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MATVEC DFREML

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(Marti & Funk, 1994)

(Dekkers, 1991)

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Farhangfar & (2001) Rezaei
(2007) Hendabadi et al. (2007) Naeimipoor

(Farhangfar & Naeimipoor, 2007)

Univariate SAS (SAS, 2002) Normal (Hendabadi et al., 2007)

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$$y_{ijkl} = \mu + Rys_i + H(Rys)_{j(i)} + b.AFC_k + A_l + e_{ijkl} \quad ($$

y_{ijkl})

$$\mu \left(\begin{array}{l} Rys_i \\ H(Rys)_{j(i)} \\ b \\ AFC_k \\ A_l \\ e_{ijkl} \end{array} \right) \quad (Farhangfar \& \text{Naeimipoor, 2007})$$

$$y_{ijklm} = \mu + Rys_i + H(Rys)_{j(i)} + ApMp_k + A_l + PE_l + e_{ijklm} \quad ($$

(Rezaei, 2001)
(Hendabadi et al., 2007)

(Farhangfar & Naeimipoor, 2007)

$$y_{ijklm} \quad ($$

(CI) (CFS) ApMp_k (GL)

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 (Rezaei, 2001; Beigi Nasiri et al.,
 2004; Dadpasand Taromsari, 2005; Daliri et al.,
 .2007)

Perez-Cabal & Alenda, 2002;)
) (Kadarmideen et al., 2003; Muir et al., 2004
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Marti & Funk, 1994; Kadarmideen et al.,)
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 (Kadarmideen et al., 2003)
 (Safi Jahanshahi, / /
 2000; Beigi Nasiri et al., 2004; Dadpasand
 .Taromsari, 2005; Daliri et al., 2007)

(Kadarmideen et al., 2003;
 Anderson-Ranberg et al., 2005; Jamrozik et al.,
 / / 2005)
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 (2005) Jamrozik et al.

(Safi Jahanshahi, / /
 2000; Rezaei, 2001; Beigi Nasiri et al., 2004;
 Dadpasand Taromsari, 2005)

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 (Kadarmideen et al., 2003)
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 (Daliri et al., 2007)

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 .(Kadarmideen et al., 2003; Muir et al., 2004)

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(2005) Jamrozik et al.

/) (2007) Farhangfar & Naeimipoor

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(Kadarmideen et al., 2003; Muir et al., 2004)

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(Mohammad Nazari et al., 2002; Farhangfar & Naeimipoor, 2007; Hendabadi et al., 2007)

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Mohammad Nazari et al.,)

(2002

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(Marti & Funk, 1994; Kadarmideen et al., 2003; Jamrozik et al., 2005)

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(Marti & /

Funk, 1994)

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(Marti & Funk, 1994; /

Anderson-Ranberg et al., 2005; Jamrozik et al., 2005)

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(Marti & Funk,
1994; Mohammad Nazari et al., 2002; Beigi Nasiri
et al., 2004; Farhangfar & Naeimipoor, 2007;
/ Hendabadi et al., 2007)

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