

## عنوان مقاله:

Effect of plant spacing and organic mulch on growth, yield and quality of natural sweetener plant Stevia and soil fertility in western Himalayas

## محل انتشار:

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## خلاصه مقاله:

The use of leaf mulch as a soil cover is effective in improving yield and soil fertility. The field experiment was conducted during 2010 and 2011 to study the effect of plant spacing (30 cm × 30 cm and 45 cm × 30 cm) and four mulches {pine needles (*Pinus roxburghii*), poplar leaf (*Populus deltoides*), silver oak (*Grevillea robusta*) tree leaf mulch and unmulched control} on growth, yield, quality of stevia and soil fertility. Weed count and dry weed weight was not affected by spacing levels during August and at the time of harvest, whereas, in unmulched plots it was significantly higher than mulched plots. Dry leaf yield, total dry biomass and leaf area index (LAI) were significantly higher in 30 cm × 30 cm spacing level and poplar leaf mulch. All the mulched plots significantly increased organic carbon (OC), available nitrogen (N), phosphorus (P) and potassium (K), bacterial and fungal population compared to unmulched plots. Rebaudioside-A content was higher in plots mulched with poplar leaves. Steviol glycosides were not significantly affected by different treatments. Soil biological activities were also enhanced by tree leaf mulches. Leaf mulch enhanced microbial biomass, relative to non-mulched soils, likely via improving C and water availability for soil microbes. Keywords: Stevia; Organic mulch; Spacing; Growth; Yield; Steviol glycoside

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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