

# A4b3. CERTIFICATE OF TRANSGENIC EMBRYO PRODUCTION FROM CELL LINE

Breed: \_\_\_\_\_ CELL LINE IDENTIFICATION: \_\_\_\_\_ Sex:  M  F

Production of cell line must have been documented and reported to record agency on Form A4b1 (Certificate of Source of Nuclear DNA - Cell Line Identification)

## Identification of Animal from which Oocytes were aspirated:

Name: \_\_\_\_\_ No.: \_\_\_\_\_ Breed: \_\_\_\_\_ Oocyte Recovery Date: \_\_\_\_\_  
cc Year Month Day

OR Oocyte Identification No: \_\_\_\_\_ Date Enucleated: \_\_\_\_\_  
Taken from form A4b2 Year Month Day

Date of Nuclear Transfer: \_\_\_\_\_  
Year Month Day

Passage Number: \_\_\_\_\_

Total Viable Embryos Produced: \_\_\_\_\_

No Frozen: \_\_\_\_\_

Freeze Date: \_\_\_\_\_  
Year Month Day

No. Transferred: \_\_\_\_\_

Signature: \_\_\_\_\_ Firm: \_\_\_\_\_  
Leader of Embryo Production Team

ET Code: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

# B4. CERTIFICATE OF EMBRYO TRANSFER OF TRANSGENIC EMBRYOS (see reverse side for coding instructions)

## IF FROZEN

Date of Embryo Transfer \_\_\_\_\_ Surgical \_\_\_\_\_ Non-surgical \_\_\_\_\_ Other \_\_\_\_\_  
 if all trans. Yr. Mo. Day  
 at one time

Freeze Date on straw \_\_\_\_\_  
 Practitioner I.D. \_\_\_\_\_  
 Straw No.'s \_\_\_\_\_

One Embryo was transferred to each of the following recipients unless it is noted that more than one was transferred.

RECIPIENT IDENTIFICATION		Breed Code	Days Since Estrus	Stage Code	Qual. Code	Straw No.	Embryo Transfer Date	Cell Line ID	Comments*
Ear Tag, Registration or Tattoo No.									
1.	_____	_____	_____	_____	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____	_____	_____	_____	_____
11.	_____	_____	_____	_____	_____	_____	_____	_____	_____
12.	_____	_____	_____	_____	_____	_____	_____	_____	_____

Signature \_\_\_\_\_ Firm \_\_\_\_\_  
Technician/Practitioner or Team Leader that transferred the Embryos

ET Code \_\_\_\_\_ Phone ( ) \_\_\_\_\_

\*Use comment column for any special notations and/or identify the location of the opposite half of a divided embryo. Pregnancy can be noted.

## CONDITIONS FOR COMPLETING EMBRYO CERTIFICATES

A4b3. Complete one or more Certificates of Transgenic Embryo Production From Cell Line for each production of embryos from one cell line. The leader of the embryo production team responsible for identifying the breed, the cell line, the oocyte batch number taken from A4b1 and the procedure record set forth is attesting to the accuracy of all information when signing this form.

If oocytes are collected from a registered/identified female, precede registration number with the International Standards Organization (ISO) three letter country code (cc). The person signing the form is certifying that such female was identified with her Certificate of Registration/Identification.

B4. Certificate of Embryo Transfer of Transgenic Embryos will be completed to the extent that is necessary and/or appropriate to identify each recipient into which an embryo is transferred. If frozen embryos are transferred, the Certificate of Embryo Production will be completed by the responsible practitioner or by transferring from the original Certificate of Embryo Production or by attaching a copy. The practitioner or embryo production team leader signing the Certificate of Embryo Transfer is attesting to the accuracy and completeness of the identification of the embryos being transferred and the identity of the recipients into which the embryos are being transferred.

One copy of a complete Certificate of Embryo Transfer of Transgenic Embryos, with Certificate of Embryo Production, will be submitted to the appropriate breed organization or recording agency as required by the respective organization, which may require the record before resulting animals can be registered or officially identified. One copy should be provided to the owner.

Should any embryo in a recipient as identified hereon change ownership, it is important that the requirements of the respective breed organization or recording agency responsible for recording the identification of the new owner be followed. This may be required before resulting animals can be registered or officially identified. This would normally be the responsibility of the owner of record.

Use the following codes to describe the embryo, identify the breed, and identify the month in all dates.

### STAGE OF DEVELOPMENT

#### No. Stage

- 1 Unfertilized
- 2 2- to 12-cell
- 3 Early Morula
- 4 Morula
- 5 Early Blastocyst
- 6 Blastocyst
- 7 Expanded Blastocyst
- 8 Hatched Blastocyst
- 9 Expanded Hatched Blastocyst

### QUALITY OF EMBRYOS

- Code 1. Excellent or Good  
 Code 2. Fair  
 Code 3. Poor  
 Code 4. Dead or degenerating
- Refer to IETS Manual, Third Edition, Chapter 9, for description of codes.

### MANIPULATION OF EMBRYOS

- N - Not Manipulated  
 D - Divided  
 F - Female by Biopsy  
 M - Male by Biopsy  
 U - Sex Undetermined by Biopsy
- Use comment column to describe other biopsies.

### SEXED SEMEN

- X - Female    Y - Male

- |           |    |
|-----------|----|
| January   | JA |
| February  | FE |
| March     | MR |
| April     | AP |
| May       | MY |
| June      | JN |
| July      | JY |
| August    | AU |
| September | SE |
| October   | OC |
| November  | NO |
| December  | DE |

### BOVINE

- |                          |                            |                                 |  |                                |
|--------------------------|----------------------------|---------------------------------|--|--------------------------------|
| AN - Aberdeen Angus      | BZ - Bonsmara              | GS - Gascone                    | MR - Marchigiana                       | RO - Rotbunte                  |
| AB - Abundance           | CP - Campine Red Pied      | GV - Gelbvieh                   | ME - Maremmana                         | SA - Salers                    |
| AF - Afrikaner           | CN - Canadienne            | GI - Gir                        | MI - Meuse Rhine Issel                 | SG - Santa Gertudis            |
| AK - Ankole              | CB - Charbray              | GR - Groninger                  | MO - Montbeliard                       | SE - Senapol                   |
| AY - Ayrshire            | CH - Charolais             | GU - Guernsey                   | MG - Murray Grey                       | MS - Shorthorn (milking)       |
| BA - Barzona             | CA - Chianina              | GZ - Guzera                     | NE - Nelore                            | SS - Shorthorn (beef - Scotch) |
| BE - Beefalo             | DB - Danish Black & White  | HC - Hays Converter             | NG - Nguni                             | SP - Shorthorn (polled)        |
| BF - Beef Friesian       | DJ - Danish Jersey         | HH - Hereford (horned)          | NM - Normande                          | IS - Shorthorn (Illawarra)     |
| BM - Beefmaster          | RW - Danish Red & White    | HP - Hereford (polled)          | NR - Norwegian Red                     | SI - Simbrah                   |
| BB - Belgian Blue        | DE - Devon                 | SH - Highland (Scotch Highland) | PA - Parthenais                        | SM - Simmental                 |
| BG - Belted Galloway     | DR - Dexter                | HO - Holstein                   | PI - Piedmont                          | DS - South Devon               |
| BD - Blonde D'Aquitaine  | DZ - Drakensberger         | HY - Hybrid (Alberta Hybrid)    | PR - Pie Rouge                         | SX - Sussex                    |
| BX - Boran               | FP - East Flemish Red Pied | IB - Ibage                      | PZ - Pinzgauer                         | TA - Tarentaise                |
| BO - Braford             | ER - Eringer               | IN - Indu Brasil                | RA - Ranger                            | TG - Tasmanian Grey            |
| BR - Brahman             | FA - Flamand               | JE - Jersey                     | AR - Red Angus                         | TL - Texas Longhorn            |
| BH - Brahmental          | FL - Fleckvieh             | KB - Kobe (Wagyu)               | RB - Red Brangus                       | TU - Tuli                      |
| BL - Braler              | FR - Fribourg              | LU - Luing                      | RD - Red Dane (Red Danish, Danish Red) | WB - Welsh Black               |
| BN - Brangus             | FB - Friesian (Belgian)    | LM - Limousin                   | WW - Red Holstein                      | WF - West FLEMISH Red          |
| BU - Braunvieh           | DF - Friesian (Dutch)      | LR - Lincoln Red                | RP - Red Poll                          | XX - Crossbreds                |
| SB - Brown Swiss (beef)  | GA - Galloway (beef)       | MA - Maine-Anjou                | RN - Romagnola                         |                                |
| BS - Brown Swiss (dairy) | GD - Galloway (dairy)      |                                 |  |                                |

### CAPRINE

- |                 |             |               |                    |                   |
|-----------------|-------------|---------------|--------------------|-------------------|
| AL - Alpine     | AG - Angora | CH - Cashmere | KR - Kalahari Reds | NU - Nubian       |
| TO - Toggenburg | SA - Saanen | BG - Boer     | LN - La Mancha     | SG - Savanna Goat |

### EQUINE

- |                          |                      |                |                    |                        |
|--------------------------|----------------------|----------------|--------------------|------------------------|
| AS - American Saddlebred | CL - Clydesdale      | MN - Morgan    | QH - Quarter Horse | SF - Suffolk Punch     |
| AP - Appaloosa           | HA - Hackney (Horse) | PL - Palomino  | SE - Shetland      | TW - Tennessee Walking |
| AB - Arabian             | HK - Hackney (Pony)  | PE - Percheron | SI - Shire         | TH - Thoroughbred      |
| BL - Belgian             | HU - Hunter          | PN - Pinto     | SN - Standardbred  | WE - Welsh             |

### PORCINE

- |                |                   |                    |                        |                            |
|----------------|-------------------|--------------------|------------------------|----------------------------|
| YO - Yorkshire | DU - Duroc        | BK - Berkshire     | PE - Pietrain          | LW - Large White (British) |
| LA - Landrace  | LC - Lacombe      | SO - Spotted       | TM - Tamworth          | LB - Large Black (British) |
| HA - Hampshire | PC - Poland Chine | CW - Chester White | WS - Wessex Saddleback |                            |

### OVINE

- |                        |                       |                         |                                 |                               |
|------------------------|-----------------------|-------------------------|---------------------------------|-------------------------------|
| AN - Afrino            | DM - Dohne Merino     | IL - Ile de France      | OX - Oxford                     | MM - S. African Mutton Merino |
| BP - Blackhead Persian | DO - Dorset           | LE - Leicester          | SP - Persian (Speckled/Skilder) | ST - Southdown                |
| BC - Border Cheviot    | DR - Dormer           | LI - Lincoln            | RA - Rambouillet                | SU - Suffolk                  |
| CO - Columbia          | DP - Dorper           | ME - Merino             | RM - Romnelet                   | VR - Van Rooy                 |
| CR - Corriedale        | FN - Finnish Landrace | MT - Montadale          | SB - Scottish Blackface         | WD - White Dorper             |
| DA - Damara            | HA - Hampshire        | NC - N. Country Cheviot | SR - Shropshire                 |                               |