

(Nicotiana tabacum L.)

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(/ / : / / :)

NAA

MS

/ BAP

MS

NAA

(R²= /)

(Kamel, 1985; Kim & Hwang, 1981; Skula, 1983)

(1981) Kim & Hwang

(Chawla, 2003)

(Dimanov, 2001)

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Torrecilla et al.

(2002)

(1999) Weeks et al.

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(Chawla, 2003)

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(1981) Keum & Jen .

Sc72×Va115

(1982) Nessler et al. .

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(2002) Dimanov

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SAS

مواد و روش‌ها

(X)

()

(Y)

%

p

MS

y q x

(Murashige & Skoog, 1962)

$$Vr = a_{r1}y_1 + a_{r2}y_2 + \dots + a_{rq}y_q$$

F CV :
 ()
 F
 / %

$$U_r = a_{r1}x_1 + a_{r2}x_2 + \dots + a_{rp}x_p$$

$$\begin{matrix}
 \cdot & q & p & & r \\
 & & & & \\
 & & & & V_1 & U_1 \\
 & & & & & V_2 & U_2 \\
 & & & & V_2 & U_1 & V_1 & U_2 \\
 (V_1 & U_1) & & & & & & \\
 & & & & & & & \dots & (V_2 & U_2) \\
 & & & & & & & & & y & x \\
 & & & & & & & & & V_1 & U_1
 \end{matrix}$$

CV

(Farshadfar, 2001)

F		CV		
F	CV	CV		
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(Rezaei & Soltani, 1998)

(ME)

(Nash & Sutcliffe, 1970)

$$ME = 1 - \frac{\sum_{i=1}^n (y_i - \hat{y}_i)^2}{\sum_{i=1}^n (y_i - \bar{y})^2}$$

$$\hat{y}_i \quad y_i$$

$$\bar{y}$$

(Kamel, 1985; Kim & Hwang, 1981; Skula, 1983)

$$\begin{matrix}
 () / () + / \\
 () + / \\
 () /
 \end{matrix}$$

1. Model Efficiency

$$(V_1 \ U_1)$$

V ₃	V ₂	V ₁	Y
/	/	/	
/	/	/	
/	/	/	

V₁
U₁

:

(Rezaei & Soltani, 1998)

$$(V_2 \ U_2)$$

V₂

U₂

$$Y = -1531/3 + 231/4SD + 15/2LL + 137/3NC + 4/9 HI$$

=Y

=LL

=SD

=HI

=NC

$$) \quad ()$$

(

)^۴

)^۵

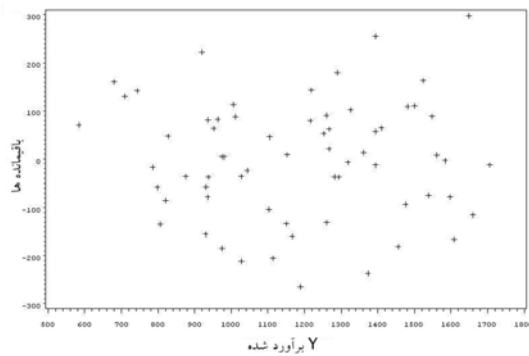
(

(Vif)^۶

t

U ₃	U ₂	U ₁	صفات گروه X
-۱/۸۶۴	-۱/۲۱۱	-۰/۸۰۴	ارتفاع بوته
-۰/۴۸۵	-۰/۲۶۷	۰/۰۰۱	میزان کلروفیل برگ
-۰/۹۱۷	-۰/۵۴۸	-۰/۱۴۰	طول برگ
۰/۵۷۱	۰/۹۹۶	-۰/۴۵۶	عرض برگ
۲/۰۰۲	۰/۵۷۰	۰/۰۷۴	تعداد برگ
۰/۰۶۹	-۰/۲۳۶	۰/۰۲۶	قطر ساقه
۰/۳۶۷	۰/۱۲۲	-۰/۲۰۸	روز تا گلدهی
-۰/۰۲۰	۰/۶۰۵	-۰/۰۴۹	درصد ماده خشک
۳/۰۷۲	۰/۷۰۷	۰/۰۹۹	طول میانگره
۰/۲۸۵	۰/۴۶۵	۱/۱۹۰	عملکرد برگ سبز

1. Stepwise
2. Studentized residual
3. Linearity
4. Equal variance
5. Independent of the error term
6. Variance inflation factor



(Nash & Sutcliffe, 1970)

R ²	R ²		t		t	(Beta)
	(Vif)					
/	/	/	/	/	/	/
/	/	/	/	/	/	/
/	/	/	/	/	/	/

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