

**TECHNICAL SPECIFICATION FOR PROCUREMENT OF DEEP-FROZEN SEMEN  
BRAZILLIAN MILKING GIR SEMEN (NCP-12,500 doses)**

**PART A - GENERAL REQUIREMENTS**

S.NO		Requirement	Bidder Response (Yes/No)	Supporting Documents Attached (Yes/No)	Remarks
1	<b>Language</b>	All documents, pedigrees, performance records, and certificates must be in English or accompanied by certified English translations.			
2	<b>Health Protocol</b>	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	<b>Exporting County</b>				
4	<b>Other Countries that Have Received These Semen</b>	Countries to which semen from these selected bulls has been exported should be specified			
5	<b>Packaging &amp; Identification</b>	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	<b>Semen Quality – Fresh</b>	- 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	<b>Semen Quality – Post-Thaw</b>	- HOS Test (Membrane Integrity) $\geq$ 65% positive.			
		- Progressive Motility $\geq$ 50%			
		- Minimum Sperm per Straw 20 million (0.25 mL straw).			

8	<b>Cold Chain</b>	Semen must be stored and transported in liquid nitrogen at $-196^{\circ}\text{C}$ 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			
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**PART B - BREED-SPECIFIC TECHNICAL SPECIFICATIONS**

S.NO		Requirement	Bidder Response (Yes/No)	Supporting Documents Attached (Yes/No)	Remarks
1	<b>Breed Purity</b>	100% purebred Gir			
2	<b>Breed Type</b>	Dairy-type Zebu (milking Gir).			
3	<b>Pedigree &amp; Diversity</b>	Semen must be sourced from at least 8 unrelated bulls. Pedigree sheets for all sires must be submitted with 4 generations. Sires must be unrelated for $\geq 4$ generations.			
4	<b>Production performance and Genetic Merit (Dairy Focus)</b>	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 (305-day lactation) $\geq 3,500 - 4,500$ kg			
		Fat % $\geq 4.0 - 4.5\%$			
		Protein % $\geq 3.2 - 3.6\%$			
		Somatic Cell Score (SCS) $\leq 3:0$ ( <i>preferred</i> $\leq 2.8$ )			
		Fertility Index / Reproduction Index $\geq 100$ (or above breed average / positive EBV)			
		Longevity / Productive Life $\geq 3.5 - 4.5$ lactations expected			
5	<b>Genetic Disorders</b>	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	<b>Straw Labeling</b>	Each straw labeled with:			
		- "GIR"			
		- Sire ID			
		- Collection Date			
		- Batch No.			

**TECHNICAL SPECIFICATION FOR PROCUREMENT OF DEEP-FROZEN SEMEN  
JESRSEY SEXED SEMEN 1,400 doses)**

**PART A - GENERAL REQUIREMENTS**

S.NO	Requirement	Bidder Response (Yes/No)	Supporting Documents Attached (Yes/No)	Remarks
1	<b>Language</b>			
2	<b>Health Protocol</b>			
3	<b>Exporting County</b>			
4	<b>Other Countries that Have Received These Semen</b>			
5	<b>Packaging &amp; Identification</b>	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	<b>Semen Quality – Fresh</b>	- Batch number.		
		- Sperm Concentration $\geq 1,000 \times 10^6$ sperm/mL		
		- Mass Motility $\geq +++$ (1-4 scale)		
		- Live Sperm $\geq 70\%$		
7	<b>Semen Quality – Post-Thaw</b>	- Abnormal Sperm $\leq 15\%$		
		- HOS Test (Membrane Integrity) $\geq 65\%$ positive.		
		- Progressive Motility $\geq 50\%$		
8	<b>Cold Chain</b>	- Minimum Sperm per Straw 20 million (0.25 mL straw).		
		Semen must be stored and transported in liquid nitrogen at $-196^\circ\text{C}$ 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	<b>Breed Purity</b>	100% purebred Jersey cattle (Bos taurus).			
2	<b>Breed Type</b>	Sexed semen ( $\geq 90\%$ female sex-sorted, X-bearing sperm).			
3	<b>Pedigree &amp; Diversity</b>	Semen must be sourced from at least 2 unrelated sires (unrelated for $\geq 4$ generations). Pedigree sheets showing 4 generations for all sires must be submitted.			
4	<b>Production performance and Genetic Merit (Dairy Focus)</b>	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 $\geq +300$ kg/lactation			
		- Fat % $\geq +0.20\%$ (or absolute $\geq 4.8\%$ )			
		- Protein % $\geq +0.10\%$ (or absolute $\geq 3.7\%$ )			
		- Somatic Cell Score (SCS) $\leq -0.5$			
		- Fertility/Conception Rate $\geq +2.0$			
		- Productive Life $\geq +0.5$ years.			
5	<b>Genetic Disorders</b>	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	<b>Straw Labeling</b>	Each straw must be laser-etched or printed with			
		- "JER-SEX" (Breed Code)			
		- Sire ID (e.g., USA-SEX-XXXX)			
		- Collection Date			
		- Sexed Batch No.			
		- "90% Female".			