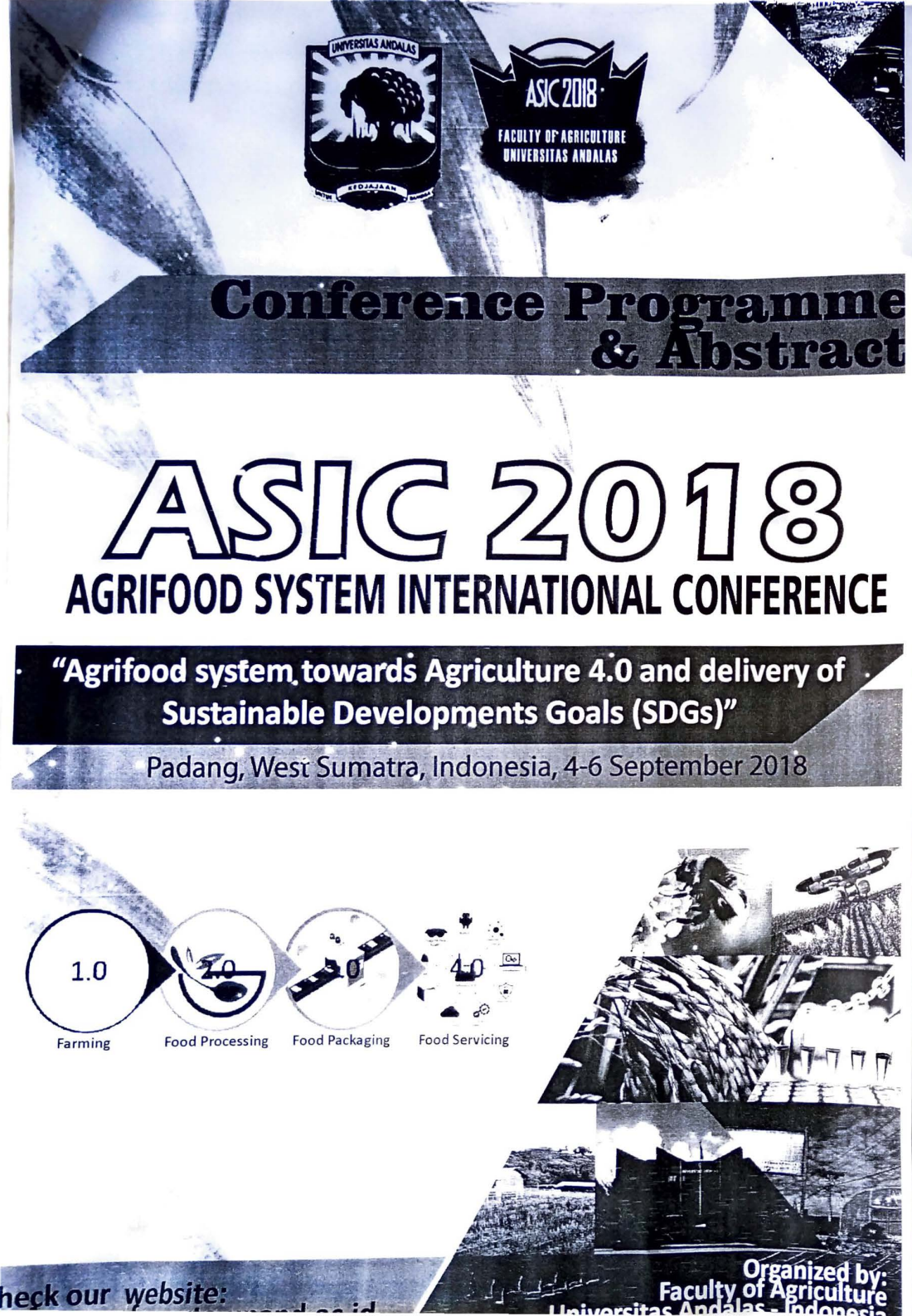

SM-05

Application of geo-organo granule fertilizer derived from volcanic ash and tithonia on corn production at Oxisols

Gusnidar, D Fiantis, Nelson, Yulnafatmawita, B Satrio, Y Jasmine
Andalas University
*Corresponding Email: gusnidar.a02@gmail.com

Volcanic ash material (Vam) can cover surface of farming land pasca volcano eruption. The covering process could be advantageous for soil fertility if it is thin enough but it can be destructive for the crops if it is thick. Therefore, it is needed an effort to utilize the Vam in order to rehabilitate the impacted farming land. The Vam material was mixed with tithonia (Tt) and then composted. Tithonia can be found anywhere, from low land up to middle height of mountain, in the tropical areas. Tithonia can easily degraded and produce some organic acids. The organic acids released by tithonia during decomposition process are hoped to faster mineral nutrient dissolving from the Vam. Compost resulted was granulated and applied to Oxisols as an ameliorant for semi-corn growth.

Keywords:

SM-06

Reclamation Of Coal Mining Used Land Through Observation On Effectiviness Of Arbuscular Mycorrhizal Fungi On Corn Plants In Greenhouse

Ujang Khairul, Eti Farda Husin, Zelfi Zakir and Oktanis Emalinda
Departement of Plants Disease Pests, Faculty of Agriculture, Andalas University
Departement of Soil, Faculty of Agriculture, Andalas University
Departements of Social Economics, Faculty of Agriculture, Andalas University
Departement of Soil, Faculty of Agriculture, Andalas University
*Corresponding Email: jgkhairul@gmail.com

Mining activities cause detrimental effects on environments and until now there has not been a maximum effort to rehabilitate the condition. When this condition is not improved very soon, it will cause disaster for human. Mining activity is often started with land clearing and its vegetation, digging soil layers and coal materials, and piling up of soil that can cause negative impacts on environments. To improve the environment impact right away there should be an effort to be implemented that can support sustainable agricultural development in Indonesia. One method is application of natural fertilizer like Arbuscular Mycorrhizal Fungi (AMF) on corn as a host plant. The objective of research was to determine optimal dose of AMF that could give the highest growth and yield of corn using soil from coal mining used land in Sumatera Barat. The research was done in a greenhouse and laboratory. The result indicated that application of AMF inoculants with a dose of 40 gr/pot either in mono or multispores could increase corn yield in coal mining used land.

Keywords: