SUMMARY

The effect of transport on vegetation is a very complex problem. It is very difficult to compare the effects of its single components. One of the most important factors is using winter de-icing agents, which influences biotic and abiotic components of road environment. The result of it is the creation of saline gradient and changes in plant species composition of road margins. Still we know very little about response of vegetation to de-icing salt and this is the aim of this thesis.

The saline and vegetation gradient was studied in different distances from the pavement, particularly in 10, 50, 100, 250, 500 and 1000 cm from the edge of the pavement. In these distances, the vegetation was sampled (by modified point-square method) and soil samples were taken for laboratory analysis of basic salinity parameters: content of Na^+ ions, content of Cl^- ions, active and exchangeable pH and conductivity. There were 15 localities in the region Písecko in South Bohemia, which were studied, with different relief and de-icing regime.

All mesured soil characteristics are decreasing with the distance from the pavement. There are differences in decreases between the different reliefs. Dynamics of salinity during the zdar, and the time in which the de-icing salt is applied, are also important. Resulting saline gradient is closely related to the gradient of vegetation. Species combinations differ in different distances from the pavement. *Puccinellia distans*, *Agrostis stolonifera* or *Plantago major* and *Leontodon autumnalis* indicate higher content of salt and higher degradation of soil. On the other hand, *Matricaria discoidea, Arabidopsis thaliana, Verbascum densiflorum, Epilobium cilliatum* či *Hypericum perforatum* indicate no or minimal contamination.

Thus, plant species and their combinations are a good indicators of impact of roadsalt and the degradation of environment by winter de-icing management.