Irish Suffolk Sheep Society

Breeding Programme

Volume Two

Approved on 18th January 2022

Contents:

1. Aim of the Breeding Programme:

Background of the Suffolk Breed.

Suffolk sheep have been in Ireland for well over one hundred and thirty years, are known by their black head and legs. The breed is renowned for its high growth rate and high meat yield plus being good on the maternal traits also - they are generally quiet and easy to handle.

The **aim** of the Breeding Programme is to maintain a high "breed standard" and by working closely with the Sheep Ireland Lamb Plus programme to improve traits such as;

- Prolificacy
- Lamb Vigor
- Lamb survivability
- Lean meat yield

The Irish Suffolk Sheep Society will encourage and support all breeders to participate in the Sheep Ireland Lamb Plus Breed Improvement Programme.

2. Breed Name

Breed Name

Suffolk Sheep

Breed Standard

Head:	Should be black and hornless. Muzzle moderately fine in ewes. Ears of medium length with hair on face of fine texture. Hair on face of fine texture.
Neck:	Moderate length & well set.
Shoulder:	Broad & Oblique.
Chest:	Deep and wide.
Back & Loin:	Long, level and well covered with meat and muscle. Tail well set up. The ribs should be long and well sprung with a full flank.
Legs and feet:	Straight and black with flat bones of good quality. Forelegs well set apart. Hind legs should be well set up and well filled up with meat.
Fleece:	Moderately short with well-defined wool. Black wool should be avoided.
Skin:	Fine, soft and a pink color.

3. Geographical Territory

The breed programme is to be carried out in the Republic of Ireland.

4. Flock Book – Divisions of the breeding book

Flock Book

The flock book itself will be composed of a **main section** plus a **supplementary section.**

Main Section:

For entry to the main section of the flock book the animal must meet the following criteria:

1. Be descended from parents and grandparents who have been entered in the main section of an approved flock book of the Suffolk Breed.
2. Be tagged with an NSIS tag in accordance with Irish Animal Health Law on the identification and registration of sheep.
3. Have its pedigree established in accordance with the rules of this breeding programme.
4. In the case of trade in or entry into the Union the animal it shall be accompanied by a Zootechnical Certificate.
5. Where an animal is produced from a germinal product which is traded or entered into the Union the germinal product shall be accompanied by a Zootechnical Certificate issued by a breeding society or breeding body for that breed.

Supplementary section:

For entry into the supplementary section the animal must meet the following criteria:

1. Be tagged with an NSIS tag in accordance with Irish Animal Health Law on the identification and registration of sheep.
2. Be judged by the breed society to conform to the characteristics of the breed. This will require a flock inspection.
3. For all such sheep the minimum performance requirements is that their ancestry must be recorded on the Sheep Ireland Database and be DNA tested.

All requests to enter sheep into the supplementary section should be made by contacting the registrar.

Upgrading of animals recorded in the supplementary section to the main section:

Upgrading only applies to the female side and the following rules apply.

1. The female sheep shall have descended from a mother and a maternal grandmother which are recorded in a supplementary section of a flock book of the same breed.
2. A father and two grandfathers which are entered in the main section of a breeding book of the same sheep breed.
3. Any upgrading requests should be made through the registrar.

The first-generation offspring descended from the female animal referred to above and a male pure-bred breeding animal entered in the main section of the breeding book of the same breed shall likewise be regarded as a pure-bred breeding animal and be entered or registered and eligible for entry in the main section of that flock book.

5. Identification, Imported Sheep and Transfers

Identification:

All sheep will be uniquely identified using the National Sheep Identification Scheme electronic tag (NSIS).

In addition, an animal in the flock book will be issued a breeding book number which will consist of the three-character flock code followed by the two last digits of the particular year and the last five numbers on the NSIS tag e.g. Y47 19 04065.

The three-character flock code is allocated to each breeder by the Society following confirmation to participate in the breeding programme.

All male animals registered in the flock book are to be named. The name may be selected by the breeder or a computer randomly selected name will be assigned. This name shall be preceded by the flock name which is assigned to breeders. Both names shall be less than 30 characters in length.

Currently names are not assigned to females.

Imported Sheep

Imported sheep must have been entered or recorded in a flock book for the Suffolk breed which is approved under E.U. Animal Breeding Regulations in order to be eligible to be entered/recorded in the Irish Suffolk Sheep Society Flock Book. All sheep from another flock book must be accompanied by a Zootechnical Certificate.

Transfer of Ownership

The seller of a purebred sheep is responsible for notifying the sale of that animal. This may be done by accessing their personal flock book on-line through Sheep Ireland. The original Zootechnical Certificate is sent by the new owner to the registrar with the appropriate transfer fee. The registrar will complete the transfer of owner process on the database. A new Zootechnical Certificate is then issued in the name of the new owner and the flock book is updated.

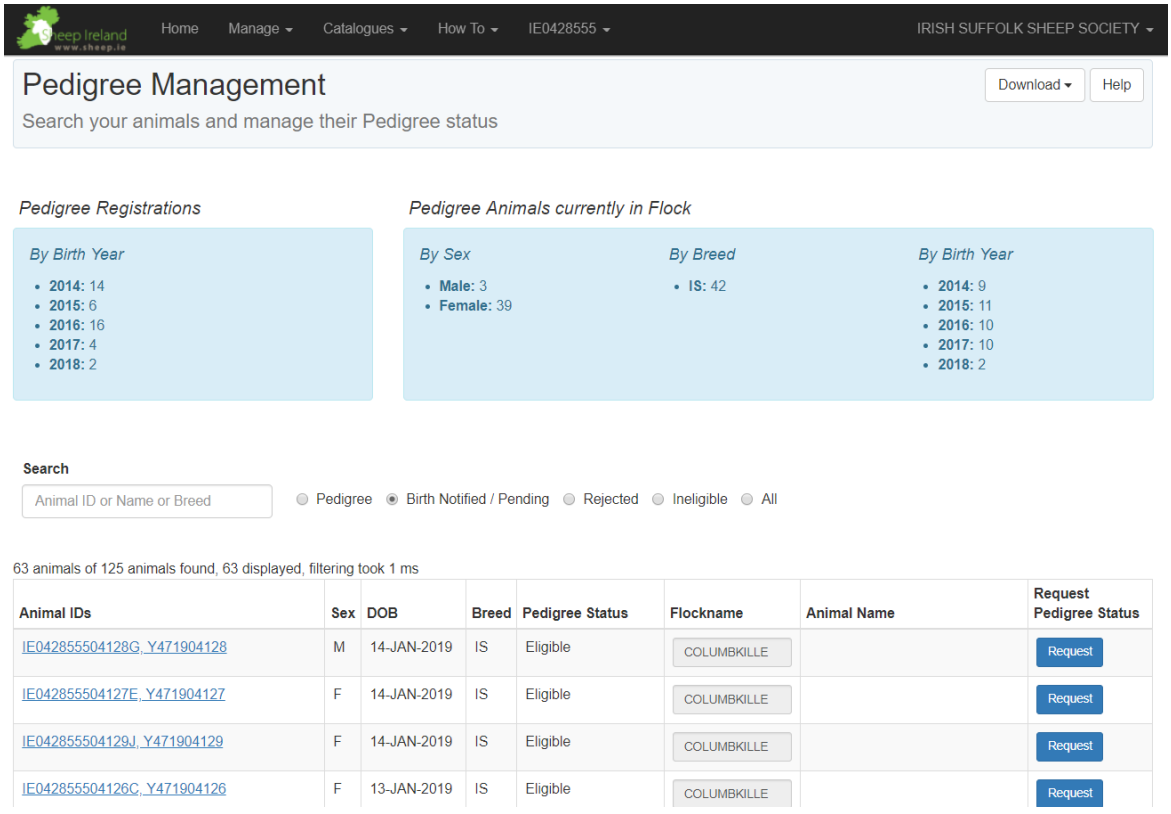
6. Procedures and Rules for Registration and Recording Pedigrees

Breeders should birth notify their births (i.e. parentage, date of birth, progeny details) on the Sheep Ireland data base by accessing their personal flock profile on-line before 30th April. Any breeder unable to meet this deadline must contact the registrar who will present the issue to the committee for consideration.

Where a breeder requires an animal to be entered in the flock book they should select '***request pedigree status'*** on the pedigree management screen (see screenshot below) of their personal online account on the Sheep Ireland database. Once the animal has been requested the registrar is notified.

The registrar can then approve the animal to enter the flock book if they are satisfied that all society rules have been met by the animal/breeder. Once an animal is approved a Zootechnical Certificate is generated for the animal which is then available for the registrar to print.

A log of every stage of the process is maintained by the database which includes a time stamp, who carried out the action, and what that action included. This is visible to the Breeder, the Society and Sheep Ireland staff.



Rules for Registration:

1. It has been agreed by the Society that five percent of all new pedigree registrations are randomly selected on an annual basis for DNA testing in order to verify parentage. This may be reviewed periodically.
2. Any animal presented for registrations who have not been birth notified will have to be DNA tested to verify parentage before registration can take place.
3. Any male animal entering a flock for the purpose of pedigree breeding should be DNA tested for parentage verification.
4. Females and males intended for breeding should be registered in the name of the breeder who should apply for the registration.
5. Females for breeding must be registered by 30th of October of their first breeding year. Registration after this date may incur late registration fees as determined by the committee.
6. All females and males that are sold for pedigree breeding should be registered by the original owner before being offered for sale. Where this is not the position and the new owner applies for registration, the animal will be required to be DNA tested (if not done previously) at the expense of the new owner. Late registration fees may also be incurred as determined by the committee.
7. In the event of a known and verified parentage error an animal cannot enter the flock book until the error is rectified. This can be rectified through DNA testing of the animal.

8. The committee reserves the right to carry out flock inspections. These inspections must be approved by the committee beforehand.

9. Any lambs that are born as a result of embryo transfer will only be eligible for registration if the lamb is DNA tested against its sire and dam. A genetic evaluation and performance testing result is required for sire and dam. The animal will not enter the flock book until such a test is completed. The cost of such test will be borne by the breeder. A Zootechnical Certificate is required to accompany the embryo where the sire and dam is in another breeding book. Breeders should be aware of this rule before they undertake any such embryo transfer work.
10. Where discrepancies occur in relation to parentage as a result of DNA testing, the committee reserves the right to request further DNA testing in the flock.
11. The cost of DNA testing will be borne by the breeder.
12. The results of DNA testing will be noted on the Zootechnical Certificate for the animal.
13. Any breeder wishing to avail of voluntary DNA testing should contact Sheep Ireland.
14. Registration fees will be available on the Society's website or by contacting the Society's Secretary. These will be reviewed on an annual basis.
15. All registrations will be carried out by the registrar and will be issued within 10 working days of request. Zootechnical Certificates will be issued to the new owner of the animal.

7. Details on the information on the system for recording pedigrees of breeding animals and data use.

Data on breeding animals which will be collected by Breeders and by Sheep Ireland will be stored on the Sheep Ireland electronic database system. The following table outlines the data collected, who records it and its usage:

Data	**Recorded by**	**Use**
Parentage	Breeder	Maintaining Flock book, Genetic Evaluations and Flock reports
Date of Birth	Breeder	Maintaining Flock book, Genetic Evaluations and Flock reports
Sex	Breeder	Maintaining Flock book, Genetic Evaluations and Flock reports
Flock of Birth	Breeder	Maintaining Flock book, Genetic Evaluations and Flock reports
Lambing Difficulty	Breeder	Genetic Evaluations and Flock reports
Ewe Milk ability	Breeder	Genetic Evaluations and Flock reports
Lamb Vigor	Breeder	Genetic Evaluations and Flock reports
Animal Pedigree ID	Breeder	Maintaining Flock book
Lamb Mortality	Breeder	Genetic Evaluations and Flock reports
Animal NSIS	Breeder	Maintaining Flock book, Genetic Evaluations

		and Flock reports
Animal Name	Breeder & Society	Maintaining Flock book
Pedigree Status	Society	Maintaining Flock book
Litter Type (E.T., Single, Twin)	Breeder	Flock Reports
Rearing Type	Breeder	Genetic Evaluations and Flock reports
Lamb Weights	Breeder & Sheep Ireland	Genetic Evaluations and Flock reports
Mature Weight	Breeder & Sheep Ireland	Genetic Evaluations and Flock reports
Muscle and Fat Depth	Sheep Ireland	Genetic Evaluations and Flock reports
Genotype	Breeder	Parentage Verification, Breed Composition, Genetic Evaluation & Flock Report
Pregnancy scan result	Breeder & Sheep Ireland	Flock Report
Lameness score	Breeder & Sheep Ireland	Genetic Evaluations and Flock reports
Dag Score	Breeder & Sheep Ireland	Genetic Evaluations and Flock reports
Carcass Weight	Breeder & Sheep Ireland	Genetic Evaluations
Carcass Confirmation	Breeder, Society &	Genetic Evaluations

	Sheep Ireland	
Carcass Fat	Breeder, Society & Sheep Ireland	Genetic Evaluations
Animal Movement	Breeder, Society & Sheep Ireland	
Mating dates	Breeder	Flock Reports
Service Type (AI, Natural)	Breeder	Flock Reports
Mastitis	Breeder & Sheep Ireland	Animal Reports
Management Group	Breeder	Genetic Evaluations
Ewe Body Condition	Breeder & Sheep Ireland	Flock Reports
Lamb Quality Score	Breeder & Sheep Ireland	Flock Reports
Prolapsed Womb	Breeder & Sheep Ireland	Flock Reports

8. Selection and Breeding Objectives

The main objective of the breeding programme is to adhere to the breed standards by developing the positive physical traits of shape, confirmation, fleece quality etc., and also improving the genetic merit of the specific breed traits using the euro star evaluations of the animal.

The Lamb Plus Programme run by Sheep Ireland records performance, data and computes evaluations within the breed- this involves recording mating information, lambing dates, birth weights, forty days and weaning weights, back fat and muscle scanning plus health traits - the traits are outlined in the table in the previous section.

The resulting euro star data and evaluations are published by Sheep Ireland on a weekly basis from May onwards (see section on genetic evaluations).

Breeders have access to all information on their flocks through the Sheep Ireland Website using a personal password. The Society encourages all breeders to partake in the Lamb Plus Programme. Reports on all aspects of the breeding programme are available as management aids e.g. inbreeding checker.

Breeders should use maternal and terminal information when selecting animal for breeding so as to ensure improvement in both traits within the flock and meet the breeding objectives of the breed - when selecting breeding stock, a breeder should use all the information available in conjunction with a visual appraisal of the animal.

9. Details on Performance Testing and Genetic Evaluation

The service of genetic evaluation of the breed is provided by Sheep Ireland. Sheep Ireland produces two genetic Indexes, the Replacement Index and the Terminal Index. Both indexes are aimed at increasing the profitability of the breed. The purpose of the Terminal Index is to identify animals/bloodlines that produce the most profitable carcass (and also taking lambing & animal health into account). The Replacement index is to identify animals that are most suitable to breed profitable replacement females. The weightings in each index were developed using the Teagasc Bio-Economic Model. The increase in profitability is a result of increased productivity (e.g. Increase weight gain, increased litter size), reduced labor (e.g. less lambing difficulty) and reduced costs (e.g. reduced dagging costs, reduced lameness control costs).

In order to generate more accurate genetic evaluations Sheep Ireland runs a central progeny test (CPT) in which the Society participate. The CPT comprises of four flocks with over 2,500 cross-bred ewes. Each year approximately five purebred Suffolk Rams (in addition to other purebred breeds) from performance recording flocks are used to AI a portion of these ewes. The subsequent lifetime data of each of the resulting lambs is then intensively recorded by Sheep Ireland personnel. Lambs are either sent to the processors or retained as breeding females. The retained females allow the genetic evaluation to test the maternal ability of each purebred Suffolk sheep bloodline. As new data is collected the genetic evaluations are updated to reflect the new data. Genetic evaluations are run weekly and are available to the public for flocks that avail of the Lamb Plus service. The data collected on these animals is captured using the Sheep Ireland App. This is the same App

used by breeders to record phenotypes on their flock. The data collected on the app is stored on the Sheep Ireland central database.

The Sheep Ireland genetic evaluations are independently validated by Teagasc (Teagasc is the state agency providing research, advisory and education in agriculture, horticulture, food and rural development in Ireland). Latest research from 2018 has shown that flocks that consistently use 5 Star (Top 20%) rams to breed in their flock that profitability could increase by €5 net profit/ewe/year.

Sheep Ireland has a Technical Advisory Group (TAG) which is comprised of two international geneticists with significant experience of breed improvement programmes, one Irish geneticist who has a detailed insight into Irish Sheep farms and a member of the Sheep Ireland board. This group reviews any changes to the genetic evaluation model before release. The TAG also advises on new directions of research to ensure the genetic evaluations are delivering the maximum feasible return for the Irish Sheep industry.

The evaluations are carried out on Mix99 and ASReml.

Emphasis for each trait for the terminal and replacement indexes is outlined in the following table:

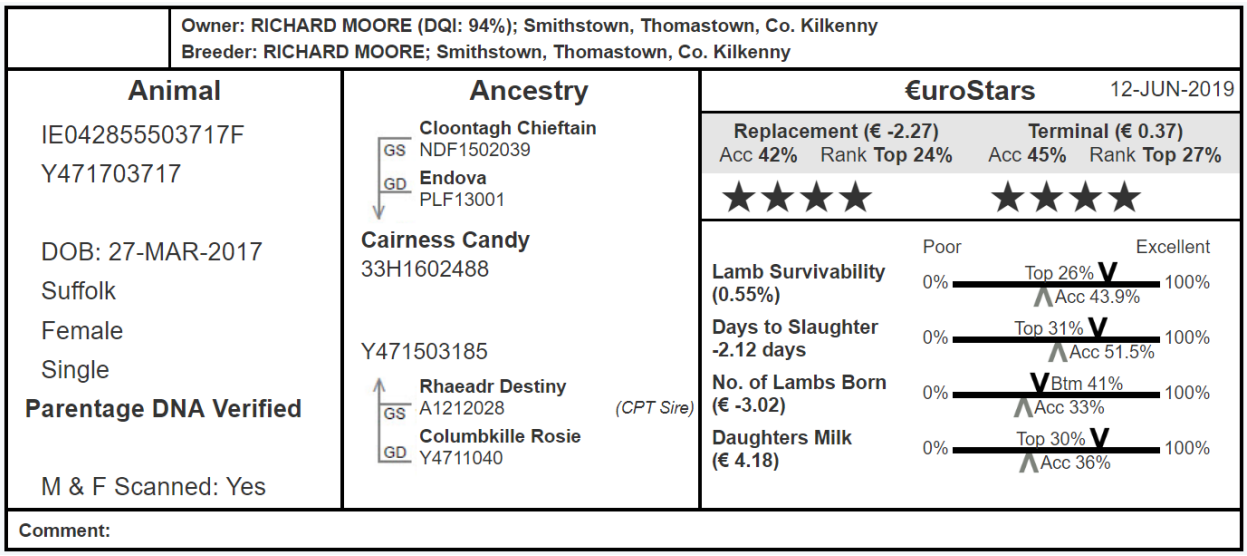
Relative emphasis

Trait	Terminal	Replacement	
Days to Slaughter	53.57%	17.93%	Growth
Car. Conf	11.33%	3.90%	
Car.Fat	3.59%	1.24%	
L.Ease.Single	0.21%	0.08%	Lambing
L.Ease.Multi	0.19%	0.08%	
L.Survival	29.17%	11.50%	
Health.Dag	1.76%	0.29%	Health
Health.Lame.Lamb	0.17%	0.03%	
Health.Lame.Ewe		0.05%	
Mat.DTS		11.32%	Maternal
Mat.Carc.Conf		4.75%	
Mat.Carc.Fat		1.50%	
Ewe.weight		5.03%	
Mat.L.Survival		0.09%	
Mat.L.Ease.Single		0.07%	
Mat.L.Ease.Multi		13.05%	
NLB		29.07%	

Further information on the interpretation and understanding of the Eurostar's can be found in the Sheep Ireland Guide (https://www.sheep.ie/wp/?page_id=33).

Genetic evaluation results are made available to breeders via their personal flock profile account on Sheep Ireland and a direct link to the results is printed on each animal's Zootechnical Certificate. The evaluations of rams are also available to the public via the 'Ramsearch.ie' which is maintained by Sheep Ireland. This allows commercial farmers to identify and source their next purebred stock ram based on genetic indexes.

When sales catalogues are being generated by the society for any sale, the genetic evaluation results are automatically included in the sales catalogue. See an example of a catalogue below.



Owner: RICHARD MOORE (DQI: 94%); Smithstown, Thomastown, Co. Kilkenny
Breeder: RICHARD MOORE; Smithstown, Thomastown, Co. Kilkenny

Animal

IE042855503717F
Y471703717

DOB: 27-MAR-2017
Suffolk
Female
Single
Parentage DNA Verified

M & F Scanned: Yes

Ancestry

GS **Cloontagh Chieftain** NDF1502039
GD **Endova** PLF13001

Cairness Candy
33H1602488

Y471503185

GS **Rhaeadr Destiny** A1212028 *(CPT Sire)*
GD **Columbkille Rosie** Y4711040

€uroStars 12-JUN-2019

Replacement (€ -2.27)	**Terminal (€ 0.37)**
Acc **42%** Rank **Top 24%**	Acc **45%** Rank **Top 27%**
★★★★	★★★★

	Poor — Excellent
Lamb Survivability (0.55%)	Top 26% / Acc 43.9%
Days to Slaughter -2.12 days	Top 31% / Acc 51.5%
No. of Lambs Born (€ -3.02)	Btm 41% / Acc 33%
Daughters Milk (€ 4.18)	Top 30% / Acc 36%

Comment:

10. Technical Activities Outsourced

The Society outsources the provision of Flock book services to:

Sheep Ireland,

Highfield House, Shinagh, Bandon, Co. Cork.

Telephone: 023 882 0451

Fax: +353 (023) 882 0229

Email: query@sheep.ie

Website: www.sheep.ie

The following services are provided by Sheep Ireland to the Irish Suffolk Sheep Society by agreement:

- **Zootechnical Certificates**: An online system to allow the Suffolk Sheep Society to produce Zootechnical Certificates for Suffolk.
- **Sales Catalogues**: An online system to allow the Irish Suffolk Sheep Society to generate Suffolk sales catalogues will be provided.
- **Birth notifying lambs**: An online system to allow Irish Suffolk breeders to birth notify their Suffolk lambs annually will be provided.
- **Requesting pedigree registrations**: An online system to allow Suffolk breeders to request the pedigree registration of their Suffolk birth notified lambs will be provided.
- **Mating records**: An online system to allow Suffolk breeders to record the mating records of their Suffolk ewes annually will be provided.
- **Flock inventory maintenance**: An online system to allow Suffolk breeders to maintain their Suffolk flock inventories up to date will be provided.
- **Inbreeding checker**: An online inbreeding checker to allow Suffolk breeders to assess the inbreeding risk associated with potential sires against ewes within their flock.
- **Breeder inventory downloads**: An online facility to allow the Suffolk Sheep Society secretary to download the flock inventory of any Suffolk breeders for any date in the past.
- **Online Flock book**: The Irish Suffolk Sheep Society Flock book will only be available online and Sheep Ireland will not be providing this in paper form

11. Zootechnical Certificate

A Zootechnical Certificate is issued to animals in the main section of the flock book and contains the ancestry of the animal. The certificate follows the model form provided in Commission Implementing Regulation 2017/717. The Society registrar will be the only person allowed to print certificates.

The certificate for females is printed on pink paper and for the males is printed on blue paper.

The breeder's details will be the person whose flock the animal was born into and the owner will be the Society breeder whose flock the animal is currently located in.

Gnomically tested animals will be denoted by the genomic symbol on the certificate.

The Society have not availed of any derogations options in relation to the issuing (Article 31(1) of the Animal Breeding Regulations) or the modalities of the Zootechnical Certificates.

Animals recorded in the supplementary section will be issued with a certificate from the Society.