



Evaluation of slope renovation in the higher altitudes

Bernhard Krautzer, Wilhelm Graiss & Albin Blaschka
HBLFA Raumberg-Gumpenstein, Austria
e-mail: bernhard.krautzer@raumberg-gumpenstein.at

Abstract

Permanent changes took place in the entire region of the Alps during the course of the last 50 years. Wide areas used for agrarian purposes were reduced or abandoned. On the other hand, the widespread opening of power stations and intensive road building, torrent and avalanche barriers, as well as extensive infrastructural measures especially for winter tourism, 40,000 ski runs amounting to 120,000km in length were built in the last decades in the Alps and used annually by 20 million tourists.

All of the measures described lead to intensive building each year, which then requires the restoration of the areas burdened by the intrusion. But at an increasing altitude restoration is increasingly more difficult due to the rapidly worsening climatic conditions. Due to cost, restoration continues to be relinquished in some areas of the Alps, but a combination of almost always cheap restoration procedures and cheap and alien seed mixtures are turned to. The resulting ecological and often economic damage is comprehensive: soil erosion, increased surface drainage, inadequate vegetation cover, the high costs of ecologically dubious fertilisation measures and management, and flora falsification are some of the resulting effects that follow.

For fifteen years, intensive research has been carried out by various institutes to break this negative circle of events. In various research projects could be proved that a combination of high quality application techniques and site-specific vegetation or seed, lead to stable, sustainable and ecologically adapted populations of high value for nature protection. Fertilisation and management measures can be clearly reduced, which make these methods useful in the medium term, as well as being economical.