

# Lingonberry: Botany and Horticulture

*Inger Hjalmarsson*

The Nordic Gene Bank, Smedjevägen 3, P.O. Box 41,  
S-230 53 Alnarp, Sweden

*Rodomiرو Ortiz*

The Royal Veterinary and Agricultural University, Department  
of Agricultural Sciences, 40 Thorvaldsensvej, DK-1871  
Frederiksberg C, Denmark

- I. INTRODUCTION
- II. HISTORY
  - A. Early
  - B. 18th and 19th Centuries
  - C. 20th Century
  - D. Horticultural Research in the Northern Hemisphere
    - 1. Nordic Region
    - 2. Other Sites in the Northern Hemisphere
- III. BOTANY
  - A. Taxonomy and Geographic Distribution
  - B. Morphology
    - 1. Vegetative
    - 2. Reproductive
  - C. Ecology
  - D. Other *Vaccinium* Species in Scandinavia
    - 1. Bilberry
    - 2. Bog Bilberry
    - 3. Small-fruited European Cranberry
    - 4. Dwarf Cranberry
- IV. MANAGEMENT OF NATURAL STANDS
  - A. Photosynthesis
  - B. Biomass Production
  - C. Seed Ecology and Regeneration
  - D. Berry Production
  - E. Effects of Forestry Management
  - F. Experiments in Natural Habitats

- V. HORTICULTURE
  - A. Propagation
    - 1. Plants Collected Directly from the Wild
    - 2. Shoot Cuttings and Rhizomes
    - 3. Seedling Plants
  - B. Frost Protection
  - C. Culture
    - 1. Soil
    - 2. Nutrients
    - 3. Mycorrhiza
    - 4. Mulching
    - 5. Irrigation
  - D. Plant Pathology
    - 1. Weed Control
    - 2. Diseases
  - E. Crop Improvement
    - 1. Early Studies of Ecotypes
    - 2. Breeding at Balsgård
    - 3. Description of Swedish Cultivars
    - 4. Description of North American Cultivars
- VI. SUMMARY AND FUTURE PROSPECTS
- LITERATURE CITED

## I. INTRODUCTION

Lingonberry (*Vaccinium vitis-idaea* L., Ericaceae) is a perennial, ever-green dwarf shrub that is indigenous to Scandinavia, where the pea-sized, bright-red fruit is picked from wild stands. Lingonberry is known as *puolukka* in Finland, as *tyttebær* in Norway and Denmark, and as *lingon* in Sweden. Lingonberry jam, with or without sugar, may be eaten with porridge, potatoes, bread, pancakes, cow and reindeer milk, herring, black blood pudding, meatballs, and steak among other foods. The berries have also been used for soups and beverage. Retzius (1806) recommended lingonberry drinks for fever patients. Furthermore, lingonberry has been used as an anti-scorbutic (Nyman 1868), and because of its richness in glycosides (Bandzatiene 1999), as a diarrhea medication (Stodola and Volak 1986). Folk medicine recommends that lingonberry tea, derived from leaves, be used against rheumatism (Henriksson 1923b) and as a remedy for urinary tract infections (Nielsen 1978). Recent reports suggest that lingonberry may have anticancer attributes due to high anthocyanin content (Bomser et al. 1996).

Lingonberry jam is a traditional delicacy and, although considered a luxury today, it was once one of the few staples available to poor people. While no longer necessary for survival, berry picking has become a recreational activity for many and jam making has moved from homes