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(Hopkins, 1999)

(Zhu, 2002)

- .(Clark & McCiag, 1982)
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- .(Ramachandra Reddy et al., 2004)
- ( ) ( Jones & Corlett, 1992)
- (Ramachandra Reddy, RuBP 1996; Tezzara et al., 1999; Parry et al., 2002; Chaitania et al., 2003) (Lawlor & Cornic, 2002)
- (Ramachandra Reddy et al., 2004; Ruiz-Toress, 2002) (Ramachandra Reddy, 2004)
- .(Parry et al., 2002; Chaitania et al., 2003) (Martin & Ruiz-Toress, 2002)
- (Cornic, 2000; Martin & Ruiz-Toress, 1992)
- (Vu et al., rbcs 1999) (CA1P) Martin and Ruiz- .(Cornic, 2000) (1992) Toress
- (Parry et al., 2002)
- (Chaves et al., 2003) (Souza et al., 2003)
- .(Martin & Ruiz-Torres, 1992) (Jensen Miyashita et al., 2005) et al., 1996)
- CF0/CF1 (Hopkins, 1999) Lawlor, ) (1995
- (Herzog, 1986) (Ritchie et al., 1990)
- .(Jung, 2004) (Martin et al., 1989)

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. (Sairam et al., 1997)  
(Sing et al., 1992) Pastori & Trripi  
1992)

=  $\frac{(\quad)}{\quad}$  (*Triticum aestivum L.*)  
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$$pWUE = \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right) \quad \text{(Merah, 2001)}$$

$$\text{(\%)} = \frac{\text{(\%)}_{\text{leaf}}}{\text{(\%)}_{\text{stem}}} \times 100$$

$$= \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right)$$

(IRGA, model: LCA4, ADC Bioscientific Ltd.  
Hoddeston, UK)

(Yang et al., 2000; Ahmad et al., 2002)

(1984) Meidner

(Clark & Mc Ciaig, 1982)

(Fischer et al., 1998; Ahmadi & Baker, 1999)

(Spectrophotometer, model: Shimadzu UV-160A)

$$\text{pWUE} = \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right)$$

$$\text{pWUE} = \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right) \times \left( \frac{b}{a} \right) \times \left( \frac{v}{w} \right)$$

$$\text{pWUE} = \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right) \times \left( \frac{b}{a} \right) \times \left( \frac{v}{w} \right) \quad \text{(Ashraf et al., 1994)}$$

$$\text{pWUE} = \left( \frac{V}{W} \right) / \left( \frac{V}{W} + \frac{W}{V} \right) \times \left( \frac{b}{a} \right) \times \left( \frac{v}{w} \right) \quad \text{(Ritchie et al., 1990)}$$

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(Sairam & Siravastava, 2002)

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.(Merah, 2001) / / /

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| Co <sub>2</sub>                         |   |                           |   |     |     |   |     |     |       |
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| (mmol m <sup>-2</sup> s <sup>-1</sup> ) | (μmol Co <sub>2</sub> mol <sup>-1</sup> ) | (μmol mol <sup>-1</sup> ) | (μmol Co <sub>2</sub> m <sup>-2</sup> s <sup>-1</sup> ) |     |     | (μmol Co <sub>2</sub> m <sup>-2</sup> S <sup>-1</sup> ) |     |     |       |
| / E                                     | / CD                                      | A                         | / CD  | AB  | E   | E   | DE  | / D | / BC  |
| / E                                     | / BCD                                     | / A                       | CD  | CD  | E   | E   | DE  | / D | / ABC |
| / E                                     | / AB                                      | / B                       | / EFG   | BCD | E   | / DE  | BC  | D   | / A   |
| / E                                     | / ABC                                     | / AB                      | / DE  | BC  | E   | DE  | CD  | / D | / A   |
| / EF                                    | / A                                       | / FG                      | / EFG   | A   | E   | DE  | AB  | / E | / A   |
| / F                                     | / D                                       | DEF                       | / G   | AB  | E   | E   | A   | / E | / C   |
| EF                                      | / AB                                      | / BC                      | / G   | D   | E   | E   | A   | / D | / A   |
| / B                                     | / A                                       | / A                       | / B   | / B | / A | / B   | / A | / B | / A   |

(Lawlor & Cornic, 2002;

.Ramachandra Reddy et al., 2004)

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.(Ritchie et al., 1990)

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(El hafid et al., 1998)

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(2003) Siosemarde .(Ritchie et al., 1990)

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(Fischer et al., 1998)

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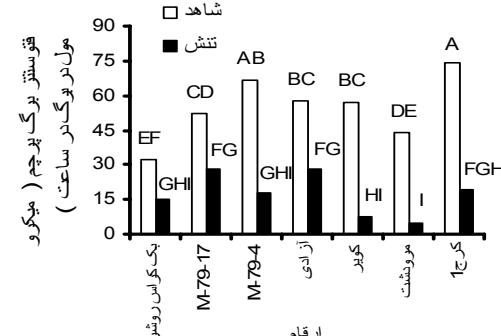
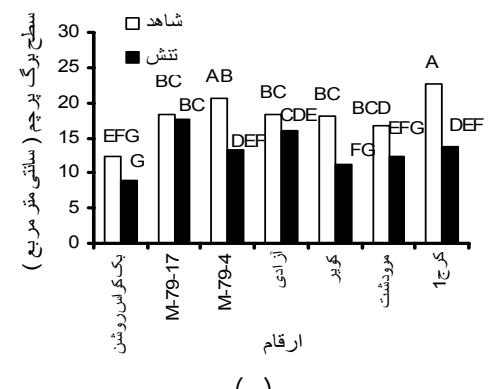
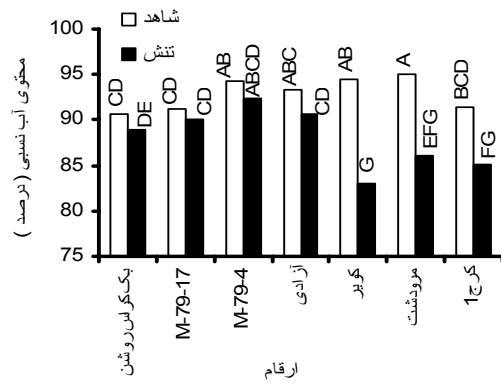
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(Ramachandra Reddy, 2004)

(Ramachandra Reddy, 2004)

(Sheferd et al., 2002)

Ahmadi & Baker (Martin & Ruiz-Torres, 1992)  
(1999)



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(Fischer et al., 1998)

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| M-79-17    | (        ) | (Castrillo & Turujillo, 1994) |
| (        ) |            | (Castrillo & Calcango, 1989)  |
| b          | a          |                               |
| M-79-4     | (        ) | b                             |
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| b          |            | (        )                    |

(2004) Jung .(Ahmadi & baker, 1999)

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(Sairam et al., 1997)

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(Ramachandra reddy et al., 2004)

(Ahmadi & Baker,

1999)

(Ashraf et al., 1994)

(Jensen et al., 1996)

(Castrillo & Calcango, 1989)

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(Siosemarde, 2003)

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(Sugiharto et al.,

1990)

(Castrillo & Calcango, 1989)

(Jensen et al., 1996)

(Castrillo & Calcango, 1989)

(Parry et al., 2002)

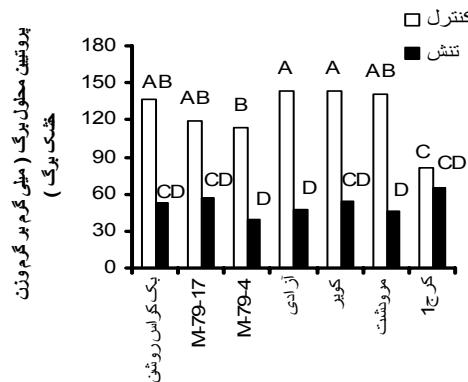
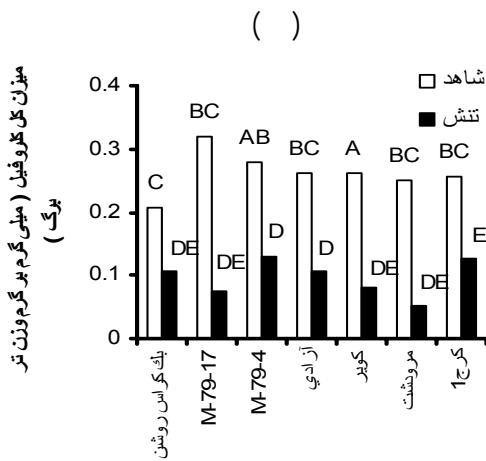
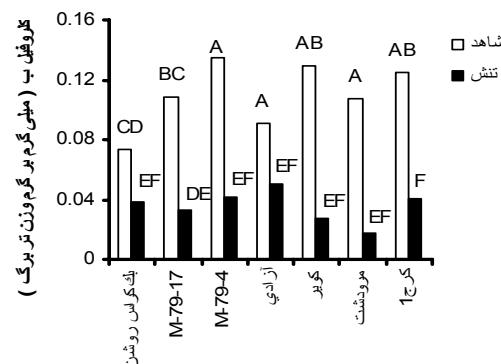
(Xu et al., 1996)

(Zhu, 2002)

Mg<sup>2+</sup>

(Parry et al., 2002)

(Chaves et al., 2003)



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(Rao et al., 1987)

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