Die Xerothermvegetation brachgefallener Rebflächen im Raum Tokaj (Nordost-Ungarn) – pflanzensoziologische und populationsbiologische Untersuchungen zur Sukzession

von Andreas Sendtko, Freiburg i. Br.

mit 16 Figuren und 10 Tabellen

Succession of xerothermic vegetation in abandoned vineyards of the Tokaj region (northeastern Hungary) – studies in phytosociology and population biology

Abstract. The Tokaj region is a traditional wine-growing area with subcontinental climate. The research area includes a wide range of abandoned vineyards with grassland, fringe, shrub and woodland communities. The reconstruction of land-use history reveals six fallow periods. Sites abandoned between 85 and more than 125 years ago are bearing stands of the Pruno-Quercetum as well as Prunetalia, Geranion, Festucetalia valesiacae and Sedo-Scleranthetalia communities. No longer grazed semi-dry grasslands of the Cirsio-Brachypodion are liable to colonization by fringe species, especially Peucedanum cervaria. Outdoor sowing experiments with this species show establishment rates between 0.9 and 1.5 % with the highest values in microsites with low vegetation and small amounts of litter. On recently abandoned sites Stipa pulcherrima forms extensive stands after 10 to 15 years. Maximum dispersal distance of marked Stipa dias­spores (plumes) was 34 m but 58 % of the dias­spores were found within 1 m distance to the mother plant. In seed trap experiments the majority of xerothermic species show even lower dispersal distances. Seed bank studies indicate that few of them form a long-term persistent seed bank. Accumulation of buried seeds already in time of cultivation is therefore unlikely. Colonization of the vineyards by xerothermic species can only take place after abandonment. Although hampered by poor dispersal ability and short seed viability xerothermic species are successful due to the close interlinkage of newly abandoned vineyards and old sites acting as propagule sources.

Keywords: abandoned vineyards, land-use history, Festuco-Brometalia, Trifolio-Geranietea, seed bank, dispersal, germination, establishment.

* Die Publikation stellt Teilergebnisse einer gleichnamigen Dissertation vor, die zur Ein­sichtnahme des gesamten Datenmaterials an der Universität Freiburg, Institut für Bio­logie II/Geobotanik zur Verfügung steht.

0340-269X/99/0029-0345 $ 26.00
© 1999 Gebrüder Borntraeger, D-14129 Berlin · D-70176 Stuttgart

DOI:10.1127/phyto/29/1999/345
(c) 2013 www.schweizerbart.com