

3RD WORLD PLANT GENOMICS AND PLANT SCIENCE CONGRESS & 4TH WORLD MYCOLOGY AND MUSHROOM CONGRESS

July 15-16, 2019
Osaka, Japan



Yusuf Leonard Henuk

University of Sumatera Utara, Indonesia

Potential used of duckweed as an alternative protein source for human and animal nutrition

The increasing world's population and accompanying total food consumption raises the worldwide demand for agricultural produces. This raising demand implies a further increase of pressure on current land usage. It becomes more and more important to search for sustainable alternatives of natural resources. Duckweed has attracted attention because it (1) contains high amounts of high quality protein when grown under optimal conditions, ranging from 35 to 43% in dry matter (considering a water content of 92 to 94% in fresh duckweed); (2) contains protein with a better composition of essential amino acids, thus covering nutritional requirements to a larger extent than many other plant

proteins; (3) has a high growth rate and can tolerate extreme circumstances; (4) can be cultivated in a basin on non-arable land, thereby avoiding the use of farming land. Human consumption of duckweed is common in some parts of Southeast Asia, including Laos, Thailand and Myanmar, as a vegetable named 'Khai-Nam'. *Wolffia arrhiza* and *Wolffia globosa* are the dominating species used for human consumption. Despite the great potential of duckweed as a source of plant protein in human nutrition, it is not part of the diet in Western countries. can be concluded that duckweed as an alternative crop for the future as an alternative protein source for human and animal nutrition.

Biography

Yusuf Leonard Henuk is a Professor in the Department of Animal Science, Faculty of Agriculture at University of Sumatera Utara (USU), Medan, North Sumatera, Indonesia. He received a bachelor's degree from the Faculty of Animal Science, the University of Nusa Cendana in Indonesia from 1980-1984. He obtained master in rural science from the University of New England from 1991 – 1995 and continued PhD from the University of Queensland from 1998 – 2001. He was a twice Visiting Professor of the Department of Poultry Science, Texas A&M University, College Station, USA (September – December 2010 & 2017).

profesorhenuk@gmail.com