



Agricultural Journals

Research in

**AGRICULTURAL
ENGINEERING**

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Res. Agr. Eng.

**Šařec P., Šařec O.,
Prosšková V., Cížková K.:**

Laser profilometer

Testing by laboratory measurements

Res. Agr. Eng., 53 (2007): 1-7

Measuring soil surface profile has many purposes in the field of agriculture and landscape management. For example, it concerns quantitative evaluation of work quality of soil cultivation implements, and related assessment of soil surface status prior sowing. For this purpose, a prototype of laser profilometer was produced whose key parts are a laser sensor Banner LT3 fixed together with a control section, a converter etc. on a carriage that travels propelled by an electromotor along an aluminum girder. In 20 mm intervals determined by an optical sensor, the laser sensor measures a distance to a soil surface. The aim of the work is to verify some laser sensor properties such as a linearity of measurement, sensitivity to surface color