The history and the future of forest education in Europe

- Prof. Dr. Dr. h. c. Bastian Kaiser –

Sękocin Stary
13-15 March 2018
The initial question...

- Where exactly did the story begin?
  - with the first tree?
  - with the first use of wood?
  - with the first wood-trading-act?
  - with the first implementation of a management-plan?
  - with the beginning of the first forestry training?
  - with the first forestry faculty?
The initial question...
Sylvicultura oeconomica, oder haußwirthliche Nachricht und naturmäßige Anweisung zur wilden Baum-Zucht (1713)

Hannß Carl von Carlowitz
1645 – 1714
Some of the most important "fathers" of forestry (and forest-sciences)…

- Heinrich Cotta (1763-1844)
- Georg Ludwig Hartig (1764–1837)
- Friedrich Wilhelm Leopold Pfeil (1783–1859)
- Carl Justus Heyer (1797–1856)
- Johann Christian Hundeshagen (1783–1834)
- Gottlob König (1779–1849)
Heinrich Cotta (1763-1844)

Friedrich Wilhelm Leopold Pfeil (1783–1859)

Johann Christian Hundeshagen (1783–1834)
Silviculture…

- Karl Gayer (1822–1907)
- Alfred Möller (1860–1922)
- Helmut Schmidt-Vogt (1918–2008)

Inventory and Planning…

- Johann Friedrich Judeich (1828–1894)

Forest Management…

- Max Preßler (1815-1886)
- J. Ch. Karl Gayer
- Gerhard Speidel (1923-1985)
Johann Christian Karl Gayer
(1822-1907)
Waldreinertragslehre (lend rent theory)
Maximilian Robert Preßler
(1815-1886)
Bodenreinertragslehre
The development of forestry science...

1713

1820

1850-1960

≈1820

The "Fathers"

The disciplines

1816 Institute of Agronomy in Marymont, Poland

Today
14.03.18

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What happened after 1965 in the forestry?

- an internal development based on technical progress
- a development driven by changing framework conditions

Scientific and technical advances have influenced the forestry practice, and (indirectly), of course, the forestry education.

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The internal development...
since ≈1990
Kiefer
Sägeholz

Durchmesser [mm]: 57
Gewählte Länge [cm]: 500

Stromquadrat 2
- Impulses from the timber industry…
In the beginning, the industry came into the forest...
1900 und 1939
since 1950
1. Spannzylinder
2. Verstellzyylinder
3. Spannhaken
   > große Höhe
4. Spannhaken
   > kleine Höhe
The forestry practice had to react...
reality or horror scenario?
The developments in the practice are providing important impulses for the forestry sciences.

- And now?

that’s a role-change of the actors!
Rethinking old ideas and ideals...
chances...

Prof. Dr. Bastian Kaiser

profile: B. Fauser, Bern

risks...

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new markets and products…
50.000 km (8,3 l / 100 km !)
New solutions…
New clients…
Additional challenges outside the forests…
New helping-technology..
How should we organize the transfer between question and solution - between science and practice?
development and innovation
El desarrollo de las ciencias forestales.

1713 ≈ 1820 ≈ 1850-1960

Today  14.03.18

how to organize? how to integrate into the education-sistem?
(New) Challenges for the Forstry Sector

- People (in Germany) still have a romantic relationship with (their) forest
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DAS GEHEIME LEBEN DER BÄUME

Nr. 1 SPIEGEL BESTSELLER

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(New) Challenges for the Forestry Sector

- People (in Germany) still have a romantic relationship with (their) forest.

But:

- never before the challenges for the Forestry Sector have been as great as today,
- they have never been as international and global as they are nowadays
- the challenges never need such a high knowledge by the forestry experts to resolve them,
- and never more (and at least more intensive) cooperation inbetween different countries

Why?

- climate change,
- energy transition
- population growth
- migration, etc.
In former days, it was really easy:

- most of our ex-students became Forestdistrict-Managers
  We knew quiet good, how to prepare them.

Nowadays, things are changing….

- The challenges inside the jobs are increasing very fast.
- There are a lot of external influences and demands.
The higher education system worked by the „Principle of Lock and Key“…

Forestdistrict-Manager
well prepared for a clearly defined job

(State)Forestdistrict
with well defined tasks
There are $5 + 4 = 9$ „Forest-Universities“

5 Universities of Applied Sciences:
- Rottenburg
- Weihenstephan
- Erfurth
- Göttingen
- Eberswalde

4 University-faculties with forest-programs:
- Freiburg
- München
- Göttingen
- Dresden
We have to move because things and the forestry sector are changing fastly!

Problems and solutions are no longer similar in the complete sector, but very different...
According to the multiple questions, we try to train different forestry experts for the future!
The future of forest education in Europe…

- more and faster transfer (in both directions)
  - joint research
  - applied research
  - transfer-centers
  - final-theses in cooperation with enterprises
  - cotracted lecturers from the practice sector
  - practice-sabbaticals for professors
  - etc.
The future of forest education in Europe...

- more and faster transfer (in both directions)
- more cooperation with enterprises
- more exchange and cooperation with other sectors at both ends of the supply-chain (the “bioeconomics-idea”)
The future of forest education in Europe...

- more and faster transfer (in both directions)
- more cooperation with enterprises
- more exchange and cooperation with other sectors
- more international cooperation and exchange
- less discussion and demarcation between basic research,
  applied research,
  consulting
  and transfer
The future of forest education in Europe…

- more and faster transfer (in both directions)
- more cooperation with enterprises
- more exchange and cooperation with other sectors
- more international cooperation and exchange
- less discussion and demarcation between
- more integration of all three fields in teaching
- more flanking (policy) activities and support programs
  tax benefits for companies investing in research
The future of forest education in Europe…

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- more cooperation with enterprises
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- more international cooperation and exchange
- less discussion and demarcation between
- more integration of all three fields in teaching
- more flanking (policy) activities and support programs
- more (and low barrier) funds for research
direct research and innovation vouchers for companies
(money does not always have to go to the universities)
The future of forest education in Europe…

- more and faster transfer (in both directions)
- more cooperation with enterprises
- more exchange and cooperation with other sectors
- more international cooperation and exchange
- less discussion and demarcation between the three fields in teaching
- more flanking activities and support programs
- more (and low barrier) funds for research
- more (personal) specialization opportunities in the curriculum of study (without surrendering the generalist claim)

They are kind of ambassadors in society and other industries!

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Dziękuję!

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