

## **Abstract**

The study was conducted on spoil heap Podkrušnohorská (50 ° 14'09 S, 12 ° 39'05 V) near Sokolov. Several factors that influence the establishment of oak were studied: the distance from the source of diaspors, type of habitat (succession vs alder reclamation), position of seedling on the wave and impact of animal grazing. Four alder restoration areas and three spontaneous succession areas have been mapped with GPS equipment, the occurrence of mature oaks, which could serve as a source of acorns was also mapped on the dump and in surroundings. Most seedlings (657) were found in the succession and only 98 in alder reclamation, and the occurrence in succession was statistically significantly more frequent. The number of seedlings from sources diaspors decreased, the longest distance was over 1300 meters.

For three habitats (spontaneous succession, alder reclamation, open space with grass vegetation (*Calamagrostis epigeios*)) were planted 12 oak seedlings in fence and 12 seedlings outside of the fence. Annual growth rate and survival of oak were evaluated using two-way ANOVA. Results showed that the area has a significant effect on the growth of oaks. In alder reclamation and the open area had a high mortality of seedlings and small increase, the fence does not have significant influence on these areas. Significant effects of fencing has been established only in spontaneous succession, where seedlings grew best.