

# 渭北高原矮化红富士树干液流动态研究(PDF)

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Title: Stem Sap Flow Dynamics of Dwarfing Fuji Apple Tree Trunk Sap Flow on the Wei bei Plateau

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关键词: 矮化红富士; TDP 茎流计; 树干液流速率; 蒸腾

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摘要: 利用热扩散茎流测定系统(TDP)对渭北高原矮化红富士树干液流进行长期定点定位观测,对苹果树开花期和新梢生长期的树干液流时空变化特征进行了分析,结果表明:晴天条件下,开花期表现为单峰曲线,日平均液流速率为0.55L·h<sup>-1</sup>,白天液流量占全天的86.84%;新梢生长期表现为双峰曲线,日平均液流速率为1.16L·h<sup>-1</sup>,白天液流量占全天的92.87%。阴天天气下呈多峰曲线。4、5、6月日平均液流量分别为2.40、3.17、3.95mm。树干液流速率在树干东南和西南方向基本一致,北方向的树干液流速率较小,大约是前者的50%。

Abstract: Stem sap flow dynamics of dwarfing Fuji apple tree on the Wei bei plateau were studied by means of the thermal diffusion stem sap flow measurement system (TDP). Spatiotemporal variation characteristics of the stem sap flow during blossom and shoot growth periods were analyzed. The results showed that during the blossom period of the sunny days, the stem sap flow presented as a single-peak curve, with the daily flow rate 0.55L·h<sup>-1</sup> and 86.84% of it occurred in the daytime; during the shoot growth period, the curve was bimodal, with the daily flow rate 1.16L·h<sup>-1</sup>, and 92.87% of it were in the daytime; On cloudy, multi-peak curve was showed in both bloom and shoot growth; From April to June, the average daily water consumption was 2.40mm, 3.17mm, 3.95mm respectively. Stem sap flow rates of the southeast and southwest part of the tree were basically the same, but different to the north, which was about half of the others.

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