Wide gene pool and high performance

England offers an unrivalled variety of quality breeding sheep with 106 different breeds to choose from. These different breeds cover a huge range of production attributes and are suited to many environments and climates. This leaflet highlights the advantages of breeds of interest to importers looking for specific genetic traits to realise breeding goals or strengthen existing stock.

English livestock genetics are world-renowned for their quality and suitability to increasing the profitability of livestock farming, with livestock being used around the world to improve indigenous breeds. Increasingly importers are learning about structured cross breeding to exploit the benefits of each breed whilst capitalising on hybrid vigour.

More is expected from less, in a shorter timescale and with lower environmental cost. In order to achieve the genetic potential of every animal in terms of growth, carcase quality, wool quality, offspring survival, has to be optimum. The wide variety of production systems in England from lowland lush pasture to extreme upland environments has meant that sheep grazing is treated as a science with the objective of optimising production.
Proven genetic progress in quantitative and molecular genetics

In 1989, a world first was seen in England with the introduction of Sire Reference Schemes to accelerate breed improvement. These schemes brought together technologies to increase the development of breeds through the use of estimated breeding value (EBVs), artificial insemination (AI), embryo transfer (ET) and statistical computer modeling. There is a unique interaction between the different English breeds and environments. Hardy hill sheep which maintain the ecological balance of the uplands are crossed with prolific lowland breeds to produce an F1 cross for use on lowland pastures for prime lamb production. These F1 crosses, ‘Mules’ or ‘Halfbreds’ are in turn crossed with a terminal sire to produce fast growing lambs.

English scientists are at the heart of international efforts to map the sheep genome and develop new tests for livestock. This technology can be used to improve musculature and/or identify those animals that have resistance to certain diseases. The following are commercial applications of sheep genomic in England: Scrapie genotyping, Muscularity markers, Nematode resistance selection, Inverdale & Booroola fertility markers, Myostatin double muscling genotyping, as well as tests for inbreeding and genetic diversity.

Health control and world leading reproduction technologies

In 2001 the UK government funded a long term programme called the National Scrapie Plan (NSP) to allow farmers to increase the resistance of their flocks to scrapie. The programme consisted of several initiatives including the Ram Genotyping Scheme for purebred flocks. Rams exported from England are tested to ensure they are of the resistant genotype ARR/ARR.

There are other significant sheep health schemes in England including: The Maedi Visna Monitoring Scheme (MV), The Premium Health Scheme for Enzootic Abortion of Ewes (EAE) and The Caseous Lymphadenitis Monitoring Scheme (CLA). These schemes are all aimed at increasing the disease resistance of English sheep.

England is a world leader in ovine breeding technologies. These technologies all provide benefits for the breeders: laparoscopic insemination allows for up to 250 ewes to be inseminated by a trained team in one day using fresh or frozen semen. This produces a reduced lambing interval. Embryo transfer dramatically increases the number of lambs born per mating and increases genetic improvement. Embryo and semen freezing/gene banking allows breeders to select genetics that are important for the restoration/development of a breed. Semen freezing can also be used as an insurance policy for breeders with important stock sires.
**Sheep Breeds**

**Swaledale** – Originating from North Yorkshire this breed almost certainly originated from the same genetic group of other horned hill sheep. The Swaledale is well known for being a bold, hardy sheep well suited to surviving the hardships of exposed high lying situations. The ewes are excellent mothers raising lambs in all conditions.

*Average adult body weight – ewes 70kg*
*Average prolificacy – up to 150%*

**Bluefaced Leicester** – Evolved from the beginnings of breed improvement in the 1700s when wool production was the main aim. The Bluefaced Leicester provides a crucial link in the stratified sheep industry of England as it is crossed with mountain breeds to produce the ‘Mule’. Sheep are large and fast growing with the ewes being highly prolific and good milk producers. The ‘Mules’ are then crossed with terminal sires to produce good quality lambs.

*Average adult body weight – some rams up to 135kg*
*Average prolificacy – purebred up to 250%, mules +200%*

**Border Leicester** – ‘The great improver’. The oldest improved English breed being in existence for over 200 years. Today rams are crossed with mountain and hill breeds to create various ‘Halfbreds’, which in turn are crossed with terminal sires to create good quality lambs. The Border Leicester is another key link in the stratified sheep industry of England. The ewes are good mothers with plenty of milk and produce quick growing lambs.

*Average adult body weight – ewes 80 to 100kg*
*Average prolificacy – 200 to 250%*
**British Charollais** – Imported from France in 1976 and developed as a terminal crossing sire with high muscularity now far out numbers the French population. The breed commands 20 per cent of the terminal sire market in the UK with rams being used across all sectors to produce a high quality, lean lamb carcass. Producing fast growth, lean heavy fleshing and good conformation. The shape of the breed ensures trouble-free lambing, with lively vigorous lambs and good maternal traits.

*Average adult body weight – ewes 90kg, rams 130kg*
*Average prolificacy – 180 to 220%*

**Hampshire Down** – Established more than 150 years ago, today used as a terminal sire breed. It is especially good at producing early maturing good quality lambs when crossed with mountain breeds. The breed has a good killing out percentage, conformation and feed conversion rate, being hardy and able to survive both extremes of heat and cold.

*Average adult body weight – ewes 80kg, rams 120kg*
*Average prolificacy – 150 to 180%*

**Suffolk** – First recorded in 1797 and consistently improved since that time. The Suffolk breed excels as a terminal sire for profitable sheep meat production, producing lambs with consistent high loin muscle depth. Well known for its exceptional growth rate and conformation has lead it to be one of the most popular terminal sire breeds in the UK.

*Average adult body weight – ewes 80kg, rams 95kg*
*Average prolificacy – 150 to 190%*
British Texel – Originated in Holland, however over the centuries it has been improved through the introduction of British bloodlines to increase its potential. Famous for its exceptional carcase qualities, it is the dominant terminal sire in the UK. Texel sheep are docile, prolific, milky and are hardy enough to be crossed directly with mountain breeds to produce high quality store lambs/breeding females.

Average adult body weight – ewes 85kg, rams 120kg
Average prolificacy – 180%

Lleyn – The fastest growing sheep breed in the UK, the Lleyn has come to the forefront during the last 20 years. Hardy, prolific, with a relatively small size, Lleyns provide low input and high output productivity. Suitable for crossing with terminal sire breeds to produce excellent quality lambs. Renowned for ease of lambing, mothering ability and longevity they are a suitable choice for the commercial farmer.

Average adult body weight – ewes 60kg, rams 90kg
Average prolificacy – up to 220%
**Romney** – Exported from England to 43 countries around the world this breed has had a huge influence on the sheep industry, especially in New Zealand and Australia. Sheep are very easy to manage and shepherd with ewes being excellent mothers. Renowned for being hardy and adaptable to most management/environmental conditions, the breed is used to thriving in exposed/isolated areas requiring very little fencing as they do not stray. Lambs are well conformed, consistent, with a high growth rate.

**Average adult body weight** – ewes 75kg, rams 100kg  
**Average prolificacy** – 175%

**Wiltshire Horn** – An ancient breed first recorded in the 18th Century and more recently exported all around the world. A large lowland dual purpose sheep used for both maternal line crosses and a terminal sire. As the breed is woolless and does not require shearing they are easy to care for, being hardy and able to survive on relatively little inputs, producing excellent meat yields with high lamb vitality.

**Average adult body weight** – ewes 75kg, rams 125kg  
**Average prolificacy** – 180%

**Dorset** – Bred either with, or without horns, the breed has the uniquely remarkable ability to lamb naturally at any time of the year, meaning three lambings in two years is possible. In England it is used to produce high quality succulent early season lambs at 10 weeks of age. Lambing is easy and ewes prove to be good mothers/milkers. Suited to a wide variety of environments, temperatures and rainfall. The wool is of high quality and exported to demanding markets like Japan.

**Average adult body weight** – ewes 85kg, rams 120kg  
**Average prolificacy** – 170 to 250% with staggered lambing
Shropshire – A mixed lowland breed used both as a maternal line and terminal sire. Ewes have the ability to lamb early and are docile with plenty of milk rearing twins with no issue. Extremely hardy with a long productive life, Shropshire sheep have the ability to graze without damaging conifers and are used extensively for conservation grazing and within plantations.

Average adult body weight – ewes 80kg, rams 120kg
Average prolificacy – 160%

Southdown – Grows one of the finest wools of all English breeds. This breed has been extensively exported having its greatest impact in New Zealand. Southdown rams will produce fast growing prime lambs with fine conformation and a good carcase. Docile and easy to handle the Southdown can thrive in situations where other breeds would not perform.

Average adult body weight – ewes 62kg, rams 90kg
Average prolificacy – 150%