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

**us**

## Table of Contents

### **IN PRESS**

**AGRICECON  
2014**

**AGRICECON  
2013**

**AGRICECON  
2012**

**AGRICECON  
2011**

**AGRICECON  
2010**

**AGRICECON  
2009**

**AGRICECON  
2008**

**AGRICECON  
2007**

**AGRICECON**

**2006**  
**AGRICECON**  
**2005**  
**AGRICECON**  
**2004**  
**AGRICECON**  
**2003**  
**AGRICECON**  
**2002**  
**AGRICECON**  
**Home**

---

**Editorial**  
**Board**

**For Authors**

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

**For**  
**Reviewers**

Guides for

· Reviewers  
Login

Subscription

# **Agric. Econ. – Czech**

## **Aly S., Vrana I.: Approaches to assess the group consensus in Yes-or-No type experts' group decision making**

Agric. Econ. – Czech, 56 (2010): 192-199

Group consensus indicators provide an important insight and information about how to combine a group of expert judgments. This paper is concerned with the development of a set of indicators to be used in analyzing the group consensus in evaluating Yes-or-No

type of decision problems. The opinions of the experts are in the form of a real number between 0 and 10 expressing the degree of answers Yes or No (0 for sharp No and 10 for sharp Yes). Two methods for obtaining the consensus indicators are developed. The first of them is based on configuring the one previously developed by (Ngwenyama et al. 1996), which is reviewed in this paper. The other one is an improved one that does not rely on the existence of the known or desired similarity significance levels or thresholds. A new measure of consensus is introduced, the standard deviation. An experiment is conducted to get acquainted with the relationship between the standard deviation of group decisions and one of the developed group consensus indicators, which measures the agreement level within the group of decisions. This research is intended to develop more consistent indicators and measures group consensus and position of each individual relative to others for Yes-or-No type group decisions. This is aimed at the exploitation of such important and relevant consensus information for developing a new consensus-based heuristic algorithm to combine the multiple experts' judgments or to be able to select the adequate combining criteria. Finally, the presented approach could be usefully utilized in critical " Yes – or – No" GDM

problems in business and industry.

**Keywords:**

group decision making, analyzing  
consensus, binary decision making

[ [fulltext](#) ]

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