Test Run	Description of Test	Result Codes
Sample Call Rate	Quality control measure for genotyping efficiency of each marker tested. Represented as a percentage for overall genotyping.	0-100%
OPP Resistance	Ovine Progressive Pneumonia: affects the lungs and nervous system and has a long incubation period which is why only sheep (rarely goats) older than 2 years show signs. Transmission is through infected colostrum and milk to the lambs. Selecting sheep with resistance can help keep a flock from developing this disease and reduce death.	
Scrapie	Scrapie is a fatal neurological disease of sheep caused by abnormal prion proteins. Certain naturally occurring variations in the prion protein (PRNP) gene can make an animal more resistant or more susceptible to developing scrapie. This test evaluates key locations within the PRNP gene known as codons 136, 141, 154, and 171. Codons 136 and 171 have the greatest influence on susceptibility to classical scrapie, while codons 141 and 154 provide additional information. Many countries also use the combined 136-154-171 haplotype system, where ARR/ARR animals are considered highly resistant to classical scrapie, heterozygous ARR and AHQ genotypes display partial resistance, and VRQ/VRQ, ARQ/VRQ, and ARQ/ARQ genotypes are considered the most susceptible. Codon 141 has been associated with atypical (Nor98) scrapie, particularly in animals carrying the F variant. At codon 171, RR is considered highly resistant to classical scrapie, QR provides partial resistance, and QQ is associated with increased susceptibility. The H variant is generally considered similar to Q in susceptibility, while the K variant is rare but is believed to provide partial resistance. Only in the last several years have H and K variants routinely been reported at codon 171; their appearance on a test report is not an error. For additional information, please refer to USDA guidance on Scrapie Genetics.	Codon 136: AA - Decreased Susceptibility; AV, VV - Most susceptible Codon 141: LL, LF, FF - Plays minor role in scrapie susceptibility Codon 154: RH, HH - Plays a minor role in scrapie Codon 171: RR - very resistant to Scrapie; QR - QQ - most susceptible
Dwarf	The Dwarf gene is a simple autosomal recessive defect that is characterized by the affected offspring being proportionally reduced in frame size and weight to approximately 80-85% of normal size.	FF - Free Non-Carrier FD - Carrier DD - Affected Animal
Spider Lamb (Chondrodysplasia)	Semi-lethal inherited disorder associated with skeletal deformities in young sheep. Testing for this gene allows breeders to select appropriate breeding pairs to elimate this disorder from a herd.	NN - Not a Carrier NS - Carrier SS - Affected Animal
Gaucher Disease	An autosomal recessive lysosomal storage disorder caused by mutations in the β-glucocerebrosidase gene. Clinical signs include neuropathy, thickened leathery skin, and ichthyosis, with lambs unable to stand from birth.	(-) Not a Carrier (+) Carrier (++) Affected Animal

OPP Haplotype or Marker	Susceptibility or Associat
Haplotype 1/1	Less susceptible
Haplotype 2/2	Very susceptible
Haplotype 3/3	Very susceptible
Haplotype 4/4	Less susceptible (rare)
Haplotype 1/2	Very susceptible
Haplotype 1/3	Very susceptible
Haplotype 1/4	Very susceptible
Haplotype 2/3	Very susceptible
Haplotype 2/4	Very susceptible

Test Run	Description of Test	Result Codes
Batten's Disease	A juvenile form of neuronal ceroid lipofuscinoses (NCL). A neurodegenerative inherited disease with no cure. Signs start at 9-12 months of age and death occurs around 24 months, Result of excessive accumulation of lipopigments in the body's tissue. Testing for this gene allows breeders to select appropriate breeding pairs to eliminate this disorder from a herd.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Callipyge	A gene causing lambs to develop large and muscular rumps, but is undesirable because the meat is not tender and contains very little fat. Researchers are studying this gene to understand meat quality, muscle, and fat in sheep.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Chondrodysplasia	A gene linked to dwarfism, including stunted growth of body parts (especially bones). Selecting sheep with resistance can help keep a flock from developing this disease and reduce deaths.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Dermatosparaxis	An inherited connective tissue disorder, this causes the skin to be very fragile. Mostly affects lambs and usually ends in death. Affects White Dorpers predominantly.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Epidermolysis bullosa, junctionalis	Inherited skin disease that causes blistering and lambs die within the first few weeks. Selecting sheep with resistance can help keep a flock from devleoping this disease and reduce deaths.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Fecundity *Booroola*	This gene can increase the number of ovulations and the size of litters in ewes.	(/) Neutral for the gene (+) Carrier (2+) 2 copies
Fecundity *GDF9*	This gene identifies higher fertility in ewes.	(/) Neutral for the gene (+) Carrier (-) Not a Carrier
Gaucher Disease	An autosomal recessive lysosomal storage disorder caused by mutations in the β-glucocerebrosidase gene	(-) Not a Carrier (+) Carrier (++) Affected Animal
Glycogen Storage Disease V (GSDV, McArdle disease)	An inherited disorder caused by an inability to break down a complex sugar called glycogen which interferes with the function of muscle cells. It can cause fatigue and muscle pain. This is not a fatal disease.	(-) Not a Carrier (+) Carrier (++) Affected Animal
GM1 (ganglioside)	A type of fat in the brain that is needed to function properly. Too much GM1 is toxic and causes destruction of nerve cells in young animals.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Hypotrichosis (hairless gene)	A rare condition in which there is little or no hair growth on the head, including the browns above the eyes and the edge of eyelids, or other areas of the body where hair normally grows.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Lissencephaly with cerebellar hypoplasia (LCH)	A distinct category of brain malformation causing newborn lambs the inability to walk and difficulty suckling.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Motor Neuron Disease (Floppy Lamb Syndrome)	An autosomal recessice trait that occurs when special nerve cells in the brain and spinal cord stop working properly. Affects the animals ability to walk, breath, speak and swallow.	(-) Not a Carrier (+) Carrier (++) Affected Animal

Test Run	Description of Test	Result Codes
Myostatin	Denotes an increase in lean meat percentage and a reduction in fat content.	(-) Not a Carrier (+) Carrier (2+) 2 copies
Myotonia Congenital (Fainting Goat)	A hereditary condition which causes the animal to stiffen or fall over when startled. Causes a delay in the relaxation of the muscles. Animal carcasses will contain less fat and more muscle.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Neuronal Ceriod Lipofuscinosis (NCL)	A neurodegenerative inherited disease with no cure. It has been classified by age of onset, Battens being the youngest form of NCL. Result of excessive accumulation of lipopigments in the body's tissue. Testing for this gene allows breeders to select appropriate breeding pairs to eliminate this disorder from a herd.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Porphyria Cutanea Tarda (PCT)	A dominant autosomal trait that causes blisters underneath the skin in result to being exposed to an excessive amount of sunlight. It is caused by a deficiency of uroporphyringen decarboxylase (UROD). It heals slowly and scars.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Rickets	The condition in young animals where the bones fail to harden properly. Lambs may appear stiff, lame and do not want to get up. Bones are easily fractured.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Vitamin-K-dependent Blood Coagulation Factors Deficiency	An autosomal recessive trait that causes ewes to bleed to death upon giving birth or lambs dying from excessive blood loss through the umbilicus or into the subcutaneous tissues. Vitamin K allows for blood to clot, therefore the inability to clot is deadly.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Waardenburg Sydrome	An autosomal recessive pigmentation disorder caused by a deletion in the EDNRB gene. Affected animals display white or mostly white coats, blue eyes, and intestinal abnormalities (megacolon) that are often fatal.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Yellow Fat	An autosomal recessive disorder caused by a mutation in the BCO2 gene that prevents the breakdown of carotenoid pigments, resulting in yellow-colored adipose tissue instead of normal white fat. Affected animals are otherwise healthy, but the yellow fat reduces carcass value and marketability.	(-) Not a Carrier (+) Carrier (++) Affected Animal
Inbreeding Coefficient	A genomic measure of genetic relatedness between an animal's parents. Positive values indicate inbreeding (shared ancestry); negative values indicate greater genetic diversity (outcrossing). Higher positive values increase risk of expressing recessive disorders. Breeders use this metric to guide mating decisions and maintain flock diversity.	-100% to +100%
Not Able to Determine	Various issues with the sample found (unspecificied).	./. Not able to determine