No | 5 to 10 litter non-metallic container |
| 33 | Large smooth board | 1 | No |  |
| 34 | Scraping tool such as an old hacksaw blade | 1 | No | Standard |
| 35 | Stirring paddle | 1 | No | Standard |
| 36 | Jar | 1 | No | Standard |
| 37 | Barrel | 1 | No | Standard |
| 38 | Table | 1 | No | Standard |
| 39 | Air drying movable frame | 1 | No | Standard |
| 1 | Pegs | 8 | No | Local product |
| 2 | Meter tape ( 10m) | 1 | M | Plastic |
| 3 | Rope /string | 2 | Roll  | Nylon  |
| 4 | Hoe | 1 | Pcs  | Local product |
| 5 | Spade | 1 | Pcs  | Local product |
| 6 | Hammer  | 1 | Pcs  | Local product |
| 7 | Rake | 1 | Pcs  | Local Product |
| 1 | Pegs  | 8 | No | Local product |
| 2 | Meter tape ( 10m) | 1 | M | Plastic |
| 3 | Rope /string | 2 | Roll  | Nylon  |
| 4 | Hoe  | 1 | No | Standard |
| 5 | Spade | 1 | No | Standard |
| 6 | Hammer  | 1 | No | Standard |
| 7 | Rake | 1 | No | Standard |
| 1 | Family drip irrigation kit | 1 | Set | Standard |
| 2 | A-frame | 1 | No | Standard |
| 3 | Water line level | 1 | No | Standard |
| 4 | Shovel | 1 | Pcs | Standard |
| 5 | Pick axe | 1 | Pcs | Standard |
| 6 | Pig | 15 | Pcs | Wooden |
| 7 | Hammer | 1 | No | Standard |

**Note**: Materials and tools may be modified by the assessor, depending on the actual job performed, and location & the standard installation practices of the country.

**Consumable materials to be used for projects per candidate**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Item description** | **Quantity** | **Unit** | **Specification** |
| 1 | Potted Seedling | 4  | No | Any potted seedling  |
| 1 | Glove (surgical and shoulder length glove) | 1 | Number  | Standard |
| 2 | Straw and/or semen | 1 | Number  | Standard |
| 3 | Warm water in termophlax | 1 | Litter  | Standard |
| 4 | Crush  | 1 | Number  | Standard |
| 5 | Alcohol  | 1 | Litter  | 75% alcohol |
| 6 | Hay  | 5 | Kg  | Grass hay |
| 7 | Silage  | 5 | Kg  | Standard |
| 8 | Urea  | 1 | Kg  | Standard |
| 9 | Molasses  | 1 | Kg  | Standard |
| 10 | Salt  | 1 | Kg  | Standard |
| 11 | Seeds  | 1 | Kg  | Alpha-alpha, lettuce, pigeon-pea, cow pea, lab-lab & Rhodes |
| 12 | Seedling  | 5 | Kg  | Any forage shrub/tree |
| 13 | Grass cut  | 1 | Kg  | Any grass |
| 14 | Technical grade salt or non-iodized salt | 1 | Kg  | Standard |
| 15 | Dish washing soap  | 1 | Number  | Standard |
| 1 | Maize seed  | 30 | gram | Quality seed  |
| 2 | Potato seed | 50 | pcs | Quality seed  |
| 3 | Fertilizer Dap | 90 | gram | DAP |
| 4 | Fertilizer Urea  | 90 | gram | Urea |
| 5 | Cork  | 1 | No  | standard |
| 1 | Dry matter (grass or maize stock) | 1 | kg |  Welted  |
| 2 | Green matter | 1 | kg | Welted |
| 3 | Soil | 0.5 | kg | Forest or top soil |
| 4 | Cow dung | 0.5 | kg |  |
| 5 | Ash | 0.5 | kg |  |
| 6 | Bamboo stick | 1.5 | meter |  |
| 7 | Water  | 1 | litter |  |
| 1 | Planting materials (like elephant grass) | 10 | No | **Locally available** |

**Tools & equipment’s/instruments to be used for projects per**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Item description** | **Quantity** | **Unit** | **Specification** |
| 1 | Pruning knife | 1 | Pcs | standard |
| 2 | Hammer | 1 | Pcs | standard |
| 3 | Rope (String line) | 2 | Roll | standard |
| 4 | Meter tape (10m) | 1 | Meters | 50 meter |
| 5 | Shovel | 1 | Pcs | standard |
| 6 | Hoe | 1 | Pcs | standard |
| 7 | Rake | 1 | Pcs | standard |
| 8 | Pige  | 20 | No | wooden |
| 1 | Record book | 1 | Number  | Sinarline, 100 sheets |
| 2 | Cow  | 1 | Number  | Dairy cow |
| 3 | AI gun | 1 | Number  | standard |
| 4 | Nitrogen gas container | 1 | Number  | standard |
| 5 | Measuring rode/AI rode | 1 | Number  | standard |
| 6 | Plastic sheath | 1 | Number  | standard |
| 7 | Scissor  | 1 | Number  | standard |
| 8 | Forcipes  | 1 | Number  | standard |
| 9 | Thermometer  | 1 | Number  | standard |
| 10 | Thaw box | 1 | Number  | standard |
| 11 | Canister  | 1 | Number  | standard |
| 12 | Empty sacks  | 1 | Number  | standard |
| 13 | Plastic sheet  | 1 | Number  | standard |
| 14 | Hoe  | 1 | Number  | standard |
| 15 | Sickle  | 1 | Number  | standard |
| 16 | Meter  | 1 | Number  | standard |
| 17 | Weighing scale  | 1 | Number  | standard |
| 18 | Watering can | 1 | Number  | standard |
| 19 | Chopper  | 1 | Number  | standard |
| 20 | Watering plastic tube  | 1 | Number  | 5-20 meter  |
| 21 | Spade  | 1 | Number  | standard |
| 22 | Shovel  | 1 | Number  | standard |
| 23 | Rack  | 1 | Number  | standard |
| 24 | Hay fork  | 1 | Number  | standard |
| 25 | Wheel barrow  | 1 | Number  | standard |
| 26 | Axe  | 1 | Number  | standard |
| 27 | Sharp knife  | 1 | Number  | standard |
| 28 | Large flat working surface (old work bench) | 1 | Number  | standard |
| 29 | Container such as a wooden barrel/plastic garbage can  | 1 | Number  | 5 to 10 litter non-metallic container |
| 30 | Large smooth board | 1 | Number  | standard |
| 31 | Scraping tool such as an old hacksaw blade | 1 | Number  | standard |
| 32 | Stirring paddle | 1 | Number  | standard |
| 33 | Vinegar | 1 | Litter  | standard |
| 34 | Jar | 1 | Number  | standard |
| 35 | Barrel | 1 | Number  | standard |
| 36 | Table | 1 | Number  | standard |
| 37 | Air drying movable frame | 1 | Number  | standard |
| 38 | Gloves  | 1 | Number  | Plastic glove  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | Pegs | 8 | No | standard |
| 2 | Meter tape ( 10m) | 1 | meters | standard |
| 3 | Rope /string | 2 | Roll  | standard |
| 4 | Hoe | 1 | Pcs  | standard |
| 5 | Spade | 1 | Pcs  | standard |
| 6 | Hammer  | 1 | Pcs  | standard |
| 7 | Rake | 1 | Pcs  | standard |
|  |  |  |  | standard |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | Family drip irrigation kit | 1 | Set | standard |
| 2 | A-frame | 1 | No | standard |
| 3 | Water line level | 1 | No | standard |
| 4 | Shovel | 1 | Pcs | standard |
| 5 | Pick axe | 1 | Pcs | standard |
| 6 | Pige | 15 | Pcs | standard |
| 7 | Hammer | 1 | No | standard |

Note: Materials and tools may be modified by the assessor, depending on the actual job performed, and location & the standard installation practices of the country.

**Materials and supplies (Consumable)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Items** | **Qty** | **Unit** | **Specification** |
|  | Stakes / Pegs | 20 | pcs | Wooden and sharpened |
|  | soap | 1 | No | Non aromatic |
|  | Grass | 20 | kg |  Welted  |
|  | Maize stalk | 20 | kg | Welted |
|  | Soil | 20 | kg | Forest or top soil |
|  | Cow dung | 10 | kg |  |
|  | Ash | 10 | kg |  |
|  | wheat seed  | 2 | kg | Any variety  |
|  | Fertilizer  | 100 | g | DAP |
|  | Fertilizer | 100 | g | Urea  |
|  | Cork  | 1 | No  | Not malformed |
|  | covering sheet  | 1.5x1.5  | meter | plastic |
|  | Temperature indicator stick | 1.5 | meter | Bamboo  |
|  | Water  | 1000 | litter |  |
|  | Glove  | 100 | Pair | Arm size  |
|  | Sheath  |  | Pcs | Standard  |
|  | Liquid nitrogen  | 3 | Litter  |  |
|  | Semen  | 100 | Straw  | Standard |

**Materials and supplies Non consumable**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
|  | Sickles / cutlass | 1 | No | Local product |
|  | Meter tape ( 10m) | 1 | meters | Plastic |
|  | Rope /string | 2 | Roll  | Nylon  |
|  | Hoes | 1 | pcs | Local product |
|  | Spade | 1 | pcs | Local product |
|  | rake | 1 | pcs | Local Product |
|  | Milking bucket | 1 | pcs | Galvanized  |
|  | towel | 1 | pcs | smooth |
|  | Appropriate wearing cloth for milking ( guan) | 1 | pcs | White  |
|  | Boots | 1 | Pair  | Plastic |
|  | Thermometer  | 1 | No | Mercury leveled  |
|  | Towel  | 1 | pcs |  |
|  | Insemination gun  | 1 | pcs | Standard |
|  | Forceps  | 1 | No  | Standard  |
|  | Scissors  | 1 | pcs |  |
|  | Thermos flask  | 1 | pcs |  |
|  | hose fittings | 1 | pcs | Standard  |

Note: Materials and tools may be modified by the assessor, depending on the actual job performed, and location & the standard installation practices of the country.

**Materials and supplies (Consumable)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | Stakes / Pegs | 20 | pcs | Wooden and sharpened |
| 2 | soap | 1 | No | Non aromatic |
| 3 | Grass | 20 | kg |  Welted  |
| 4 | Maize stalk | 20 | kg | Welted |
| 5 | Soil | 20 | kg | Forest or top soil |
| 6 | Cow dung | 10 | kg |  |
| 7 | Ash | 10 | kg |  |
| 8 | Maize seed  | 57 | pcs | Any variety  |
| 9 | Fertilizer  | 57 | Cork  | DAP |
| 10 | Cork  | 1 | No  | Not mal formed |
| 11 | Water | 20 | lt |  |
| 12 | covering sheet  | 1.5x1.5  | meter | plastic |
| 13 | Temperature indicator stick | 1.5 | meter | Bamboo  |

**Materials and supplies Non consumable**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | Sickles / cutlass | 1 | No | Local product |
| 2 | Meter tape ( 10m) | 1 | meters | Plastic |
| 3 | Rope /string | 2 | Roll  | Nylon  |
| 4 | Hoes | 1 | pcs | Local product |
| 5 | Spade | 1 | pcs | Local product |
| 6 | rake | 1 | pcs | Local product |
| 7 | Milking bucket | 1 | pcs | Galvanized  |
| 8 | towel | 1 | pcs | smooth |
| 9 | Appropriate wearing cloth for milking ( guan) | 1 | pcs | White  |
| 10 | Boots | 1 | Pair  | Plastic |
| 11 | Feeding trough | 1 | No  | Wooden  |
| 12 | Water trough | 0.5 | No  | plastic |
| 13 | Wheelbarrow  | 0.5 | No  | Local product |

Note: Materials and tools may be modified by the assessor, depending on the actual job performed, and location & the standard installation practices of the country.