

Note: Abstracts must be submitted in single spaced format. Line spacing here was adjusted for readability purposes. The following examples of abstract scoring are for illustration purposes only. The edits and comments shown reflect what reviewers may be "thinking" as they score an abstract. Brackets indicate clear delineation of sections (Introduction, Methods, Results, Discussion/Conclusion). Students will not receive such individual markups of their scored abstracts.

A characterization of N status in *Populus trichocarpa* inoculated with an endophytic bacteria.

Purpose of study is unclear

Producing biomass for energy that does not negatively impact food supply will require the ~~cultivation~~ ^{food production} establishment of biofuel species on poor quality soils that are not used for ~~agriculture~~. The association of endophytic bacteria with their plant hosts has been shown to have a growth-promoting effect for many different plant species and suggests that plant-endophyte interactions may allow improved growth on marginal soils. However, few relationships between plants and these endophytes have been characterized and studied in detail. Previously, the endophytic bacteria *E. enterobacter* 638 was shown to promote growth in *Populus trichocarpa* (poplar). We grew poplar cuttings in Hoagland's solution and investigated the impact of *E. enterobacter* on the Nitrogen status of poplar. To account for possible differences in growth rate, we selected leaves for harvest and analysis using the leaf plastochron index (LPI). In the youngest leaves (LPI 2), nitrate levels were ~~significantly and markedly~~ ^{redundant} (120%) higher in poplars inoculated with *E. enterobacter* suggesting that these plants were better able to take up nitrate. Free amino acid content and starch content ~~was~~ ^{were} not altered by the presence of *E. enterobacter*, but leaf protein content was reduced by c. 10%. [These data provide preliminary evidence that poplar inoculated with *E. enterobacter* may have an improved ability to acquire and assimilate nitrate, a trait that would be desirable for feedstock species suitable for growth on marginal soils.

refer to the study

Define or eliminate

Results + conclusion mixed

Introduction	1
Methods	1
Results	1
Conclusion	1
Language + Conventions	0
Total	4