

## 2. Thematic project team workshop

### *Excursion guide Waldviertel*

**Work Package: Implementation T1**

**Activity: A.T.1.2**

**Deliverable: A.T.1.2.2**

Lead institution:	BOKU
Lead Author/s:	Eduard Hochbichler, Karl Schuster
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# 1. Agenda

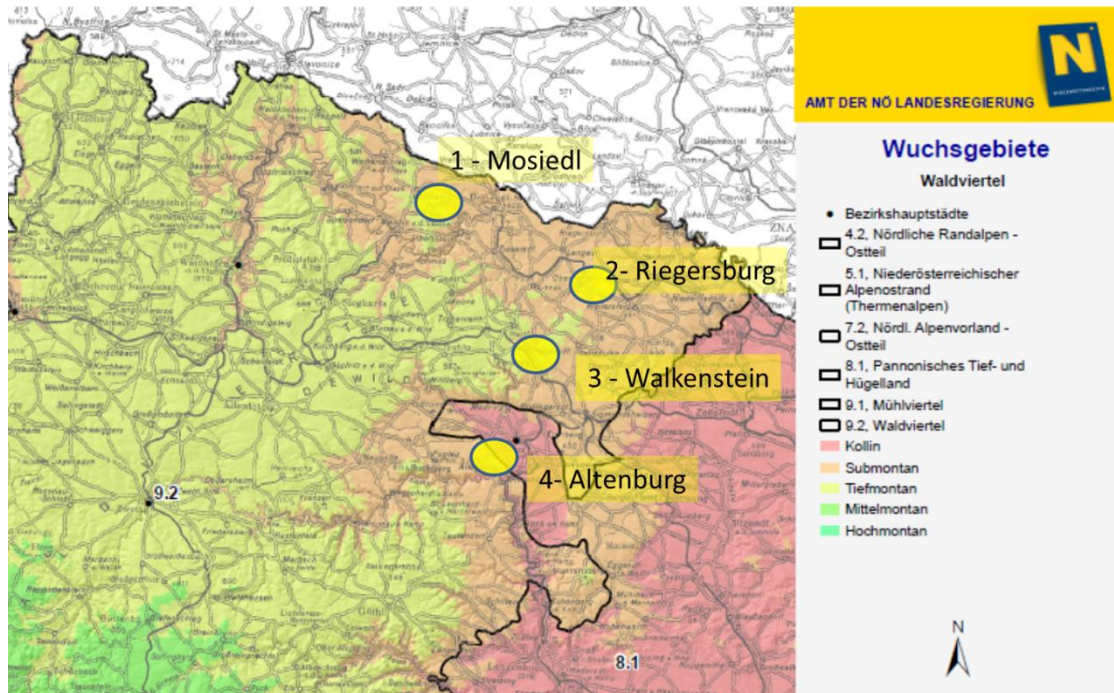
## October 1, 2021 - Excursion

**Departure: Hotel Liebnitzmühle, Liebnitz 38, 3820 Liebnitz**

08:00	Departure to Field Excursion (a bus will be provided by BOKU)
08:15 – 09:15	Visiting family-owned forestry small enterprise (at <i>Modsjedl</i> )
10:00 – 11:30	Visiting pilot area <i>ÖBf Riegersburg</i>
11:30 – 12:30	<b>Lunch</b> (at <i>ÖBf Riegersburg</i> )
13:00 – 14:00	Visiting family-owned forestry small enterprise (at <i>Walkenstein</i> )
14:30 – 15:30	Visiting pilot area forest enterprise of monastery <i>Altenburg</i>
15:30 – 16:30	<b>Coffee break</b> (at monastery <i>Altenburg</i> )
17:00	Return to hotel Liebnitzmühle

## 2. Facts about the excursion area

### 2.1. Overview excursion area



- average annual precipitation per year: 450 - 700 mm
- average annual temperature: 7(8) - 10 °

### 2.2. Forest ecoregions

#### 8.1. Pannonisches Tief- und Hügelland

altitudinal zones: colline-planar ~100 - 350(400)m; submontane (150) 350 -500 m

kollin-planar: Quercetum petraeae – cerris; Carpinetum (oak-hornbeam forests)

submontan: Fagetum ((beech, oak)

#### 9.2 Waldviertel

altitudinal zones: colline (200 – 300 (350)m; submontane (200) 300 -500 (650) m

kollin: Carpinetum (oak-hornbeam forests); scots pine-oak forests

submontane: Fagetum (beech; fir, oak, (spruce)).

## 3. Excursion point 1: Modstiedl, family-farm Fischer

- **Modstiedl, family-farm Fischer**



**Franz Fischer, 3820 Zemmendorf 1, farmer and forester**

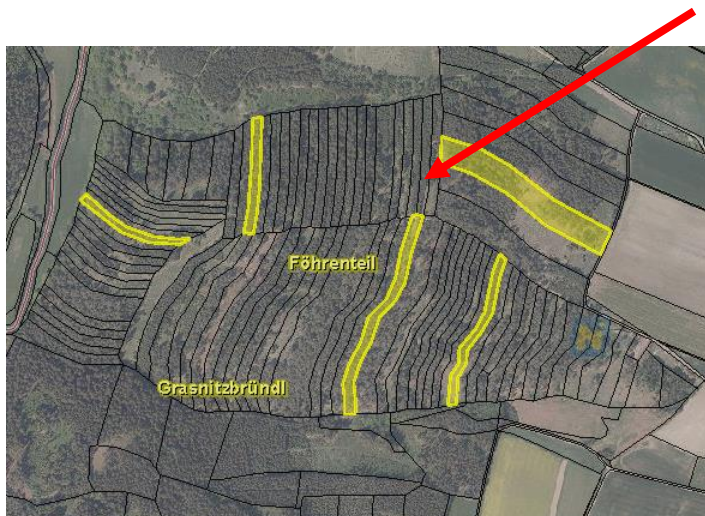
***President of the Forest-Owner Association of Lower Austria with more than 6500 members***

Whole Farm: 80 hectares

Forest area : 35 hectares

- 400-500 m above sea level
- tree species composition: 80% Norway spruce, 15% Scotch pine, 5% other species) on 25 different stands/forest parcels
- damaged forest area since 2015: 18 ha spruce, 1 ha pine, total irregular cuttings 6000 m<sup>3</sup>

**Forest owner structure**



## 3.1. Basics about Chamber of Agriculture in Lower Austria

### Organization of the Advisory of Lower Austria

Forest service in the districts - federal state and **Chamber of agriculture**

NGO – Land&Forst for bigger companies (mostly legal advice and advocacy)

NGO – Forest owner association (wood sales and joint purchasing)

Private companies – civil engineers (management concepts and forest maps)

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### Main Tasks of the Chamber (Department of Forestry)

#### (Forest)Advisory

- Reforestation
- Thinning
- Logging
- Subsidies
- Wood sales
- Forest education
- Forest road building
- Forest maps
- .....

#### Advocacy

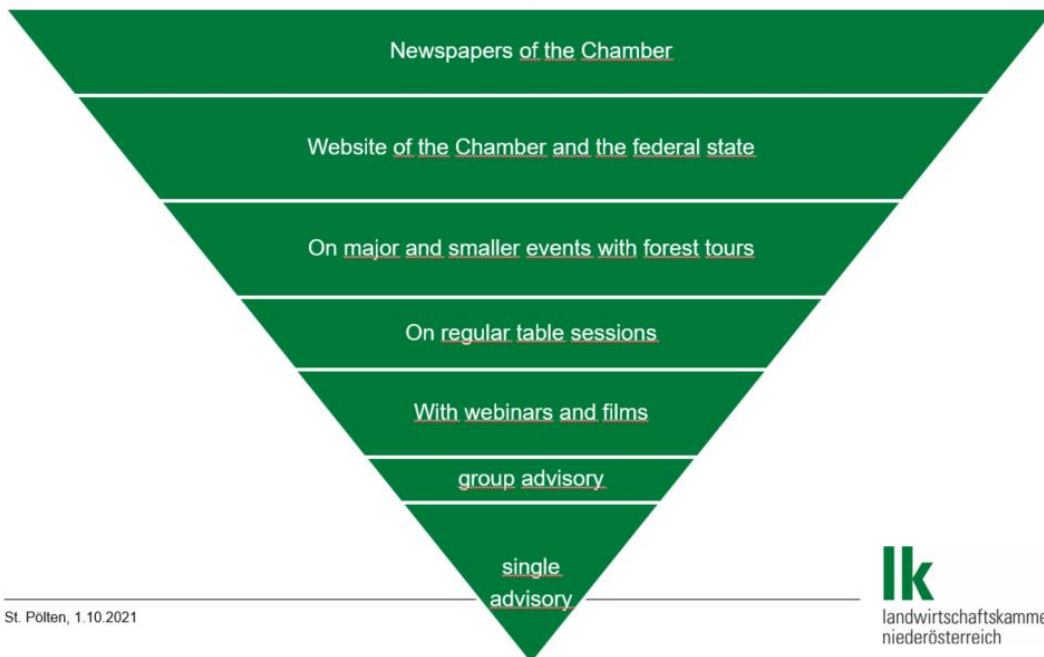
- We help the farmers and forest-owners in all aspects of their work
- We give assistance in public authorities
- We inform customers about products and about the work in the forest
- .....

The farmers in Austria have to be member of the Chamber and have to pay for membership, so most of the advisory is for free.

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## How do the forest owners get the information?



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## Challenges for the advisors

Some forest owners will do nothing – no reforestation (from forest law: time for reforestation is 5 year, for natural regeneration 10 years)

Some forest owners only plant spruce and pine again

Many small forest owners have no forest knowledge and are completely overstrained – after the reforestation we will have the next problem with pruning for quality production

There are only few check areas where people can look at the different stadiums of cultivation

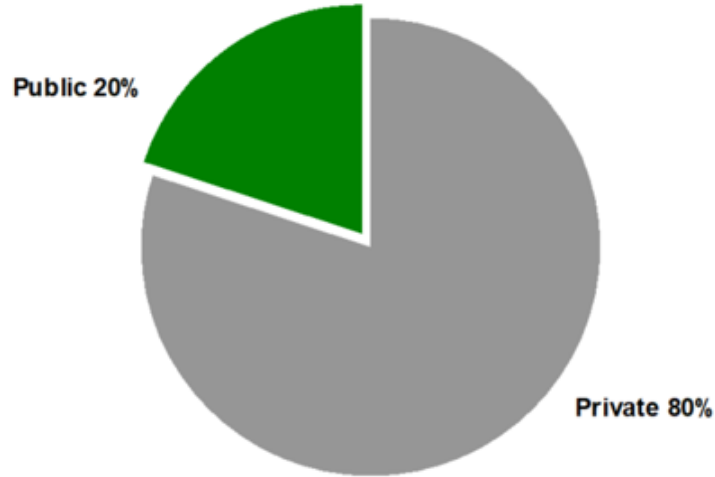
The small structure of the forest plots (mostly under 1 hectare)

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# Austrian forest owner I

Austrian forests are in private hands

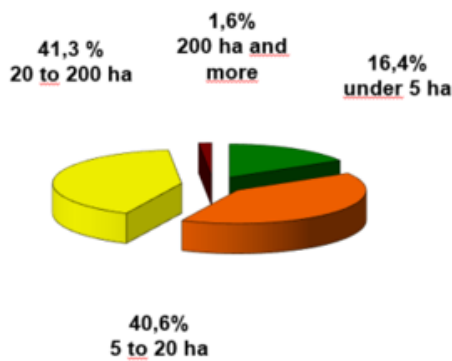


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Folie 6

# Austrian forest owner II

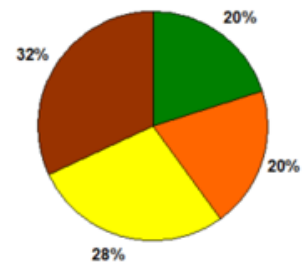
Small scaled business –  
family forestry



Percentage / size

Quelle: Statistik Austria, Agrarstrukturerhebung 2007

Owner category –  
all types and their quantity



Family forestry  
Part time farmer  
Living in small town  
Urban

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Folie 7



## Basis for advisory - Guidelines for Silviculture

„Bible“ of Silviculture for Lower Austria

Only recommendations, but also the basis for the subsidies

Created by the University of Agriculture (Hochbichler), the federal state forest and the Chamber of Agriculture

Financed by the federal state forest



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## Forest subsidies for reforestation

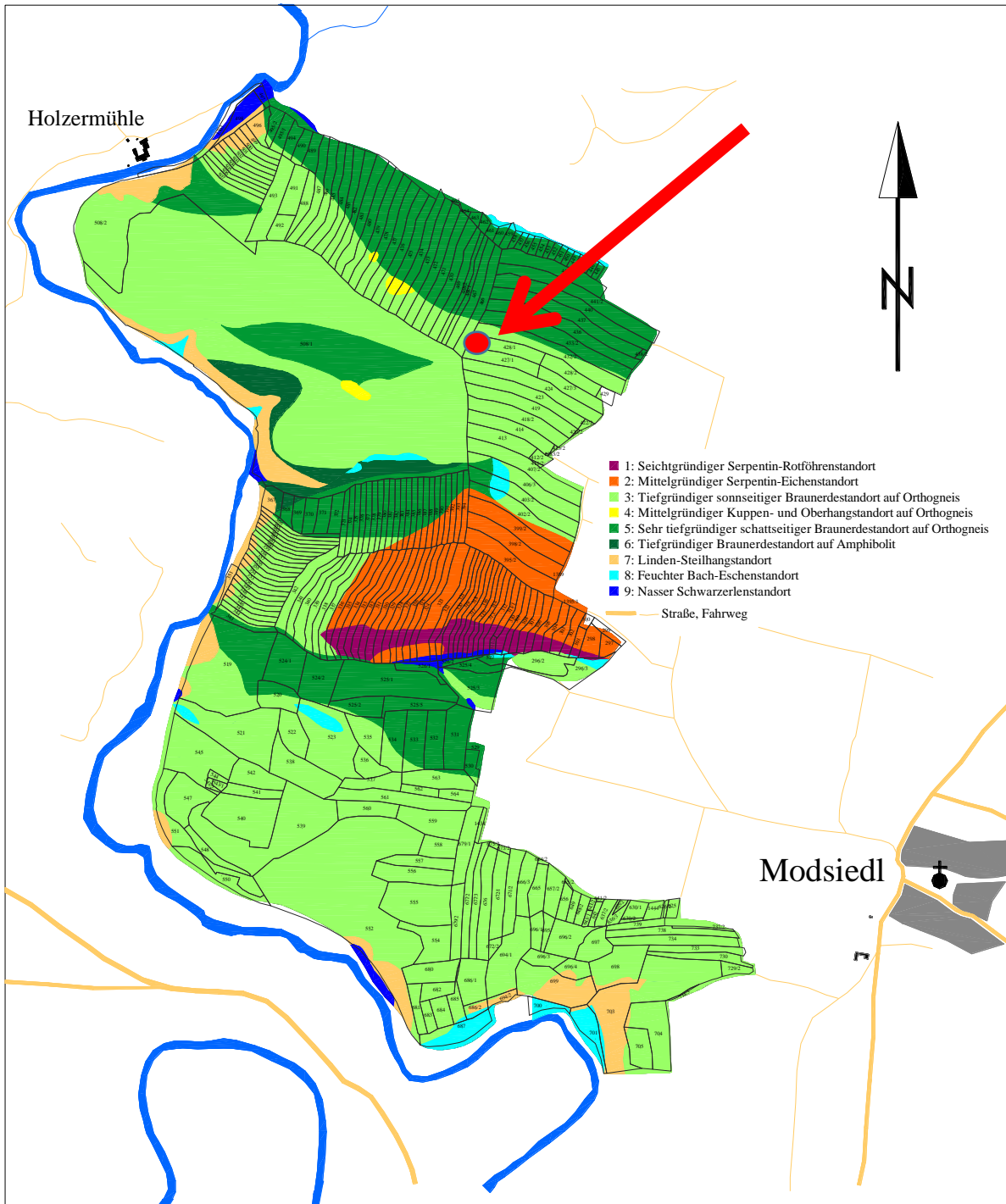
	Standard costs per plant in Euro	Percent of subsidies
spruce	1,70	60 – 80 %, it depends on the region (Forest developing plan)
fir	3,10	
other needle species	2,50	
broad leaved trees	3,50	
bushes	5,50 – 6,40	
seldom species	6,80	
weeding	1,00	
mulching	1400 per ha	
fencing	6 – 15 per meter	
Bark beetle damage payments	3.500 € per ha	For 2018 and 2019 (with Satellite pictures)

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### 3.2. Site types and mapping (2033)

KG Modsiedl with about 350 ha (We stand on red point, about 500 m above sea level): in cooperation with the Federal Forest Research Institute in Vienna.



### 3.3. Tree species choice (recommendations)

[Green: well-suited, orange: suitable, Red: not suitable]

Site	Spruce	Pine	Oak	Beech	Ash	Linden	Black alder	Fir	Larch	Douglas fir	Mountain maple	Common maple	Plane maple	Cherry	Hornbeam	Birch
1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

### 3.4. Excursion stands

**Forest stand 1** : KG Modsiedl , GNR: 428/1 - 0,66 ha (33 x 200 meter)

Site type (light green): fresh, deep brown soil (sandy loam to loamy sand) on Orthogneis, south exposition, water capacity good, pH between 4 and 5.

**reforestation:** tree species composition and spacing: 30 % spruce, 15 % fir, 25 % mountain maple (2,5 x 2,5 m), 30 % oak (2,5 x 1,25 m)

**forest owners made common fencing**

**subsidies (Waldfonds): 60 % of standard costs**

**Forest stand 2 (age: 20 y)**

**natural succession:** pioneer crop dominated by poplar, willow and birch, admixed oak, spruce, pine; canopy cover and the tree species fulfill the requirements of the Austrian Forest Act

## 4. Excursion point 2 - State Forest (ÖBF AG) in Riegersburg

Forstbetrieb Waldviertel-Voralpen (Bernhard Funcke)

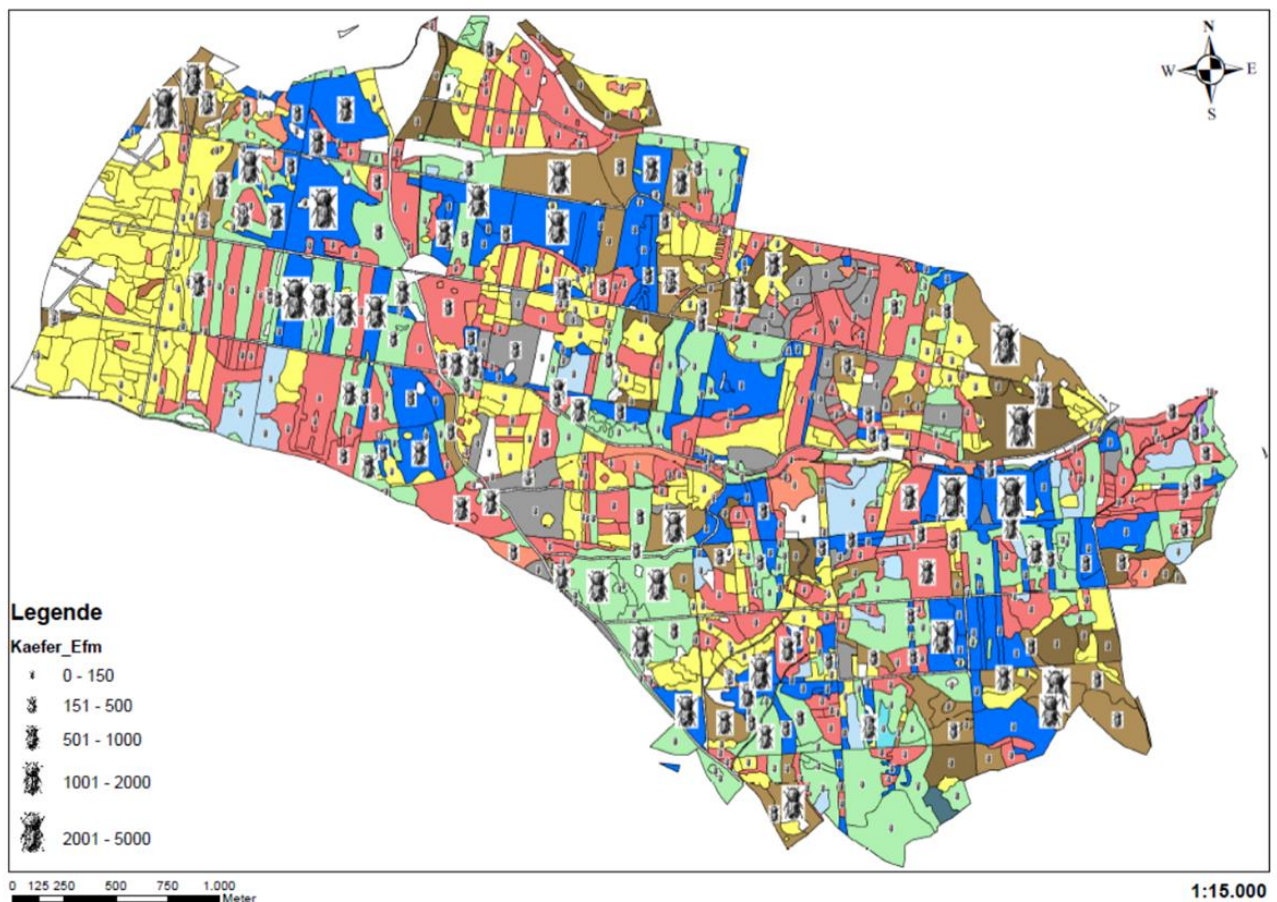
Forest area 37.300 ha; annual cutting volume 162.000 m<sup>3</sup>

Forstrevier Droß (Martin Schönsgibl)

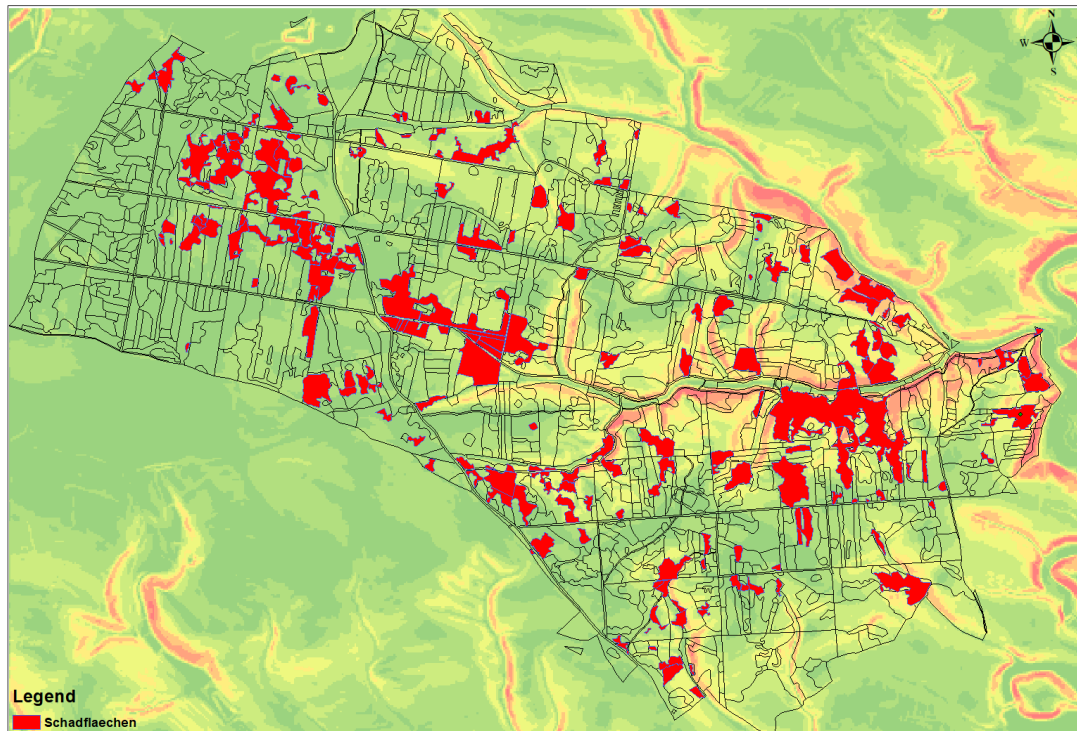
Revierteil Riegersburg (1.100 ha)

- **damaged area since 2015: 140 ha (severe drought; bark beetle)**

**Forest map (age class; amount of damaged volume)**



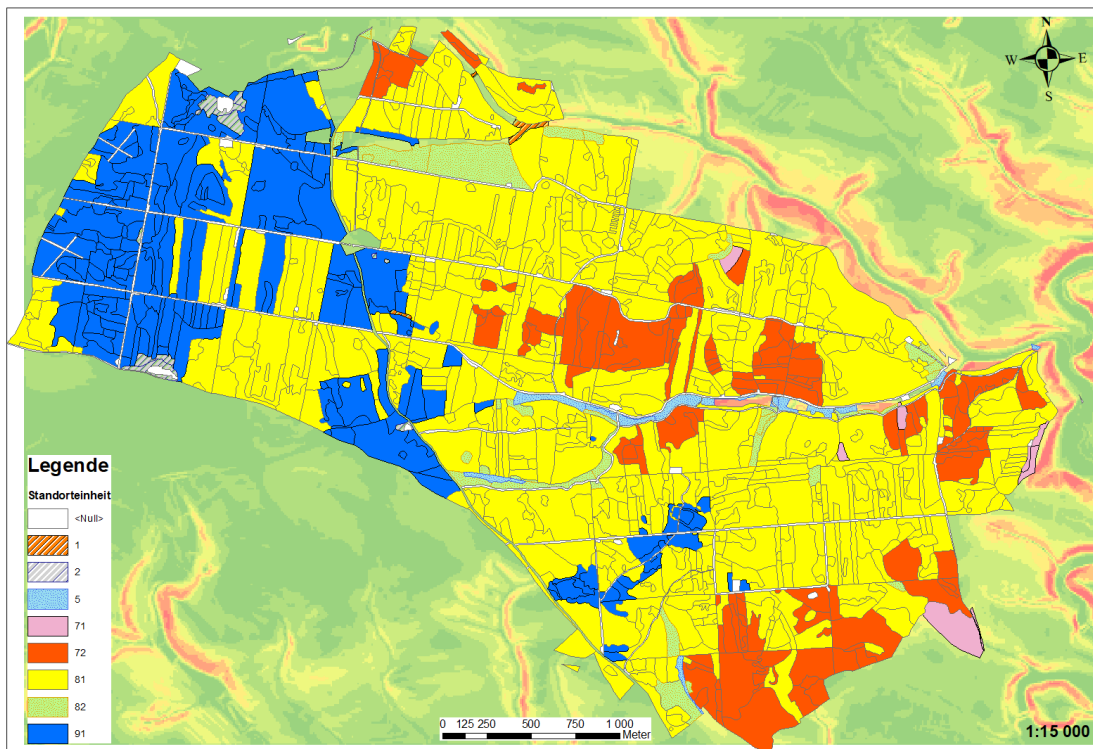
## Damaged area of bak beetle (2106 – 2019)



0 125 250 500 750 1000 Meter

1:15 000

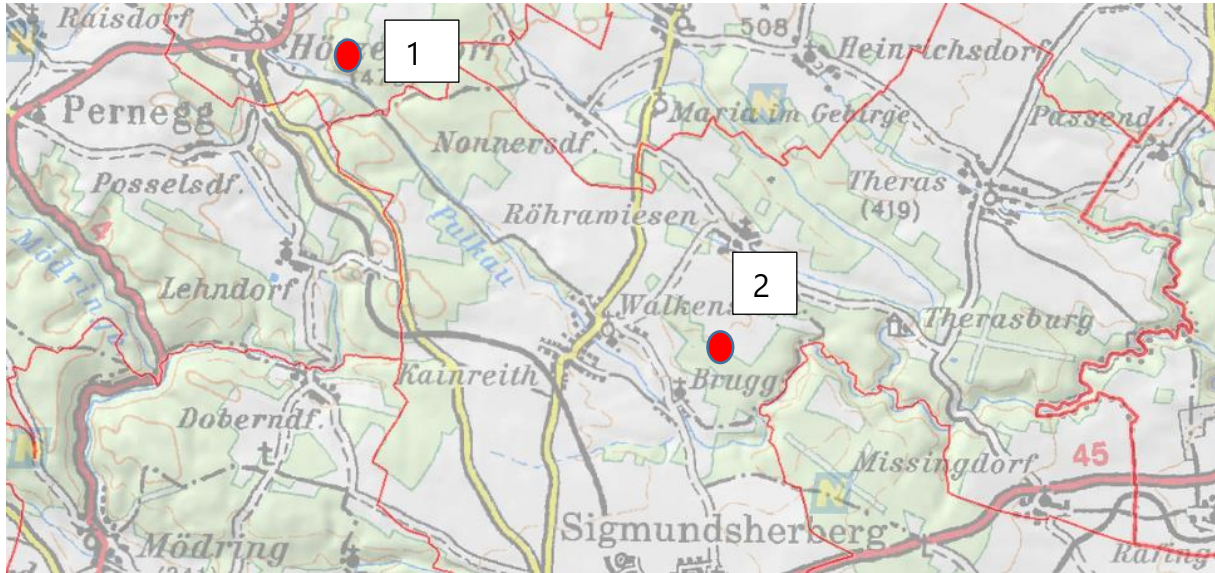
## Site types and mapping



0 125 250 500 750 1000 Meter

1:15 000

## 5. Excursion point 3: Walkenstein, family-farm Hofer



**Herbert and Christoph Hofer, 3952 Röhrwiesen 7, farmer and forester**

***Chairman of the district Horn Chamber of Agriculture (representative of the farmers in Horn)***

Whole Farm: 128 hectares

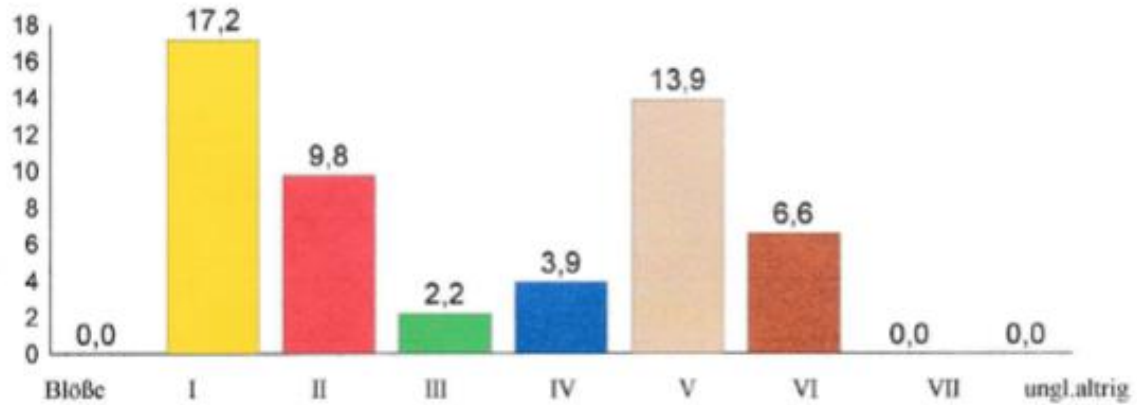
organic production of different agricultural crops

Christmas tree plantations

Forest: 54 hectares (36 stands/forest parcels)

- tree species composition: 24% spruce, 19% scots pine, 21% fir, 14% oak, 6% larch, 8% douglas fir, 8% other broad-leave trees (beech, ash, maple, cherry)
- Damages 2015: 6,5 ha spruce, 3,5 ha pine, 0,5 ha fir; irregular cutting volume 1600 m<sup>3</sup>

## Age class structure (ha)



### **Forest stand 1:**

Site characteristic: 530 m sea level; site type: pseudogley with loamy sand to sandy loam, deeper with loamy clay

Reforestation: partial area planting (spacing 14\*14m; **small group: (nest):** 25 oaks in 1.5 x 1.5 m; total 1000 oaks per ha), spruce 2.0 x 2.0 m; protected against browsing with wooden boards; competition of Calamagrostis grass

advantage to normal spacing [2.0 x 1.0 m, only 1/5 of oak-plants are needed]

### **Forest stand 2 (age 40 y)**

Site characteristic: 450 m sea level; leached brown soils with silt loam, pH from 4-5, high water capacity

100 % douglas fir, mean height 24 m, dbh up to 45 cm, yield class 14;

plus-trees are pruned;

thinning activities are planned in short term

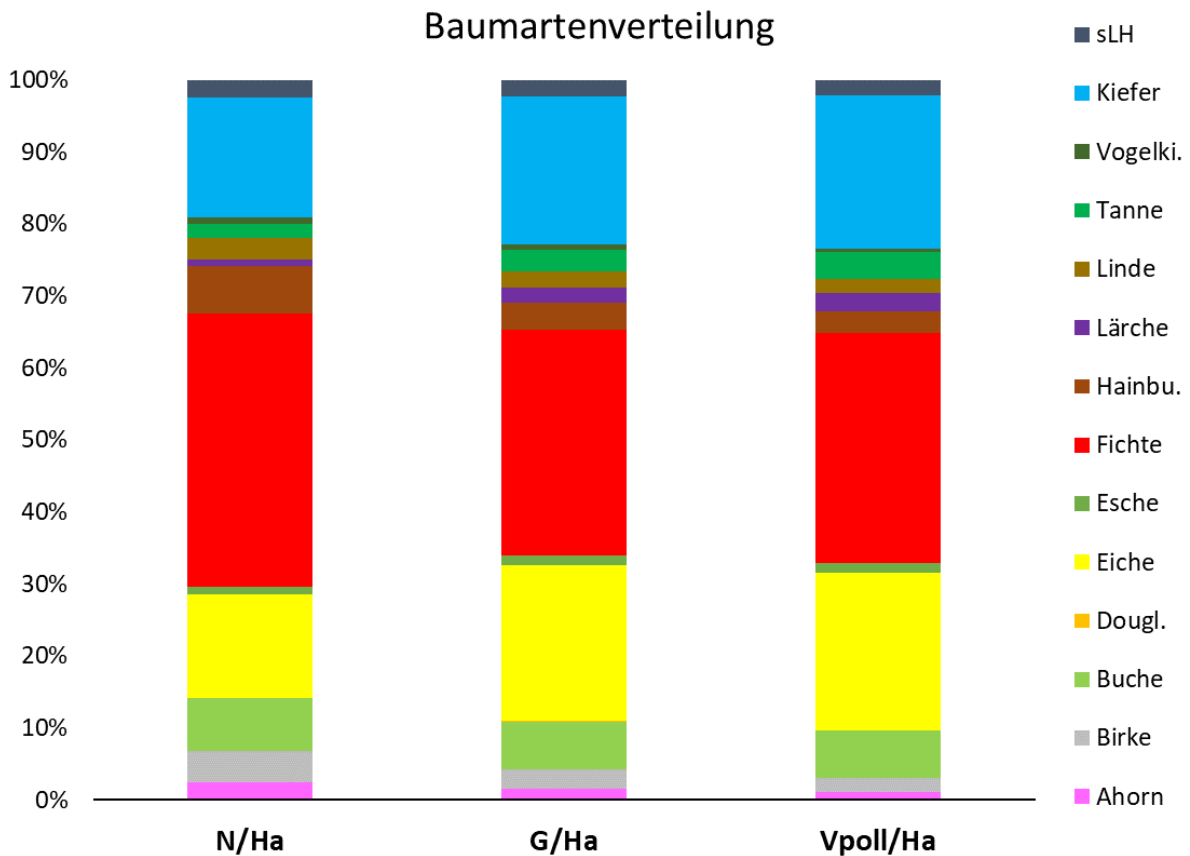
some damages from Pityogenes chalcographus mostly on unfavorable sites

## 6. Excursion point 4: Monastery of Altenburg

**Manager (Betriebsleiter):** FD Ing. Herbert Schmid

Forest area: 2800 ha (800 ha Natura2000) - 2 forest districts: Altenburg, Wildberg; 260 und 600 m a.s.l.

Tree species composition (stand; dbh  $\geq$ 8cm)



- damaged area since 2015: 240 ha (snow breakage; bark beetle)
- age class I: about 340 ha (young growth stand; thicket)



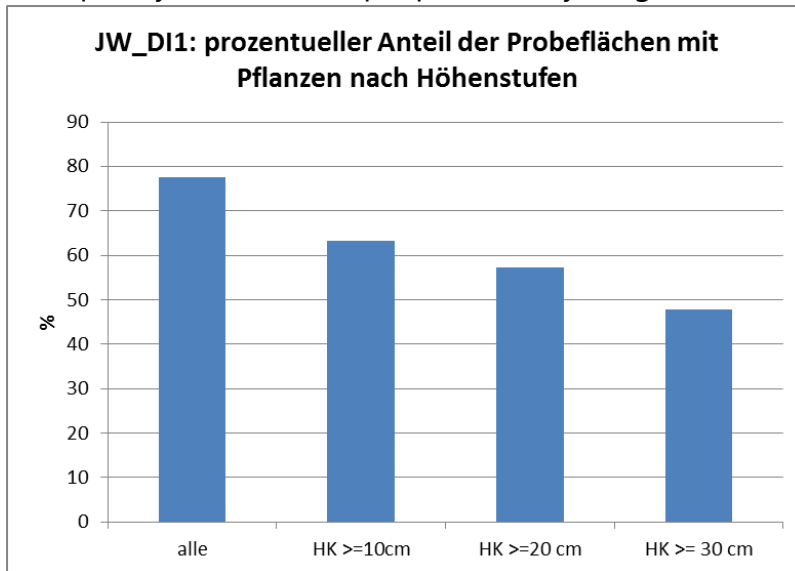
## ➤ Forest conversion strategy: natural succession (regeneration)

### Young stand characteristic (stem number per ha; tree species composition)

young growth stand and thicket: 14.765 n/ha ( $s_x\% = \pm 7,8\%$ )

thicket: 450 n/ha ( $s_x\% = \pm 9,5\%$ )

Relative frequency (in %) of sample plots with young trees over height classes



Tree species composition over height classes

