Sector of Forestry- Special Needs?

by

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Secretary

European Forest Nursery Association
What is Forest Reproductive Material?

Anything from which a forest will grow
Seeds

Variability in size & shape of tree seed

95% is generated from seed
5% by vegetative reproduction
from setts, cuttings or micro-propogation

- Poplar setts
- Picea sitchensis cuttings
- Micro-prop of Prunus

Forestry Commission
Micro-propogation Services Ltd
All seeds are destined to become plants

1-year old Acer pseudoplatanus  1u1 (2 yr old) Quercus robur  2+2 (4 yr old) Abies alba

which are all covered by the FRM Directive
Origin and Provenance

- Provenance – where any batch of seed is actually collected
- Origin – where in the natural distribution of a tree species the FRM came from
The natural distribution of Picea sitchensis from Forestry Commission Bulletin 127
The natural distribution of *Quercus petraea*
Forest Reproductive Material (FRM)
Directives

- 66/404 – Genetic Quality
- 71/161 – External Quality
- 99/151 – Combining both
The new Directive 1999/105

- EFNA first consulted by EC in 1982!
- Early 1990’s revision was made a condition of Swedish and Finnish entry to EU
- EC represented on OECD working group on the revision of their own scheme
- 1995 Draft agreed
- 1999 Directive adopted
<table>
<thead>
<tr>
<th>Type of Basic Material</th>
<th>Category of reproductive material</th>
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<tbody>
<tr>
<td></td>
<td>Source-identified</td>
</tr>
<tr>
<td>Seed Source</td>
<td>⬤</td>
</tr>
<tr>
<td>Stand</td>
<td>⬤</td>
</tr>
<tr>
<td>Seed Orchard</td>
<td>⬤</td>
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<tr>
<td>Parents of Families</td>
<td>⬤</td>
</tr>
<tr>
<td>Clone</td>
<td>⬤</td>
</tr>
<tr>
<td>Clonal Mixture</td>
<td>⬤</td>
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</tbody>
</table>

 categories in both old and new Regulations

- Introduced in new Regulations

Categories of material which may be marketed and the types of source from which they may derive
Seed Source

Aberdeen, Scotland

Cirencester, England

Collecting beech seed in two Seed Sources
Stand of Fagus sylvatica, Langholm, Scotland
Seed Orchards

Cone sacks in Pinus pinaster seed orchard  SW France  Vilmorin
Other types of Basic Material

- Parents of families – one or more individual parent trees can be used for the direct production of planting stock
- Clones
- Clonal Mixtures
Categories of FRM
Source Identified

Stand of Quercus robur Attingham, England
Selected

Bundesamt für Wald, Austria

Phenotypically superior stand Fagus sylvatica 1100m asl
Tested

Frost/bird protection on Tested Prunus avium Seed Orchard France

Vilmorin
Plus trees are selected

Progenies grown on

Superior trees grafted and planted in orchards

Seed collected and tested

If significant improvement orchard is “Tested”

15-30 year process
Selected stands can also be tested

Tested Quercus robur stand Velp-01 Holland    S.de Vries
Qualified

Seed from untested orchards can now be marketed as “Qualified”
Other changes in the Directive

• An increase in species covered by the Directive from 13 to 44 plus possibility for MS to add other species locally important

• FRM for forestry and non-forestry uses now covered

• Official certification for inter-MS trade no longer needed

• The end of the annual Derogation uncertainty
External quality - plants

- EEC Standard removed
External Quality - Seeds

- No change from 71/161 Directive
- Seeds have no quality standards
- Statement of quality
  - Germination (Viability) %
  - Purity %
  - 1000 pure seed weight producing
  - number of germinable (viable) seeds per kg
- Quality very variable between species
  - Quercus 220 germinable seeds per kg
  - Betula >250,000 viable seeds per kg
Is EFNA happy with the genetical aspects of the new Directive?
After 17 years gestation, genetically, the new Directive covers all the industry’s immediate needs
Tree Breeding
Tree Breeding in EU has almost exclusively been within each MS due to-

- its different forestry objectives and
- the different climates in which its forests grow.
Tree breeding is -

- usually extremely long term and therefore very expensive
- Predominantly carried out by Government programmes and seed often kept by state
- For short rotation crops (eg Populus in Italy) sometimes done by private companies
- Can be risky due to policy changes in MS
  - eg Belgium  All seed orchards in Forêt de Soignes felled for conservation reasons
  - eg UK  1988 change in tax regime
  - 1988 23,000ha
  - 1991 12,000ha
  - 2009 <3,000ha conifer afforestation per annum
The TreeBreedex Programme

- Douglas Fir (Pseudotsuga menziesii) in SW France
- Hybrid Larch (Larix x eurolepis) in Holland
Hybrid Larch (Larix x eurolepis)

• Chance crossing between Larix decidua and Larix kaempferi in Dunkeld, Scotland
• Hybrid vigour
• Disease resistance of Japanese parent
• Growth and form of European parent
Hybrid Larch Seed Orchard
Problems with Hybrid Larch seed production

- Species tend to flower at different times and regularly suffer frost damage
- Proportion of true hybrid very variable
- Chronic shortage but high demand
- Cost of seed very high >€3,500 per kg
EFNA would like to see some test of hybridity before the seed can be sold.
EFNA is alarmed at number of new tree diseases occurring and would like some effort put into finding disease resistance or practical cure.

Phytophthora ramorum  Sudden Oak Death
Phytophthora kernoviae  Oak disease newly found in Cornwall, UK
Chalara fraxinea  New disease in Ash spreading from Baltic
Dothistroma septosporum  Red Band Blight of Pinus spp
Phytophthora disease of Alnus glutinosa
Pseudomonas syringae pv. aesculi  Bacterial bleeding of Horse Chestnut
Thaumetopoea processionea  Processionary Moth of Oak
Is EFNA content with the Directive?

- Problems with Supplier’s Documentation
- Better enforcement of some Articles
Supplier’s documents

EFNA welcomes not having to obtain official certificates for inter- and sometimes intra-MS sales
BUT!

The variability of and different languages used is proving a nightmare
## Austria

**Lieferschein-Nr. 071092**  
15.03.2007

<table>
<thead>
<tr>
<th>Pos</th>
<th>Herkunft</th>
<th>Menge</th>
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<tbody>
<tr>
<td>1</td>
<td>Mattighofen</td>
<td>2.250 STK</td>
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</tbody>
</table>
|     | *Fagus sylvatica* (Eiche)  
|     | Es 50 (10m: 300-600m)  
|     | Alter: 20  
|     | Sortierung: 60°  
|     | Stammarz.-Nr.: A/04/01-07/2003  
|     | ausgewählt, aufdroben, forstlicher Zweck |
| 2   | Spital am Pynn | 6.575 STK |
|     | *Fucus abies* (Fichte)  
|     | Fl 24 (10a:60-90-13)  
|     | Alter: 2+2  
|     | Sortierung: 30/60  
|     | Stammarz.-Nr.: nicht PGO 2003  
|     | ausgewählt, unbekannt, forstlicher Zweck |
| 3   | Darrington | 5.300 STK |
|     | *Pseudotsuga menziesii* (Douglasie)  
|     | Zone 403-1015, USA  
|     | Alter: 2+0  
|     | Sortierung: 15/10  
|     | Stammarz.-Nr.: BFW 1.2-8/2004  
|     | quellengefördert, indigen, forstlicher Zweck |
| 4   | Paul | 800 STK |
|     | *Pinus cembra* (Zirbe)  
|     | Zt: 2,110m: 100-1050m  
|     | Alter: 2+0  
|     | Sortierung:  
|     | Stammarz.-Nr.: A/00/12-02/2003  
|     | ausgewählt, aufdroben, forstlicher Zweck |
| 5   | New Mexico | 500 STK |
|     | *Pseudotsuga menziesii glauca* (Blase Douglasie)  
|     | Gila NP, USA  
|     | Alter: 20  
|     | Sortierung: 7/15  
|     | Stammarz.-Nr.: BFW 2.3-62/2005  
|     | quellengefördert, indigen, Zweck: Christbaumzucht |
| 6   | Aerop pseudoatlantis (Bergahorn) | 45 STK |
|     | B.Ah: 2,7 (2,40)  
|     | Alter: 1+1  
|     | St.Zent.: A/04/185-02/2003  
|     | ausgewählt, aufdroben, forstlicher Zweck |
| 7   | Fagus sylvatica (Rotsche) | 25 STK |
|     | R.Ba 310 (2,3m)  
|     | Alter: 3+0  
|     | St.Zent.: A/0255-06/2004  
|     | ausgewählt, aufdroben, forstlicher Zweck |
| 8   | Larix decidua (Lärche) | 9.860 STK |
|     | La PfSt 2,1.5-3.2 (6)  
|     | Alter: 2/1  
|     | St.Zent.: A/01/06-01/2004  
|     | qualifiziert, forstlicher Zweck |
**Czech Republic - Seeds**

**VZOR**

Průvodní list č. ___________ / ___________ / ___________ (číslo jednotného registru dodavatele)

k oddílu reprodukčního materiálu

č. ___________ / ___________ / ___________ (kód obce)

Individuální lot dodavatelů

**ČÁST A**

**Dodatek:**

- Fenální osoba:
- Obchodní firma nebo název:
- Adresa tržiště pobytu:
- Adresa sídla podnikání:
- Školka (pomocovna):

**Právnická osoba:**

- Obchodní firma:
- Adresa sídla firmy:
- Adresa místa podnikání:
- Školka (pomocovna):

Identifikační číslo dodavatele:

Licence č. ___________ ze dne ___________ nabyla právní moci

**Odběratel:**

- Fenální osoba:
- Obchodní firma nebo název:
- Adresa tržiště pobytu:
- Adresa místa podnikání:

**Právnická osoba:**

- Obchodní firma:
- Adresa sídla firmy:
- Adresa místa podnikání:

Český název dle výrobcy:

Václavský název dle výrobcy:

Oblast provenience:


Výzkumné jméno:


Užití potrubí reprodukčního materiálu: [1] pro obnovu lůna a selektování, [2] pro výzbroj taxonické sestavy

Evidenční číslo uraně jednotky:

**Sestrojení materiálu:**

- Množství:
- Množství ihla
- Množství osiva:

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**Individual lot Supplier’s Certificate**
Single lot Supplier’s document and Plant Passport
United Kingdom

SUPPLIER’S DOCUMENT FOR PLANTS OR PARTS OF PLANTS FOR MULTIFUNCTIONAL FORESTRY
Forest Reproductive Material (Great Britain) Regulations 2002/Voluntary Scheme for the Certification of Native Trees and Shrubs

<table>
<thead>
<tr>
<th>Supplier’s document no:</th>
<th>Date supplied:</th>
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<tbody>
<tr>
<td>Supplied by:</td>
<td>Supplied to:</td>
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<thead>
<tr>
<th>Species (botanical name)</th>
<th>Quantity (No.)</th>
<th>Master Certificate No.</th>
<th>Type of basic material</th>
<th>Category</th>
<th>National Register of Basic Material identities</th>
<th>Origin</th>
<th>Age and type of plants</th>
<th>Nature</th>
<th>Veg. Prop.</th>
<th>(Y/N)</th>
</tr>
</thead>
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</table>

Comments:

1. RP = seed source, S=Fertiliser, P=Parents of Family, SI=Sanitary Incinerator
2. Source identity, S=Certified, Q=Qualified, T=Trade, TE=Trade (Pecuniarily approved)
3. For seed sources, enter only region of provenance or native seed zone
4. For native seed zones, insert in where altitude is greater than 300m
5. Indigenous, non-indigenous (state origin known), unknown
6. e.g. 9X1, 4X1, P
7. P = containerised
8. Plants, Parts of plants

*FRM in evidence prior to 1st January 2003 is marketed under Art. 28(3) EC Directive 1999/105. For this material, where no certificate has been issued insert “Art.28(3)”* (March 2004)
EFNA welcomes the news that the EC is coming forward with a proposal to number the items of information on the Supplier’s document but would still prefer a standard format.

EFNA Website  www.efna.co.uk
EFNA would like better enforcement of some articles of the Directive

- Some MS still requiring import permits
- Some MS imposing restricted zone status on Alnus and Fraxinus plants
- Some MS demanding information extra to that in Directive
- Some MS demanding FSC or PEFC certification as well as EU Certification
EFNA claims that

Local Governments and Forestry Departments in one MS have been infringing Community Law since 1993
History of EFNA complaint

• Nov 2003  EFNA lodges official complaint
• Dec 2005 DG Sanco asks for evidence and are told it will take 2-5 years to gather
• June 2007 EFNA provides some data but told complaint lapsed
• Dec 2007 EFNA obtains Counsel opinion
• Feb 2008 EFNA re-submits consolidated complaint
- EFNA spent 2 year’s income from reserves on legal opinion
- Counsel opinion confirms EFNA position that the MS is infringing several articles
- Meanwhile EFNA awaits EC response and its nurseries are still experiencing restriction on trade!
Thank you for your attention!