



Agricultural Journals

Research in

**AGRICULTURAL
ENGINEERING**

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Res. Agr. Eng.

**Kumhála F., Kvíz Z.,
Kmoch J., Prošek V.:
Dynamic laboratory
measurement with**

dielectric sensor for forage mass flow determination

Res. Agr. Eng., 53 (2007): 149-154

A new parallel plate capacitance sensor was built consisting of two metal sheets. The sensor – a capacitor and the whole oscillating circuit was driven at 27 MHz frequency. Dynamic laboratory experiments were performed with grass from a natural meadow in order to evaluate the possibility of the forage mass flow determination by means of this sensor. The results revealed a relatively strong linear relationship between the feed rates of the wet forage crop material passing through the sensor between its plates and the measured capacitance sensor circuit output frequency. The coefficients of determination (R^2) varied from 0.9 to 0.96. Further improvement of