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home [page](#) [about us](#) [contact](#)



us

**Table of
Contents**

IN PRESS

RAE 2014

RAE 2013

RAE 2012

RAE 2011

RAE 2010

RAE 2009

RAE 2008

RAE 2007

RAE 2006

RAE 2005

RAE 2004

RAE 2003

RAE Home

Editorial

For Authors

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

For Reviewers

- **Guide for Reviewers**
- **Reviewers Login**

Subscription

Res. Agr. Eng.

Sochr D., Adamovský R., Kára J., Hanzlíková I.:

Evaluation of the influence of fermentation input substrates preparation on biogas production intensity

Res. Agr. Eng., 60 (2014): 60-67

The article is aimed at verification of the effect of chaff length of fermented material and duration time of the contact of material with oxygen before dosing into the fermenter, on production and energy content of biogas. The results of the verification showed an effect of chaff length in the fermented material on production and energy content of the biogas at processing grass silage with high content of dry-matter and especially maize silage. When processing maize silage, optimal length of chaff in terms of production and energy content of biogas was 13 mm, with grass silage it was from 69 to 112 mm. Verification of the influence of time of grass silage and maize silage contact with air oxygen before dosing into the fermenter did not confirm our hypothesis. It was demonstrated that production and energy content of the biogas increase together with the length of duration of 7 days compared to fermentation of material after max. 3 h of contact with air oxygen.

Keywords:

biogas plant; energy crop; grass silage; maize silage; energy content

[[fulltext](#)]

