

**TECHNICAL SPECIFICATION FOR PROCUREMENT OF DEEP-FROZEN SEMEN
MONTBÉLIARDE SEMEN (500 doses)**

PART A - GENERAL REQUIREMENTS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Language | All documents, pedigrees, performance records, and certificates must be in English or accompanied by certified English translations. | | | |
| 2 | Health Protocol | Semen must comply with the Veterinary Health Protocol issued by the Health Protocol Advisory Committee, DAPH. Bidder must provide a Veterinary Health Certificate signed by the Competent Authority of the exporting country. | | | |
| 3 | Exporting Country | | | | |
| 4 | Other Countries that Have Received These Semen | Countries to which semen from these selected bulls has been exported should be specified | | | |
| 5 | Packaging & Identification | Semen must be packaged in 0.25 mL French mini-straws (or 0.5 mL if justified). Each straw must be laser-etched or printed with: | | | |
| | | - Breed code | | | |
| | | - Sire ID | | | |
| | | - Collection date | | | |
| 6 | Semen Quality – Fresh | - Batch number. | | | |
| | | - Sperm Concentration $\geq 1,000 \times 10^6$ sperm/mL | | | |
| | | - Mass Motility \geq +++ (1-4 scale) | | | |
| | | - Live Sperm \geq 70% | | | |
| 7 | Semen Quality – Post-Thaw | - Abnormal Sperm \leq 15% | | | |
| | | - HOS Test (Membrane Integrity) \geq 65% positive. | | | |
| | | - Progressive Motility \geq 50% | | | |
| | | - Minimum Sperm per Straw 20 million (0.25 mL straw). | | | |
| 8 | Cold Chain | Semen must be stored and transported in liquid nitrogen at -196°C from collection until dispatch. Compliance with this cold-chain requirement shall be verified by an authorized officer at the AI Centre through an assessment of post-supply semen quality parameters prior to the release of payment | | | |

PART B - BREED-SPECIFIC TECHNICAL SPECIFICATIONS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Breed Purity | 100% purebred Montbéliarde cattle (<i>Bos taurus</i>). Sires must be registered with Coopex Montbéliarde (France) or an equivalent national Montbéliarde breeding organization. | | | |
| 2 | Breed Type | Specialized Dairy Type. Genetics must be selected primarily for milk production, milk solids, fertility, and udder health. Beef carcass traits are not a selection criterion for this procurement. | | | |
| 3 | Pedigree & Diversity | Semen must be sourced from at least 4 unrelated sires (unrelated for ≥ 4 generations). Pedigree sheets showing 4 generations for all sires must be submitted. | | | |
| 4 | Production performance and Genetic Merit (Dairy Focus) | Sires must have genomic evaluation or progeny test data (EBV/PTA) for the following dairy traits, values must be from an official genetic evaluation run no earlier than 2023 and genetic evaluation report must include the Reliability (%) | | | |
| | | - Milk Yield $\geq 8,500$ kg/lactation (305 days) | | | |
| | | - Fat % $\geq 3.9\%$ | | | |
| | | - Protein % $\geq 3.5\%$ | | | |
| | | - Somatic Cell Score (SCS) ≤ 2.8 (indicates mastitis resistance) | | | |
| | | - Fertility Index ≥ 105 (or equivalent national index) | | | |
| | | - Longevity/Productive Life ≥ 3.5 lactations expected. | | | |
| 5 | Genetic Disorders | Bulls should be free from all known genetic disorders like bovine leukocyte adhesion disease (BLAD), deficiency of uridinemono-phosphate synthetase(DUMPS), citrulinemia (deficiency of argino-succinate synthetase) and Factor XI. | | | |
| 6 | Straw Labeling | Each straw must be laser-etched or printed with | | | |
| | | - "MONT" (Breed Code) | | | |
| | | - Sire ID (e.g., FRA-MONT-XXXX) | | | |
| | | - Collection Date | | | |
| | | - Batch Number. | | | |

**TECHNICAL SPECIFICATION FOR PROCUREMENT OF DEEP-FROZEN SEMEN
BOER GOAT SEMEN (2,000 doses)**

PART A - GENERAL REQUIREMENTS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Language | All documents, pedigrees, performance records, and certificates must be in English or accompanied by certified English translations. | | | |
| 2 | Health Protocol | Semen must comply with the Veterinary Health Protocol issued by the Health Protocol Advisory Committee, DAPH. Bidder must provide a Veterinary Health Certificate signed by the Competent Authority of the exporting country. | | | |
| 3 | Exporting County | | | | |
| 4 | Other Countries that Have Received These Semen | Countries to which semen from these selected bulls has been exported should be specified | | | |
| 5 | Packaging & Identification | Semen must be packaged in 0.25 mL French mini-straws (or 0.5 mL if justified). Each straw must be laser-etched or printed with: | | | |
| | | - Breed code | | | |
| | | - Sire ID | | | |
| | | - Collection date | | | |
| 6 | Semen Quality – Fresh | - Batch number. | | | |
| | | - Sperm Concentration $\geq 1,000 \times 10^6$ sperm/mL | | | |
| | | - Mass Motility $\geq +++$ (1-4 scale) | | | |
| | | - Live Sperm $\geq 70\%$ | | | |
| | | - Abnormal Sperm $\leq 15\%$ | | | |
| 7 | Semen Quality – Post-Thaw | - HOS Test (Membrane Integrity) $\geq 65\%$ positive. | | | |
| | | - Progressive Motility $\geq 50\%$ | | | |
| | | - Minimum Sperm per Straw 20 million (0.25 mL straw). | | | |
| 8 | Cold Chain | Semen must be stored and transported in liquid nitrogen at -196°C from collection until dispatch. Compliance with this cold-chain requirement shall be verified by an authorized officer at the AI Centre through an assessment of post-supply semen quality parameters prior to the release of payment | | | |

PART B - BREED-SPECIFIC TECHNICAL SPECIFICATIONS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|-------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Breed Purity | 100% purebred Boer goat | | | |
| 2 | Breed Type | Meat-type goat. | | | |
| 3 | Pedigree & Registration | Semen must be sourced from at least 5 unrelated donor bucks and those must be registered with a recognized Boer goat breeders' association. Pedigree sheets showing 4 generations (buck, parents, grandparents, great-grandparents) must be provided. | | | |
| 4 | Herd Certification | Donor bucks must originate from herds managed by registered breeders with valid Certificates of Registration, Pedigree, and Production Records. | | | |
| 5 | Fertility Status | Donor bucks must be free from fertility problems | | | |
| 6 | Performance Traits | Growth & Weight: | | | |
| | | - Birth Weight 3.5-4.5 kg | | | |
| | | - Weaning Weight (90 days) ≥ 25 kg | | | |
| | | - Post-weaning ADG ≥ 200 g/day | | | |
| | | - Mature Buck Weight ≥ 110 kg | | | |
| | | - Mature Doe Weight ≥ 90 kg | | | |
| | | Fertility & Kidding: | | | |
| | | - Conception Rate (AI) ≥ 75% | | | |
| | | - Kidding Rate ≥ 1.8 kids/doe/kidding | | | |
| | | - Litter Size ≥ 1.7 kids/birth | | | |
| | | - Kidding Interval ≤ 8 months | | | |
| | | Carcass Traits: | | | |
| | | - Dressing % ≥ 52% | | | |
| | | - Meat-to-Bone Ratio ≥ 4:1 | | | |
| - Lean Meat % ≥ 75% | | | | | |
| - Subcutaneous Fat Thickness ≤ 3 mm | | | | | |

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 7 | Genetic Disorders | Donor bucks must be free from known genetic disorders:(Eg :Polled intersex syndrome, Chondrodysplasia (dwarfism), Scrapie susceptibility, etc). | | | |
| 8 | Straw Labeling | Each straw must be labeled with: - "BOER" - Sire ID - Collection Date - Batch No. | | | |

**TECHNICAL SPECIFICATION FOR PROCUREMENT OF DEEP-FROZEN SEMEN
MURRAH SEMEN (5,000 doses)**

PART A - GENERAL REQUIREMENTS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Language | All documents, pedigrees, performance records, and certificates must be in English or accompanied by certified English translations. | | | |
| 2 | Health Protocol | Semen must comply with the Veterinary Health Protocol issued by the Health Protocol Advisory Committee, DAPH. Bidder must provide a Veterinary Health Certificate signed by the Competent Authority of the exporting country. | | | |
| 3 | Exporting County | | | | |
| 4 | Other Countries that Have Received These Semen | Countries to which semen from these selected bulls has been exported should be specified | | | |
| 5 | Packaging & Identification | Semen must be packaged in 0.25 mL French mini-straws (or 0.5 mL if justified). Each straw must be laser-etched or printed with: | | | |
| | | - Breed code | | | |
| | | - Sire ID | | | |
| | | - Collection date | | | |
| 6 | Semen Quality – Fresh | - Batch number. | | | |
| | | - Sperm Concentration $\geq 1,000 \times 10^6$ sperm/mL | | | |
| | | - Mass Motility \geq +++ (1-4 scale) | | | |
| | | - Live Sperm \geq 70% | | | |
| 7 | Semen Quality – Post-Thaw | - Abnormal Sperm \leq 15% | | | |
| | | - HOS Test (Membrane Integrity) \geq 65% positive. | | | |
| | | - Progressive Motility \geq 50% | | | |
| | | - Minimum Sperm per Straw 20 million (0.25 mL straw). | | | |
| 8 | Cold Chain | Semen must be stored and transported in liquid nitrogen at -196°C from collection until dispatch. Compliance with this cold-chain requirement shall be verified by an authorized officer at the AI Centre through an assessment of post-supply semen quality parameters prior to the release of payment | | | |

PART B - BREED-SPECIFIC TECHNICAL SPECIFICATIONS

| S.NO | | Requirement | Bidder Response (Yes/No) | Supporting Documents Attached (Yes/No) | Remarks |
|------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|---------|
| 1 | Breed Purity | 100% purebred Murrah | | | |
| 2 | Breed Type | Buffalo (Murrah) | | | |
| 3 | Pedigree & Diversity | Semen must be sourced from at least 5 unrelated bulls. Pedigree sheets for all sires must be submitted with 4 generations. Sires must be unrelated for ≥ 4 generations. | | | |
| 4 | Production performance and Genetic Merit (Dairy Focus) | Preference shall be given to semen from bulls with higher reliability and stronger proven genetic merit. Then Murrah sire semen shall be from bulls with official genetic evaluation evidence based on either genomic evaluation or progeny-test evaluation (EBV/PTA) for dairy traits. The evaluation must be from an official genetic evaluation run not earlier than 2023, and the report must clearly show Reliability (%) for each sire. | | | |
| | | Milk Yield (305-day lactation) $\geq 1,500$ to 2,500 kg | | | |
| | | Fat % - 4.5 % to 6.5% .. | | | |
| | | Protein % - 3.7% to 4.0% | | | |
| 5 | Genetic Disorders | Bulls should be free from all known hereditary defects and genetic disorders recognized in buffalo breeding programs. | | | |
| 6 | Straw Labeling | Each straw labeled with: | | | |
| | | - "MURRAH" | | | |
| | | - Sire ID | | | |
| | | - Collection Date | | | |
| | | - Batch No. | | | |