



# 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



95% is generated from seed

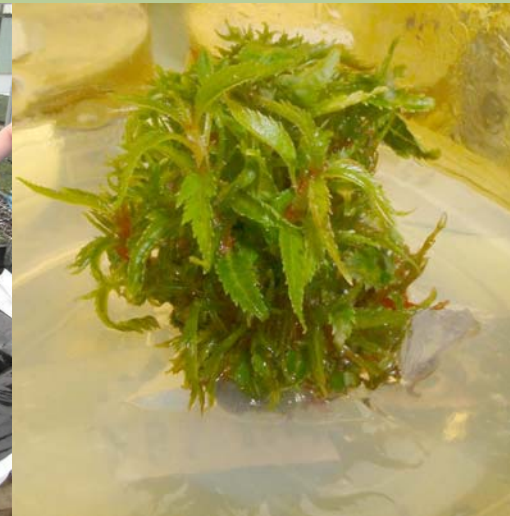
**5% by vegetative reproduction  
from setts, cuttings or micro-propagation**



**Poplar setts**



**Picea sitchensis cuttings**



**Micro-prop of Prunus**

Forestry Commission

Micro-propagation 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



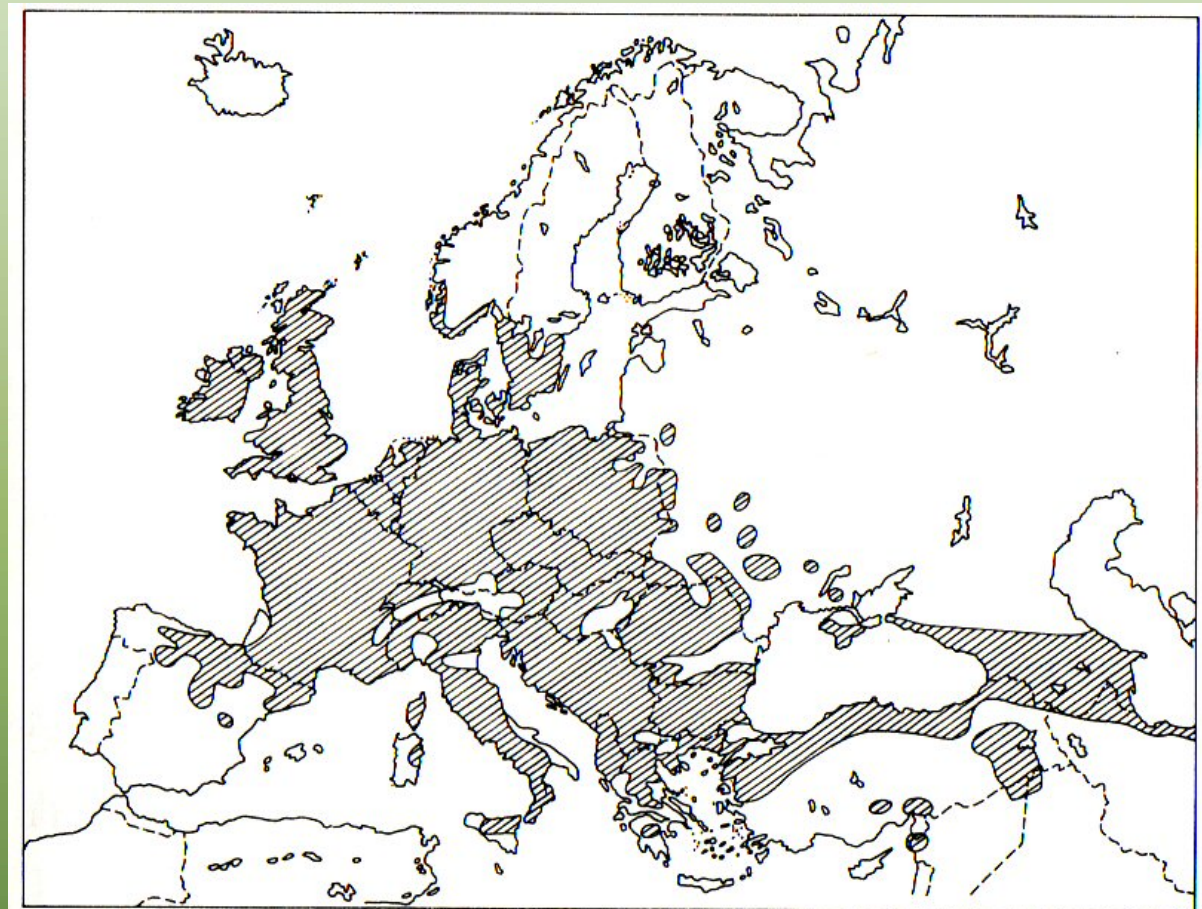
# Origin and Provenance

- 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 Sitka spruce (→ indicates disjunct population at Jug Handle Creek, California).



The natural distribution of *Picea sitchensis* from Forestry Commission Bulletin 127







# 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

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

	Type of Basic Material	Category of reproductive material			
		Source-identified	Selected	Qualified	Tested
Increasing refinement of source ↓	Seed Source	●			
	Stand	●	■		■
	Seed Orchard			●	■
	Parents of Families			●	●
	Clone			●	■
	Clonal Mixture			●	●
		Increasing genetic quality →			

■ 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



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 tree *Pinus sylvestris* Finland

- 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 xeurolepis*) 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





Bundesamt für Wald

Austria

## 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

*Thaumetoptera 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

Seite 1

Pos	Herkunft		Menge
1	Mattighofen	<b>Fraxinus excelsior (Esche)</b> Es 5(7.1/sm: 300-600m) Alter: 2/0 Sortierung: 60/+ Stammzert.-Nr.: A/40401-04/2003 ausgewählt, autochthon, forstlicher Zweck	2.250 STK
2	Spital am Phyrn	<b>Picea abies (Fichte)</b> Fi 24(IIa/3/9-13) Alter: 2+2 Sortierung: 30/60 Stammzert.-Nr.: nicht FVG 2003 ausgewählt, unbekannt, forstlicher Zweck	6.575 STK
3	Darrington	<b>Pseudotsuga menziesii (Douglasie)</b> Zone 403-10/15, USA Alter: 2+0 Sortierung: 15/30 Stammzert.-Nr.: BFW 1.2-8/2004 quellengesichert, indigen, forstlicher Zweck	5.300 STK
4	Paal	<b>Pinus cembra (Zirbe)</b> Zi 3(3.1/ts: 1600-1900m) Alter: 2+0 Sortierung: Stammzert.-Nr.: A/00612-02/2003 ausgewählt, autochthon, forstlicher Zweck	800 STK
5	New Mexico	<b>Pseudotsuga menziesii glauca (Blaue Douglasie)</b> Gila NF, USA Alter: 2/0 Sortierung: 7/15 Stammzert.-Nr.: BFW 2.3-E2/2005 quellengesichert, indigen, Zweck: Christbaumzucht	500 STK
6		<b>Acer pseudoplatanus (Bergahorn)</b> B.Ah 2(7.2/ko) Alter: 2/1 St.Zert.: A/41815-03/2003 ausgewählt, autochthon, forstlicher Zweck	45 STK
7		<b>Fagus sylvatica (Rotbuche)</b> R.Bu 31(9.2/sm) Alter: 2/0 St.Zert.: A/32515-06/2004 ausgewählt, autochthon, forstlicher Zweck	25 STK
8		<b>Larix decidua (Lärche)</b> Lä P12(1.2, 1.3, 2.2/ts) Alter: 2/1 St.Zert.: A/20606-01/2004 qualifiziert, forstlicher Zweck	9.860 STK

Delivery note used as Multi-lot Supplier's Document





# Czech Republic - Seeds



Příloha č. 18 k vyhlášce č. 29/2004 Sb.

## VZOR

Průvodní list č. .... / ..... / .....  
(č. jednotného registru (pořadové číslo) (rok)  
dodavatele)

k oddílu reprodukčního materiálu

č. .... / ..... / .....  
(kód obce) (pořadové číslo) (rok)

sadební materiál

### ČÁST A

#### Dodavatel:

Fyzická osoba:

Jméno, příjmení: ..... datum narození: .....

Obchodní firma nebo název: .....

Adresa trvalého pobytu: .....

Adresa místa podnikání: .....

Školka (provozovna): .....

Právnícká osoba:

Obchodní firma: .....

Adresa sídla firmy: .....

Adresa místa podnikání: .....

Školka (provozovna): .....

Identifikační číslo dodavatele: .....

Licence č.j. .... ze dne ..... nabyta právní moci .....

#### Odběratel:

Fyzická osoba:

Jméno, příjmení: .....

Obchodní firma nebo název: .....

Adresa trvalého pobytu: .....

Adresa místa podnikání: .....

Právnícká osoba:

Obchodní firma: .....

Adresa sídla firmy: .....

Adresa místa podnikání: .....

Český název dřeviny: .....

Vědecký název dřeviny: .....

Oblast provenience: .....

Původ: \* *autochtonní, neautochtonní z oblasti* ..... *neznámý*

Výškové pásmo: .....

Kategorie reprodukčního materiálu: \* *identifikovaný, selektovaný, kvalifikovaný, testovaný*

Účel použití reprodukčního materiálu: \* *pro obnovu lesa a zalesňování, pro zvláštní lesnický účel*

Evidenční číslo uznané jednotky: .....

#### Semenný materiál:

Množství:

Surovina ..... kg Osivo: ..... kg

Individual lot Supplier's Certificate



# Czech Republic - Plants

3. kopie Druh platby: fakturace

**PRŮVODNÍ LIST - ROSTLINOLÉKAŘSKÝ PAS**

<b>Průvodní list</b>	č.:	3632-L	330087	2007
sadební materiál	č. jednotného registru dodavatele		pořadové číslo	rok
<b>K oddílu reprodukčního materiálu:</b>		7882	00004	2006
	kód obce:		pořadové číslo	rok

**DODAVATEL:**  
 Obchodní firma: IČO:  
 Adresa sídla firmy:  
 Adresa místa podnikání:  
 Skolka (provozovna):  
 Licence č.: ze dne: nabyla právní moci: 26.10.2004

**ODBĚRÁTEL:**  
 Právnícká osoba:  
 Obchodní firma nebo název: IČO:  
 Provozovna:  
 Adresa sídla firmy:  
 Adresa místa podnikání:

Český název dřeviny: **Otše lepkavá** Vědecký název dřeviny: **Alnus glutinosa**  
 Oblast provenience: 31 Českomoravské mezíhoří Původ: neznámý  
 Výškové pásmo: 4 Kategorie reprodukčního materiálu: identifikovatelný  
 Účel použití reprodukčního materiálu: pro obnovu lesa a zalesňování  
 Evidenční číslo uznané jednotky: CZ-1-2C-OL-00043-31-4-E

Věk a způsob pěstování (vzorec) 1-1 Druh obalu (krytokořený sadební materiál):  
 Klasifikační označení (pouze u rodu Populus):

množství1:	3 000	výška1:	51-70	tloušťka1:	6
množství2:	0	výška2:		tloušťka2:	
množství3:	0	výška3:		tloušťka3:	
množství4:	0	výška4:		tloušťka4:	
Množství celkem:	3 000 ks	Forma balení:	50	Počet balení:	60

Sadební materiál byl množěn vegetativně: NE  
 Jedná se o geneticky modifikovaný materiál: NE  
 "předběžně uznáno" (jen u testovaného reprodukčního materiálu): NE

Vystaven dne 29.3.2007	Razítko, podpis osoby oprávněné vystavit průvodní list
Převzal (jméno, podpis):	

ES Rostlinolékařský pas CZ Státní rostlinolékařská správa: Číslo partie:  
 ZP (kód chráněné zóny) RP (náhradní pas):  
 COC (kód země původu nebo vyvážející země - country of origin - code)  
 Poznámka:

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

Supplier's document no:

Date supplied:

Supplied by:

Supplied to:

Name:

Name:

Address:

Address:

Telephone:

Email:

Species (botanical name)	Quantity (No.)	Master Certificate No.	Type of basic material <sup>1</sup>	Category <sup>2</sup>	National Register of Basic Material Identities <sup>3,4</sup>	Origin <sup>5</sup>	Age and type of plants <sup>6</sup>	Nature <sup>7</sup>	Veg. Prop. (Y/N)

Comments:

- 1. RP = seed source, STand, ORchard, Parents of Family, CLone, Clonal Mixture
- 2. Source Identified, SElected, QUalified, TEsted, TE (prov) (provisionally approved)
- 3. For seed sources, enter only region of provenance or native seed zone

- 4. For native seed zones insert h where altitude is greater than 300m
- 5. Indigenous, non-indigenous (state origin if known), unknown
- 6. e.g. 1+1, 1u1, P1 P = containerised
- 7. Plants, Parts of plants

\*FRM in existence prior to 1<sup>st</sup> 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)

## Multi-lot Supplier's document



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](http://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!**