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(Phaseolus vulgaris)
(Amaranthu retroflexus)

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.(Majnoun Hosseini, 2008)

(LAI)

(NAR)

(Malik et al., 1993)

(Ogg & Rogers, 1989)

(IWM)

(Malik et al.,
1993; Ngouajio et al., 2001; Steinmaus & Norris,
2002)

(*Amaranthus retroflexus*)

(Wilson et al., 1980)

(Mirkamali, 1995)

(Conley et al., 2002; Deines et al., 2004; Swaton &
Murphy, 1996)

(*Ambrosia artemisiifolia*)

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(Cousens, 1985)

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(2004) Mesbah et al. (Chikoye et al., 1995)

(*Helianthus annuus*)

(*Setaria viridis*)

Deliman et al.

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(DMA)

(CGR)

4. Net Assimilation Rate
5. Leaf Area Index

1. Integrated Weed Management
2. Dry Matter Accumulation
3. Crop Growth Rate

... (*Phaseolus vulgaris*)

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$$x_0 = \frac{b}{a} \left(\frac{1}{1 + \exp(-b(t-m))} - 1 \right)$$

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(Ngouajio et al, 2001; Ni et al., 2000; Steinmaus & Norris, 2002)
CGR ()

$$l = \frac{a}{b} \left(\frac{1}{1 + \exp(-b(t-m))} - 1 \right)$$

$$W(t) = a / (1 + \exp(-b(t-m)))$$

$$CGR = b \cdot w(t) \{1 - (w(t)/a)\}$$

$$w(t) = \frac{a}{1 + \exp(-b(t-m))}$$

CGR

(Swinton et al., 1994)

(Cousens, 1985)

Y_L

a

$$(l * l) /$$

m

N_w

Leaf Area Meter

(Cousens, et al., 1988)

$$YL = \frac{aNw}{1 + \frac{aNw}{m}}$$

(LAI) ()

(Steinmaus & Norris, 2002)

$$x(t) = a \cdot \exp\{-0.5(x-x_0/b)^2\}$$

Y

YWF

x(t)

t

a

(Swinton et al., 1994)

a

(2001) Negouajio et al. ()

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$$Y = YWF \left[1 - \frac{aN_w}{100 \left(1 + \frac{aN_w}{m} \right)} \right] \quad ($$

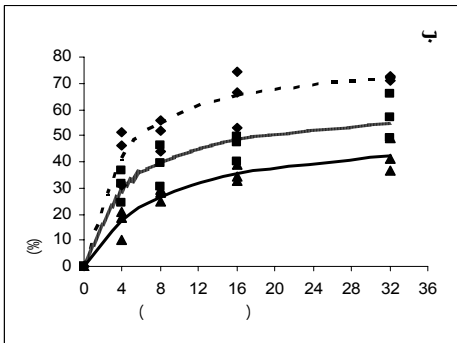
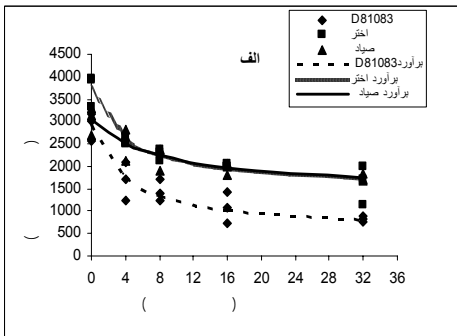
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(2001) Norris et al.

Sigma plot

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(Moeching et al., 2003; Ngouajio

et al., 2001; Norris et al., 2001)

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... (*Phaseolus vulgaris*)

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m				a				YWF			
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(Wilson et al.,

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(1993) Malik et al.

(1991) Blackshaw

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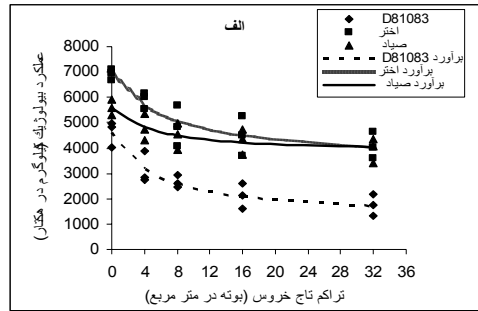
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(Moeching et al.,

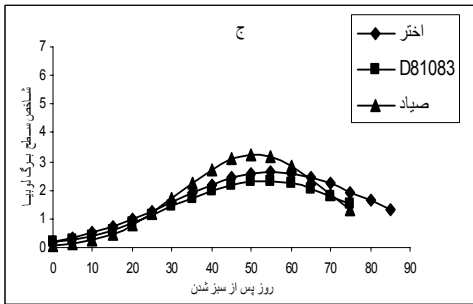
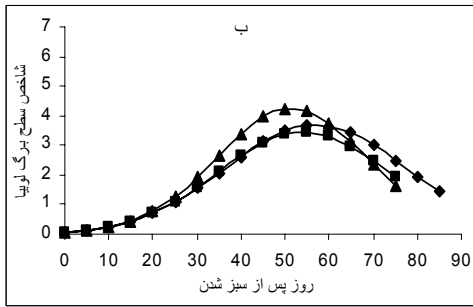
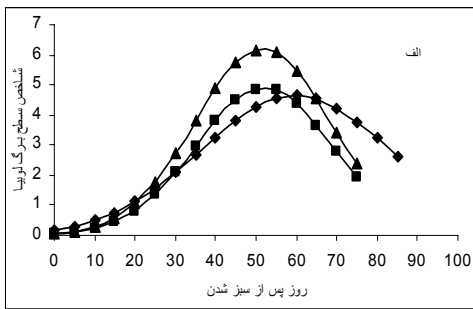
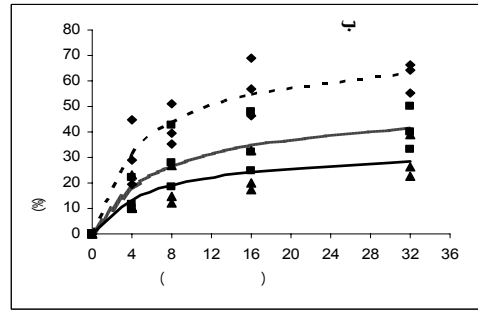
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.2003; Ngouajio et al., 2001)

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Blackshaw .

(1991)

LAI

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D81083 (a)

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... (*Phaseolus vulgaris*)

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(1993) Woolley et al.

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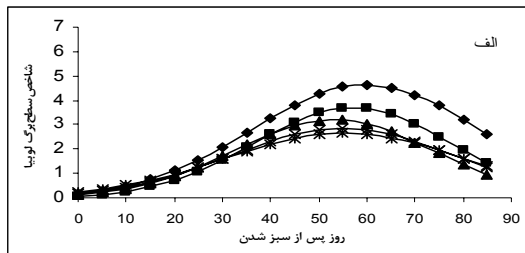
(Malik et al., 1993;

Ngouajio et al., 2001; Ni et al., 2000)

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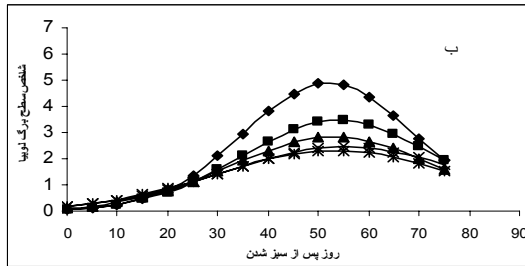
(1993) Malik et al.



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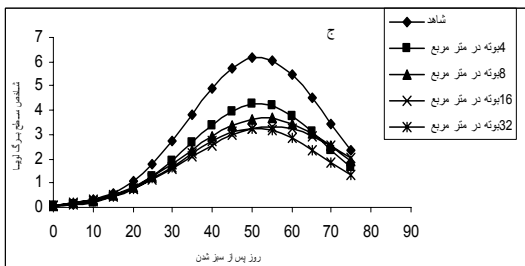
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D81083 (a)



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Ngouajio et al. .

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(2000) Ni et al.

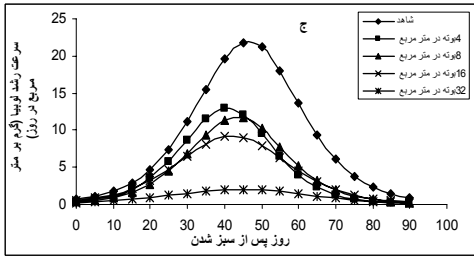
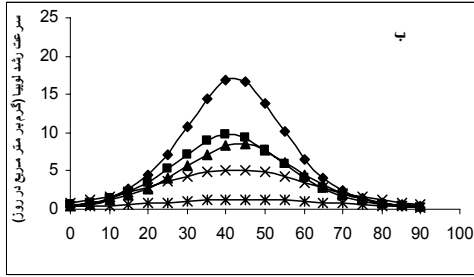
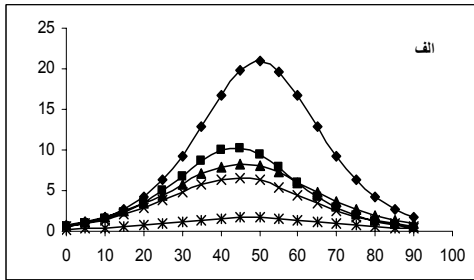
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... (Phaseolus vulgaris)

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(Woolley et al., 1993)

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(1993) Malik et al.

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(1989) Legere & Schreiber . ()

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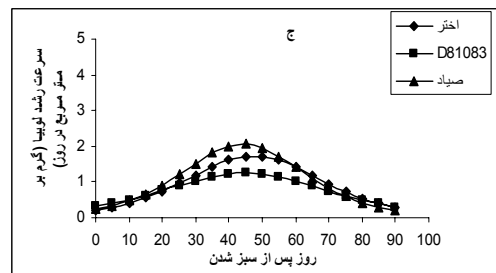
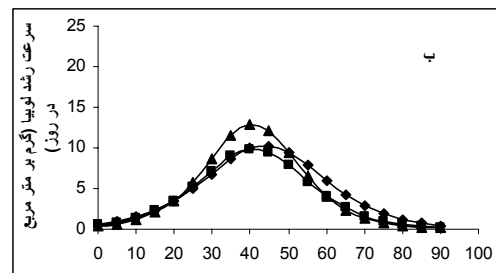
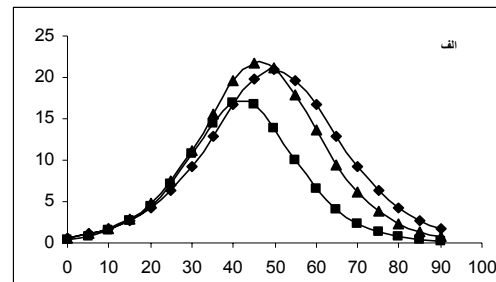
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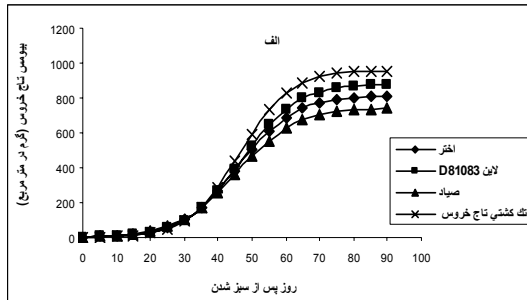
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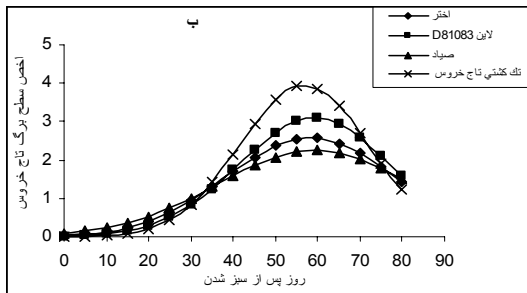
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(1980) Wilson et al. .



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(2002) Steminmaus & Norris .(Malik et al., 1993)

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Ngouajio et al.

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