

* " "

25 20

(% 15 11 7)

(p<0.05)

%9.3

(%)

%15

20

.(1988 Baloch

;1995 Wiley Zoz)

%15

Abu-Hamdeh ;2003 Reeder Abu-Hamdeh

.(2004 Al-Jalil Abu-Hamdeh ;2004

Zoz)

%15-8

Ismail ;1973 Luth Wismer ;1970

.(1991

Taylor)

(1987 Brixius ;1985 Garber ;1981

Moitazi)

(1993) Turner

.(2006

.(1981 Culpin)

;1976

Reghavan)

.(1991

Taylor)

;1984 Gloker ;1977

Thansantote

(2005) Varshney

Suresh

*

(1973) Luth Wismer

.2009/4/1

2008/4/10

(1995) Verma Guruswamy

4.3
/ 1800

(1982 Kepner)

Moitazi

(2006)

-) =

.100 ÷ x (

(2004)

Arvidsson

Auger

72

(2004)

Arvidsson

(2006 Casady)

(2007)

Alimardani

100

(2001)

Vaz

$$S = \frac{(A - B)}{A} * 100$$

.%

:S

:A

:B

2007

18

11 7)

100

MSTATC

25 20

(% 15

(Michigan State University, 1988)

0.05

60

		(2004)		(1)	
				(p<0.05)	
				25	20
(1986)	Summers			% 16.9	% 15.2
				(2006 Moitazi)	
(1996)	Glancey	Arvidsson			
				.1	
				. (%)	
				()	
11.5 e	16.0 c	17.7b*	20	15.2 b**	
13.5 d	17.2 b	19.5 a	25	16.9 a	
	0.05			*	
	0.05			**	
				.2	
				. (%)	
				(%)	
16.0 c	18.8 b	20.7 a*	7		
11.7 e	16.7 c	19.1 b	11		
10.3 f	14.4 d	16.3 c	15		
12.7 c	16.6 b	18.7 a**			
	0.05			*	
	0.05			**	
(1981)	Bauder			(2)	
				% 12.7	
		% 18.7			

			(%)	()
17.0 ef	19.7 b	22.0 a	7	
12.7 j	17.3 e	19.7 b	11	25
11.3 k	14.7 hi	17.3 e	15	

0.05

*

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Some Factors Affecting the Wheel Slip of a 2WD Farm Tractor

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ABSTRACT

This experiment was conducted at the Agricultural Research Station at Mu'tah University, where the soil is a sandy clay loam, to determine the effect of three levels of soil moisture content (7, 11 and 15 %) with a moldboard, disc and chisel plow set at plowing depths of 20 and 25 cm during the experiment on wheel slip of two-wheel drive agricultural tractor. The results showed that the tractor wheel slip was highest for the moldboard plow and lowest for the chisel plow and significantly ($p < 0.05$) increased with increasing plowing depth and with reducing soil moisture content. The interaction effect of plowing depth, soil moisture and used plow type showed that the optimal tractor wheel slippage during the experiment was 9.3%. This result was obtained from plowing by a chisel plow at 20 cm plowing depth and 15% soil moisture.

KEYWORDS: Farm tractor, Wheel slip, Plow, Plowing depth, Soil moisture.

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