

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.

C4. The Certificate of Embryo Freezing of Transgenic Embryos will be completed with the Certificate of Embryo Production, whenever embryos are frozen. The practitioner or leader of the embryo production team signing the certificate is attesting to the identification of each embryo with container labeling as set forth within the Certificate, along with the accuracy of all other information.

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

When a frozen embryo changes 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.

When frozen embryos are exported, a special application for embryo export is to be submitted to the respective breed organization in the country from which embryos are exported, with the appropriate fee.

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 - Flaman | 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 - Luig | 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 | |