The purpose of this review is to present information on the importance for agriculture of outlaying land in Norway, both historically and at present. Since Norwegian geography, politics and economy differ in many ways from that in the rest of Europe, it might be interesting to compare the utilization and economy of outlaying land in Norway with the situation in other European countries. Forestry is not a main topic here, but forests have been and still are important for grazing by farm animals in Norway, therefore some information on forestry is included.

Introduction

Norwegian agriculture has been based on an outlaying land – infield farming system since the Iron Age (Moen 1999). Due to natural conditions, such as topography, the arable land area is strongly limited. During the last century it constituted c. 3% (1 million hectares) of the total land area. Most of the other area is usually called outlaying land ("utmark"). About 25% of this is productive forests. When other forests are included, the forest area constitutes 40% of the land area. The forests have been used for production of timber, firewood, fence materials, charcoal, tar etc. The outlaying land, including forests, has also been used for grazing and winter fodder production, and for hunting and fishing. In the pre-industrial agriculture the permanent infields were first and foremost used for food production. This production depended on manure from the domestic animals and it was important to have many animals and large areas of grasslands for hay cutting and grazing. To some extent winter fodder (hay, straw and leaf fodder) was also produced on the infields. Still most of the fodder was harvested in outlaying land (Sølvberg 1976; Bele and Norderhaug 2013) and these large areas also made up the grazing areas. This extensive use of the landscape resulted in many different semi-natural nature types.

Pre-industrial land use and semi-natural nature types

*Forest grazing* has probably been common since agriculture was introduced in Neolithic times. All types of forest were grazed. In grazed forests the amount of shrubs is reduced and the field layer is lower and more grass rich and even. The forest becomes more open and may look like a park. However, due to more or less grazing and trampling in different parts of the forest, the forest density and vegetation composition varies. In the pre-industrial agriculture the forests were probably most important for grazing even if many other resources, such as firewood and wood material, were also harvested. This situation changed, however, when timber became more valuable.

*Semi-natural pastures* have also been common since the very beginning of agriculture. They are grass dominated and have a low and often species rich field layer with light