عنوان مقاله:

A General Dynamic Function for the Basal Area of Individual Trees Derived from a Production Theoretically Motivated Autonomous Differential Equation

محل انتشار:

تعداد صفحات اصل مقاله: 12

نویسنده:

پیتر لهماندر – Department of Management and Economic Optimization, Optimal Solutions in cooperation with Linnaeus University, Umea, Sweden

خلاصه مقاله:

The management of forests may be motivated from production economic and environmental perspectives. The dynamically changing properties of trees affect environmental objectives and values of trees as raw material in the construction sector and in the energy sector. In order to optimize the management of forests, it is necessary to have access to reliable functions that predict how trees develop over time. One central property of a tree is the basal area, the area of the stem segment ۱.۳ meters above ground. In this paper, a general dynamic function for the basal area of individual trees has been developed from a production theoretically motivated autonomous differential equation. A closed form solution is derived and analyzed. Several examples of recent application of this function in Iran and Sweden are reported.

کلمات کلیدی:

Dynamic function, differential equation, basal area, forest growth

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1516852