

Author: [ADVANCED](#) | Volume Page
Keyword: |

Add to
Favorite / Citation
Articles AlertsAdd to
Favorite
PublicationsRegister
AlertsMy J-STAGE
HELP

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1883-2261

PRINT ISSN : 0389-1763

Japanese Journal of Farm Work Research

Vol. 42 (2007) , No. 2 pp.91-103

[\[PDF \(542K\)\]](#) [\[References\]](#)

Ergonomic Study on the Process of Mastering Reversible Plow Operation using Ride-on Tractor

[M. Faiz SYUAIB^{1\)}](#), [Shoji MORIIZUMI^{2\)}](#) and [Hiroshi SHIMIZU^{2\)}](#)

1) Department of Agricultural Engineering, Bogor Agricultural University, Indonesia

2) School of Agriculture, Ibaraki University

(Received November 17, 2005)

(Accepted May 2, 2007)

Abstract

This research was mainly conducted to obtain basic ergonomic data about tractor operator performance and to analyze the mastering process of tractor operation, especially reversible moldboard-plowing using a ride-on tractor. This paper mainly deals with the analysis of learning curve patterns of beginners to assess the necessary expertise level through a comparison with skillful operators. Comparative analyses between beginners who do and do not have automobile-driving experience are also discussed. Suggestions for the minimum account of practice and instructional attentions are also given.

It was proven that the automobile-driving capability of beginners was cognitively advantageous for the learning tractor operation. Compared to the skillful operators, almost, no significant difference in physiological burden was recognized in the beginners, except at the beginning of practical experience of the non-driverslicensed beginners. The tillage straightness was clearly the most difficult task to be mastered. In this regard, a minimum working (learning) time of about 64 and 67 hours is recommended for DL and NDL beginners, respectively, to reach the necessary level of performance. From the various results, the mastering process of reversible plow tillage may be divided into the first and second steps. Depending on the situation, the practice of second step (DL-beginners : after 3 hours, NDL-beginners : after 43 hours) is considered that it may be made to be the self-training.

Key words

[ride-on tractor](#), [reversible plow](#), [physiological strain](#), [technical performance](#), [beginner](#), [learningcurve](#)

[[PDF \(542K\)](#)] [[References](#)]

Download Meta of Article [[Help](#)]

[RIS](#)

[BibTeX](#)

To cite this article:

M. Faiz SYUAIB, Shoji MORIIZUMI and Hiroshi SHIMIZU (2007): Ergonomic Study on the Process of Mastering Reversible Plow Operation using Ride-on Tractor . Japanese Journal of Farm Work Research 42: 2 91-103 .

doi:10.4035/jsfwr.42.91

JOI JST.JSTAGE/jsfwr/42.91

Copyright (c) 2009 Japanese Society of Farm Work Research



[Japan Science and Technology Information Aggregator, Electronic](#)

