# Pedunculate oak

***Quercus robur L.* | *F: Chêne pédonculé* | *I: Quercia farnia* | *R: Ruver cumin/tempriv* | *E: Common/pedunculate oak***

## General

Pedunculate oak requires a lot of light and a long, warm growing season[1]. It therefore usually grows below 800 m a.s.l. and is found mainly on the Swiss Plateau and in the eastern Jura[1].

## Flowering

As in all members of the beech family (Fagaceae), the flowers of pedunculate oak are unisexual. The male flowers are borne in pendulous inflorescences, so-called “catkins” (Fig. 1). Pedunculate oak flowers from mid-April to the end of May.

## Fruits

The acorns are surrounded by a woody cup, the so-called cupule (Fig. 2). Unlike sessile oak, the fruits of pedunculate oak usually sit in pairs or threes on long stalks (Fig. 2). They ripen in October and a large proportion is eaten by wildlife before they can germinate[2]. Jays and squirrels, which store acorns for the winter, also contribute to seed dispersal. Acorns remain viable for only a short time and do not form a persistent seed bank.

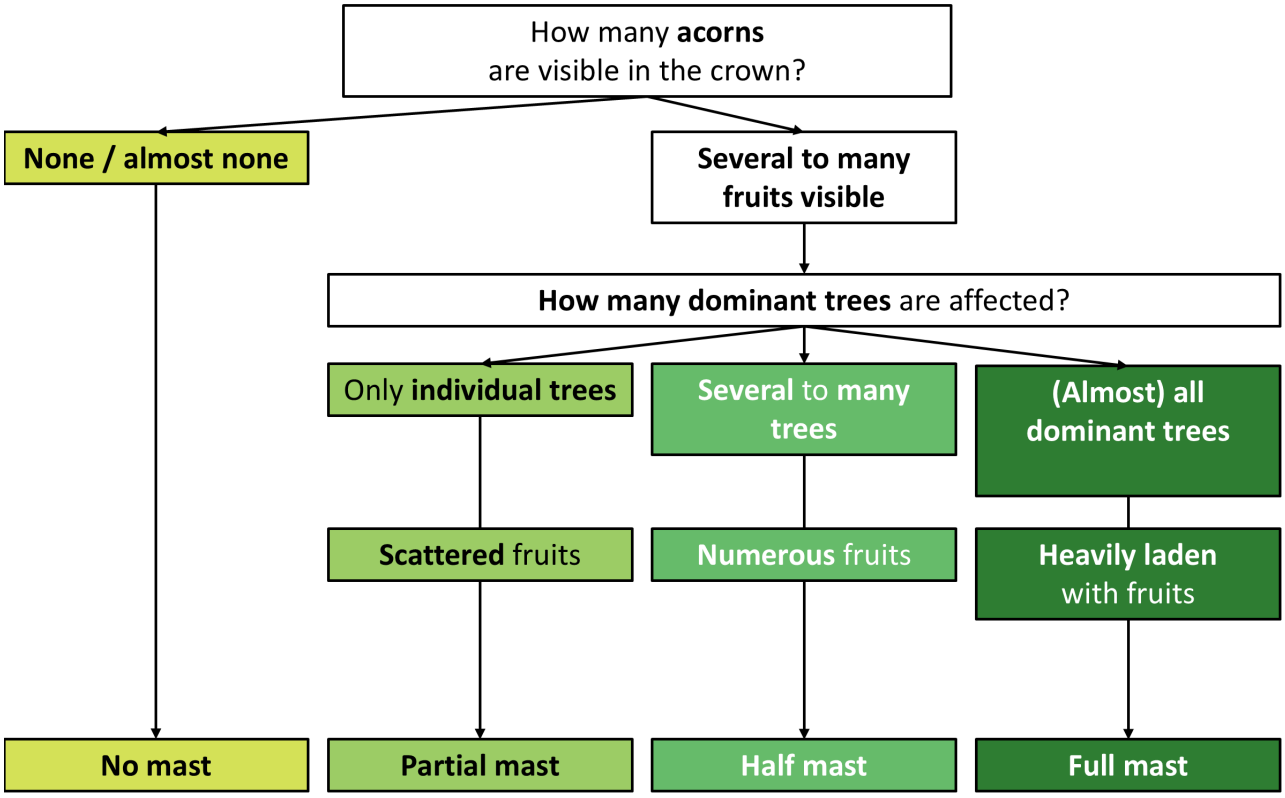
## Masting behaviour

Oaks show pronounced masting behaviour. At our latitudes, years of high seed production are relatively frequent, about every 2 to 3 years[3]. Which factors trigger or prevent oak mast has not yet been fully resolved; relationships with climatic factors differ between regions[3]. Unlike beech and spruce, the amount of pollen does not appear to be a reliable indicator of subsequent seed production[4]. Owing to their high energy content[5], acorns are an important food source for many wild animals[2]. In the canton of Zurich, for example, the number of wild boar shot in mast years is more than twice as high as in years with low acorn production[3].

## Mast assessment

**Timing:** August to the end of September.

**Assessing the fruit load:** Seed masting is a stand-level phenomenon. Wherever possible, several dominant, reproductively mature trees in a stand are assessed. The mast class describes the stand as a whole, not individual trees with particularly heavy or light fruiting. If the fruit load is uneven, choose the class that best characterises the stand as a whole. The intensity of oak mast can be estimated using the following key:




## References

[1] Brändli UB (1996) Die häufigsten Waldbäume der Schweiz. Ber. Eidg. Forsch.anst. Wald Schnee Landsch. 342

[2] Gurnell J (1993) Tree seed production and food conditions for rodents in an oak wood in southern England. Forestry 66: 291-315

[3] Wohlgemuth T, Nussbaumer A, Burkart A, Bollmann K (2016) Eichenmast und Wildschweine. Zürcher Wald 3/16: 28-30

[4] Kasprzyk I, Ortyl B, Dulska-Jeż A (2014) Relationships among weather parameters, airborne pollen and seed crops of Fagus and Quercus in Poland. Agricultural and Forest Meteorology 197: 111-122

[5] Kallman S (1991) Nutritive value of Swedish wild plants. Svensk Botanisk Tidskrift 85: 397-411