



*

(// : // :)

() () ()

()

(c,b,a)

(b,a)

c b a

a b

Archive of SID

E-mail: ahad_habibzadeh@yahoo.com
pitting
ripping
contour furrow

: : : *

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o ' o ' "
o ' " o ' "

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/

(.)

(.)

()

/

(.)

c,b,a

a

(.)

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(B)

()

c,b,a

b,a

(.)

F

F

()

a,b

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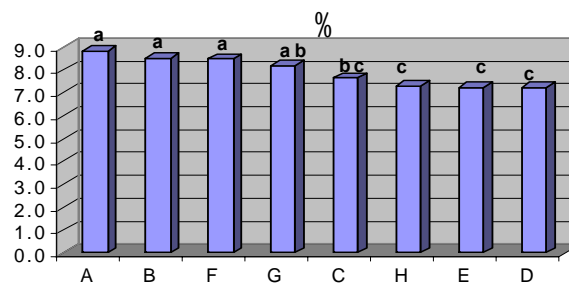
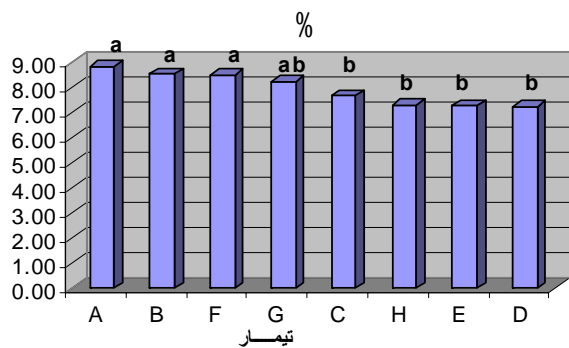
/	/	/	/	/	A1
/	/	/	/	/	A2
/	/	/	/	/	A3
/	/	/	/	/	B1
/	/	/	/	/	B2
/	/	/	/	/	B3
/	/	/	/	/	C1
/	/	/	/	/	C2
/	/	/	/	/	C3
/	/	/	/	/	D1
/	/	/	/	/	D2
/	/	/	/	/	D3
/	/	/	/	/	E1
/	/	/	/	/	E2
/	/	/	/	/	E3
/	/	/	/	/	F1
/	/	/	/	/	F2
/	/	/	/	/	F3
/	/	/	/	/	G1
/	/	/	/	/	G2
/	/	/	/	/	G3
/	/	/	/	/	H1
/	/	/	/	/	H2
/	/	/	/	/	H3

...

	A	B	C	D	E	F	G	H	$\sum X_i$	Xi.	
I	/	/	/	/	/	/	/	/	/	/	X00
II	/	/	/	/	/	/	/	/	/	/	/
III	/	/	/	/	/	/	/	/	/	/	X00
$\sum X_j$	/	/		/	/	/	/	/			/
X.j	/	/	/	/	/	/	/	/			

() ANOVA

S.O.V	df	sS	Ms	F	F5%	F1%
G		/				
T		/	/	/	2/77*	4/28*
R		/	/	/	3/74*	6/51*
E		/	/			



	Kg/ha				Kg/ha				Kg/ha			
	()				()				()			
A	/	/	/	/	/	/	/	/	/	/	/	/
B	/	/	/	/	/	/	/	/	/	/	/	/
C	/	/	/	/	/	/	/	/	/	/	/	/
D	/	/	/	/	/	/	/	/	/	/	/	/
E	/	/	/	/	/	/	/	/	/	/	/	/
F	/	/	/	/	/	/	/	/	/	/	/	/
G	/	/	/	/	/	/	/	/	/	/	/	/
H	/	/		/	/	/		/	/	/		/

...

	Kg/ha				Kg/ha				Kg/ha			
			()				()				()	
			()				()				()	
A	/	/	/	/	/	/	/	/	/	/	/	
B	/	/	/	/	/	/	/	/	/	/	/	
C	/	/		/	/	/	/	/	/	/	/	
D	/	/		/	/	/	/	/	/		/	
E	/	/		/	/	/	/	/	/		/	
F	/	/		/	/	/	/	/	/	/	/	
G	/	/		/	/	/	/	/	/		/	
H	/	/		/	/	/		/	/	/	/	

\bar{P}	ΣS			
/	/	/	/	A1
/	/	/	/	A2
/	/	/	/	A3
/	/	/	/	B1
/	/	/	/	B2
/	/	/	/	B3
/	/	/	/	C1
/	/	/	/	C2
/	/	/	/	C3
/	/	/	/	D1
/	/	/	/	D2
/	/	/	/	D3
/	/	/	/	E1
/	/	/	/	E2
/	/	/	/	E3
/	/	/	/	F1
/	/	/	/	F2
/	/	/	/	F3
/	/	/	/	G1
/	/	/	/	G2
/	/	/	/	G3
/	/	/	/	H1
/	/	/	/	H2
/	/	/	/	H3

...

	A	B	C	D	E	F	G	H	$\sum X_i$	X_i
I	/	/	/	/	/	/	/	/	/	/
II	/	/	/	/	/	/	/		/	/
III	/	/	/	/	/	/	/	/	/	/
$\sum X_{0j}$	/	/	/	/	/	/	/	/	/	$X_{00} = /$
X_j	/	/	/	/	/	/	/	/		$X_{00} = /$

() ANOVA

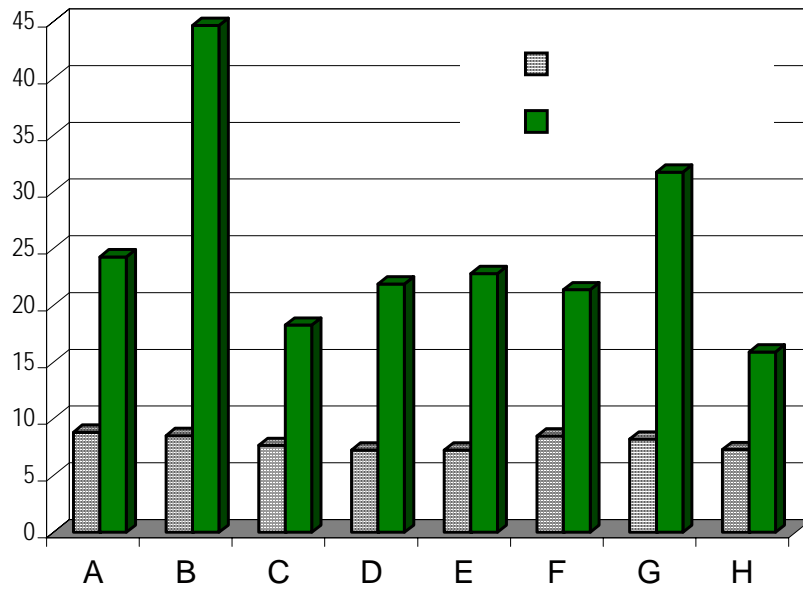
S.O.V	Df	Ss	Ms	F	F5%	F1%
G		/				
T		/	/	/	/ *	/ **
R		/	/	/	/ *	/ **
E		/	/			

LSR

SSR %	/	/	/	/	/	/
LSR %	/	/	/	/	/	/
SSR %	/	/	/	/	/	/
LSR %	/	/	/	/	/	/



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Archive 01

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The Effect of Pitting, Ripping and Contour Furrow on the Moisture Storage and Increase in Plant Cover

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Abstract

This study conducted to compare different watershed operations such as pitting, ripping and contour furrow for water conservation in soil and plant cover by using experimental plots in order to determine suitable operations. Random complete blocks carried out this study with eight treatments (pitting, ripping and contour furrow with and without seeding, plot with only seeding and control plots) in three replicates. Plots dimension were 8*40 meters with 6% slope. The two features of soil moisture and plant cover were considered. Soil moisture was measured in 0-50cm depths physically by using sampling cylinder and auger and subsequent drying and weighing the samples. The results derived from statistical surveys showed that at the probability of 1% the samples fall into two categories (a and b) while at the probability of 5% three categories (a, b, c) appear. Maximum soil moisture was observed in contour furrow and pitting with 8.82% and 8.52%, respectively, and minimum was found in the control sample with the value of 7.24%. Plant cover and forage production in two consecutive years were investigated. The results showed again that in the 5% probability three categories may be distinguished (a, b and c) while at the 1% probability two categories (a and b) forms. Maximum plant cover was observed with pitting with seeding with 44.66% and the minimum was found with ripping without seeding with 15.891%. Finally, it is concluded that favorable plant cover may be developed in heavy-texture marly lands by building furrow and pitting construction. Rainfall water and soil conservation is another advantage of using these initiatives.

Key Words: pitting, ripping, contour furrow, moisture storage, and plant cover.

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