Research done for a 12 years period on a mountain pasture dominated by Nardus stricta and situated at 1600 m altitude in the Parîng mountains, have demonstrated that higher yields can be obtained using annually low or medium nitrogen fertilizer rates (together with phosphorus and potassium), compared to the higher rates applied periodically every 2 or 3 years. The recommended annual treatment is 100-150 kg N with 50 kg P2O5 and 50 kg K2O. The average yield of the pastures fertilized according to this scheme in 6 years, was over 4,5 t/ha dry matter, showing a good constancy over the trial period.