

## **Comparison of cold resistance physiological and biochemical features of four Herba Rhodiola seedlings under low temperature**

### **Abstract**

To discuss the cold resistance performance of different Herba Rhodiolae and successfully transplant Herba Rhodiolae to the Gansu plateau area for nursing, domestication and planting, this paper systematically studies six physiological and biochemical features of *Rhodiola kirilowii*, *Rhodiola algida*, *Rhodiola crenulata* and Herba Rhodiolae that are closely associated with cold resistance features and concludes with the cold resistance capability of *Rhodiola kirilowii*. In the selected six main indexes of the Herba Rhodiolae, the POD, SOD and CAT activity and MDA and Pro content in the leaf are the main physiological and biochemical indexes to indicate the cold resistance performance of four Herba Rhodiolae seedlings and can be regarded as the preliminary indexes to assess the winter performance of Herba Rhodiolae. The research work will provide the theoretical basis for the wild variants of Herba Rhodiolae and GAPJ base construction.