



## **FutMon action D1**

# **Assessment of Damage Causes: feedback by field observers**

*(P. Roskams – INBO)*



# **1. Symptom description**

## **2. Extent**

## **3. Cause**

## **4. Reporting**

# D1 questionnaire



| Species                              | # plots   |
|--------------------------------------|-----------|
| <i>Betula pendula</i>                | 2         |
| <i>Fagus sylv.</i>                   | 23        |
| <i>Quercus robur</i>                 | 7         |
| <i>Q. petraea</i>                    | 4         |
| <i>Q. cerris</i>                     | 1         |
| <i>Q. cerris</i> + <i>Q. petraea</i> | 1         |
| <i>Q. suber</i>                      | 1         |
| <b>Broadleaved spec.</b>             | <b>39</b> |

|                          |           |
|--------------------------|-----------|
| <i>Picea abies</i>       | 16        |
| <i>P. abies/F. sylv.</i> | 3         |
| <i>Picea/Abies/Fagus</i> | 1         |
| <i>Picea/Pseudotsuga</i> | 1         |
| <i>Pinus sylv.</i>       | 20        |
| <i>P. halepensis</i>     | 2         |
| <i>P. nigra</i>          | 3         |
| <i>P. pinaster</i>       | 2         |
| <i>P. pinea</i>          | 1         |
| <b>Coniferous spec.</b>  | <b>49</b> |
| <b>TOTAL</b>             | <b>88</b> |

# D1 questionnaire



|                    |                             |                      |
|--------------------|-----------------------------|----------------------|
|                    | Assessment<br>damage causes | remarks/problems     |
| tree vitality (D1) | 84 plots                    | removals & mortality |
| crown condition    | 88 plots (84)               | cause                |

# 1. Symptom description



- **Symptoms can be described in different ways**
  - e.g. crown dieback by *Sphaeropsis sapinea*
    - Branches (2-10 cm) dead (SAF=23, symp=14, ext=5)
    - Browning of needles of all ages (SAF=13, symp=03, ext=5)



# 1. Symptom description



- **Dead branches**

- if dead twigs are part of a big dead branch → do not report dead twigs separately, only dead big branch



# 1. Symptom description



- **Multiple symptoms by same agent**  
→ report more important symptom only (e.g. yellowing + browning by Mildew)
- **Multiple symptoms by different agents**  
→ report multiple symptoms

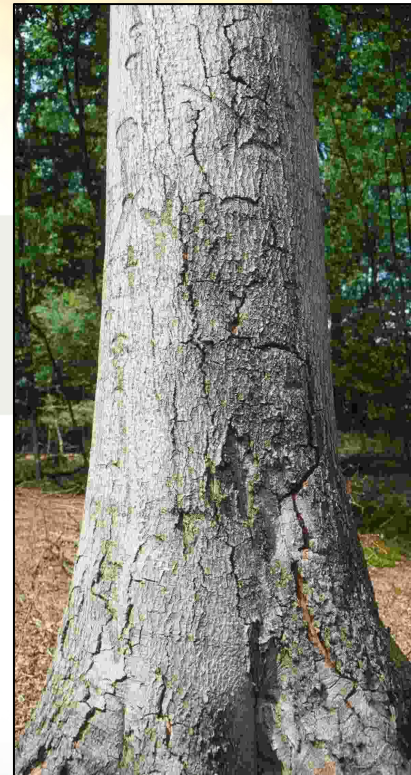


# 1. Symptom description



- **Evolution of damage can be reported using different symptom description**

- Sun scald beech
  - First stadium = necrosis
  - Later: debarking
- Same cause (heat/sun scald)





# 1. Symptom description



- **Dead trees:**

- No symptom description
- Only cause
  - SAF = 04
  - cause = 304 (decay/root rot fungi)
  - scient. name = HETEANN (*Heterobasidion annosum*)

# 1. Symptom description



- **Conclusions:**

- **consistent symptom description**  
→ Provide detailed guidelines for field observers
- **Deviation of national guidelines is allowed but a harmonised method for reporting is needed**  
(same symptom = same code for reporting)
- **Regular training of field observers is necessary**

## 2. Extent



- **Always refers to affected part:**  
→ % of leaves/needles, braches, stem affected
  - **% Defoliation (data CCA)  $\geq$  lower limit of extent class for symptom "devoured/missing leaves"**
    - E.g. Defoliation by insects = class 3 (21 – 40 %)
- Total defoliation score  $\geq$  25 %

## 3. Cause



- **Primary / secondary agent** (e.g. damage by hail, followed by fungal infection)
- **Should never be an empty field**  
→ if cause unknown: code 999
- **Digital code** (table A2)
  - Digital code as detailed as possible:  
e.g. defoliator → code 210 preferred and not 'insects' (200)
  - Especially for Fungi sometimes difficult to specify the right class (e.g. blight, dieback and canker, ...)
- **Scientific name (annex3): letter code**
  - Problem of synonyms (e.g. *Fomes annosus*, *Heterobasidion annosum*)  
→ check annex 3
  - Code for agent missing → contact PCC
  - Consistency: some organisms only in table 2

## 4. Reporting



- **Same symptom caused by 2 different agents**
  - manual: only the overall extent and the different factors involved should be reported
  - Reporting of more than 1 agent: specification needed in manual (2 identical records except for cause)

# 4. Reporting



| PlotNr | TreeNr | Spec | SAF | Sympt | CauseNr | CauseName | Ext |
|--------|--------|------|-----|-------|---------|-----------|-----|
| 1285   | 5      | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 5      | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 13     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 13     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 14     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 14     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 30     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1285   | 30     | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1400   | 8      | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |
| 1400   | 8      | 20   | 14  | 03    | 260     | ORCHFAG   | 1   |

## 4. Reporting



- **How to calculate overall defoliation, discolouration, ... if 2 or more different types are reported?**  
e.g. yellowing (extent class 1) + browning (extent class 1) by 2 agents