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Soil management with respect to nitrogen mobilization and nutrient supply of grapevines on loess soil

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The effects of different methods of soil management on the nutrient supply and the vine quality of organically grown 'Grüner Veltliner' grapevines (Guyot double) were investigated in the winegrowing region Wagram of Lower Austria (municipality: Großriedenthal). Under permanent green cover the mineral nitrogen content in the soil was significantly lower than under green cover only in each second row. Regarding the nitrogen demand of the vine the best results of the mineral nitrogen content in soil were found by loosening up the soil by the end of April and breaking it open two weeks later. Permanent green cover inhibited shoot length development and the total acidity of the must was lower. The content of yeast assimilable nitrogen and the yield were reduced, but must density as well as potassium and ash contents of the wine were slightly higher. There were no differences in the vinification of the grapes of different origins. Significant differences in the sensory evaluation could not be related to different methods of soil cultivation.