

Object name. Klepačov („Masaryk Forest” Training Forest Enterprise Křtiny, a special-purpose facility at Mendel University of Agriculture and Forestry Brno)

Main character: A primary management group of forest stands in conversion to selection forest was established as a demonstration and testing object for students in 1973. Selection principles have been applied since the 1950s, i.e. 20 years before the establishment of demonstration object. Application of the selection system of management under natural conditions of Oak-Beech and Beech forest altitudinal vegetation zones, i.e. under conditions less favourable for this management system as proved by the hitherto experience, is possible with the natural species composition altered in favour of coniferous tree species. Maintenance of this second composition will bring problems in the future following out from the penetration of deciduous species by natural regeneration. Present stands are in the advanced stage of stand conversion and locally their visual aspect approach to selection forests.

Area of object: 80.07 ha

Locality: Czech Republic, near city of Brno (49° 20'N; 16°40' E)

Natural conditions:

Altitude 300 - 400 m, plateau gradually changing to deep valleys (NW orientation)

Mean precipitation only 618 mm; mean annual temperature 6.8 °C

Geological basement is igneous rock, largely amphibolic granodiorites covered by loess loams. Dominant soil types are typical mesotrophic and oligotrophic Cambisols, partly Luvisoil. Potential vegetation of *Querci-fageta* and *Fageta paupera* dominate. Most represented of trophic series is the fertile series (46%) accompanied by the acid series (36%).

Inventory: Continuous complex of stands integrated in conversion is divided into 10 permanent units (subcompartments), which are separately managed by control method of Gurnaud-Biolley modification. Presented data are related to the whole object Klepačov.

First inventory by control method was done in 1973 followed by next inventories in ten years intervals, last (the fourth) was dated the 1st January 2003.

Basic stands characteristics (tree number, basal area, stand volume) are obtained by full callipering (4 cm diameter interval) according the species and diameter classes (lower registration limit 8 cm).

Tab. 1 Division of diameter interval in diameter classes

Diameter interval	Diameter range	Diameter class
Secondary crop	8.1 – 16.0	10, 14
Thin trees	16.1 – 24.0	18, 22
Mean thick trees	24.1 - 36.0	26, 30, 34
Thick trees	36.1 – 52.0	38, 42, 46, 50
Very thick trees	52.1 – 72.0	54, 58, 62, 66, 70
Over thick trees	72.1+	70, 78, 82, 86, 90+

Model curve of diameter distribution according the Meyer - exponential curve was used for assignment of cutting intensity. Comparison between total current increment and total allowable cut according the Mèlard method is the basic felling indicator.

Tab. 2 Basic stand characteristics of the object

Period	Area	Growing stock		TCI	Increment	Mèlard	Cutting in decade	
		real	normal	real			Total	% of growing stock
	ha	m ³ .ha ⁻¹	m ³ .ha ⁻¹	m ³ .ha ⁻¹	%	m ³ .ha ⁻¹	m ³ .ha ⁻¹	%
1973-1982	60.78	216.17	363.38	7.79	3.60	0	48.21	22.3
1983-1992	60.78	277.82	363.38	10.48	4.85	0	124.45	32.9
1993-2002	78.48	361.79	363.38	9.52	3.33	6.71	42.28	16.2
2003-2012	80.07	273.59	363.38	5.47	2.13	5.50		

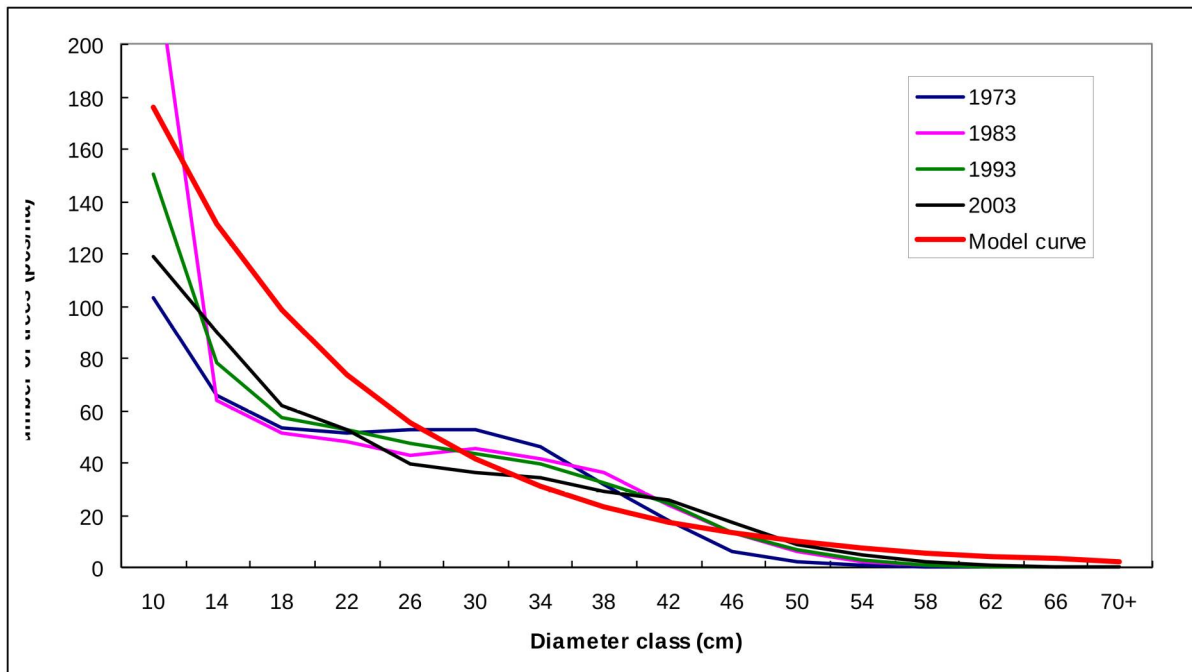


Fig. 1 Development of tree number distribution

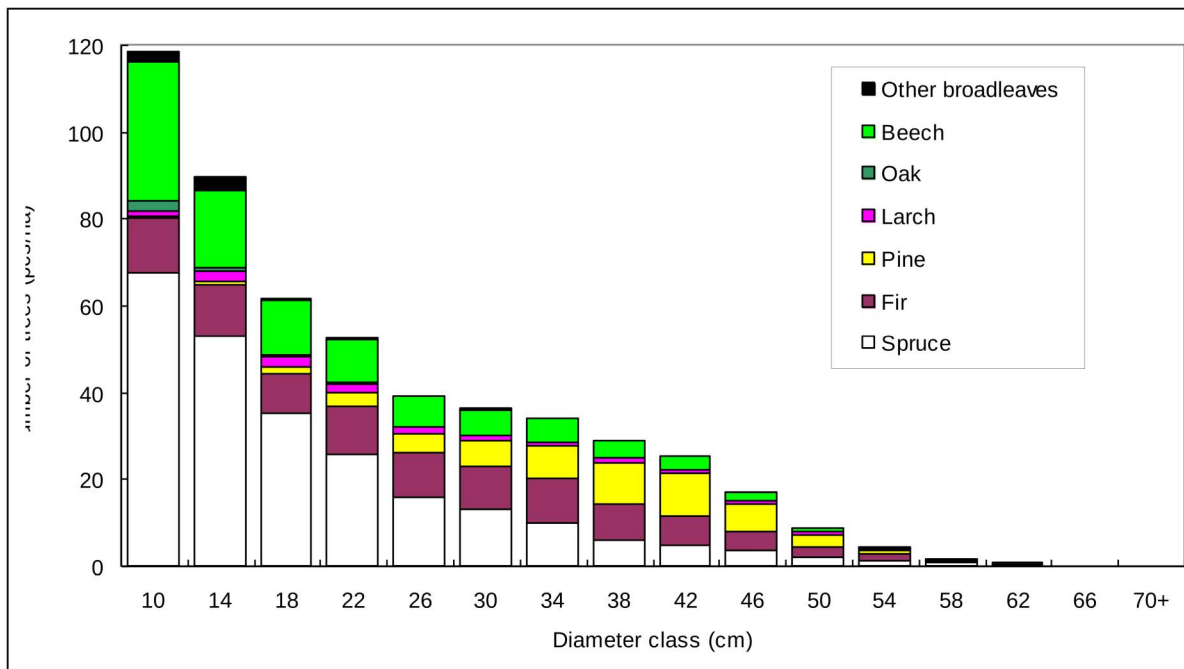


Fig. 2 Distribution of tree species in diameter classes (2003)

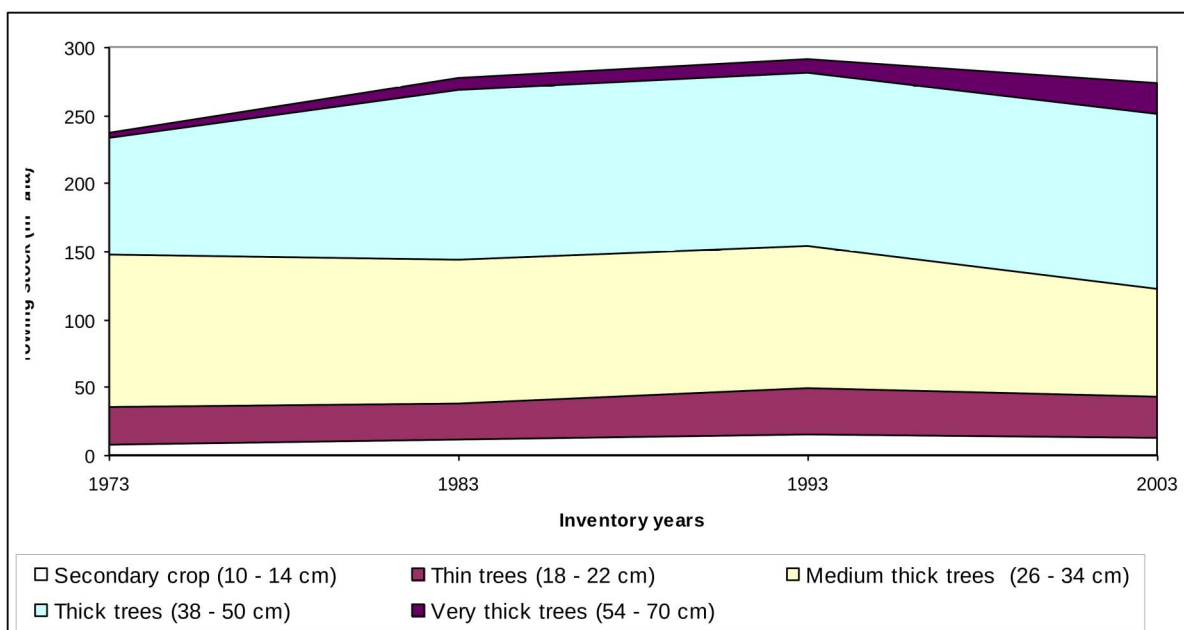


Fig. 3 Development of growing stock in years and diameter classes

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Literature

- TRUHLÁŘ, J. Complex of stands in conversion to the selective forest in the Masaryk forest Training Forest Enterprise (in Czech).. *Lesnictví*, 1977, 8, s. 651–666.
- TRUHLÁŘ, J. Results of conversion to the selection forest in the Masarykův les Training Forest Enterprise. *Lesnictví – Forestry*, 41, 1995, 3, s. 97–107.
- ŠILHÁNEK, J. Conversion of even aged forest managed under system involving coupes to selection forest in Klepačov. *Journal of Forest Science* (in press).