

()

*

()

(// : // :)

- (2009) Tousi Mojarrad & Bihanta *
- Jinks (1953, 1954) Griffing
(1956) Kempthorne (1954) Hayman (1954)
Lee & (1963) Cokerham (1956a) Griffing
(1972) Gardner & Eberhart (1972) Kaltsikes
(1978) Walter & Morton
:
/
(1953) Griffing
(1978) Baker .
Guscinora
(1987)
(1980) Nooral .
(1988) Malik et al.
(1988) Ma .
Ald ``s`` Moncho Walbler
(1995) Taleie & Beigi
*
F₁
()
(1999) Nic-Khah .
(2002) Musavi .

Griffing) B (1953)
 Hayman - Jinks (1953)
 WR² WR-VR
 D₂ () Minitab
) Excel ()

(1999) Nic-Khah (1978) Baker ()
 Musavi (2002)
 (2004) Etminan (2002) Musavi
 (1995) Taleie & Beigi
 (1980) Eghbal
 (1994) Keiralla et al.
 (1976) Edwards et al.
 (1972) Yap & Harvey
 (1999) Nic-Khah

/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/
/ **	/ **	/ **	/ **	/ **	/ **	/ **	/ **	/ **	/ **	/ **
/ **	/ **	/ **	/ **	/	/	/ **	** /	/ **	/ **	/ **
/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/

** *

/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**																	
/	**	/	**	/	**	/	**	+	+	/	**	/	**	/	**	/	**	/	**	/	**																	
/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**																	
/	**	/	**	/	**	+	+	/	**	/	**	/	**	/	**	/	**	/	**	/	**																	
/		/		/		/		/		/		/		/		/		/		/																		
/		/		/		+	+	/		/		/		/		/		/		/																		
/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**	/	**																	
/	**	/	**	/	**	+	+	/	**	/	**	/	**	/	**	/	**	/	**	/	**																	
																		**	*																			+

(1954) Hayman

(2000) Roy .

:

Warbler

)

Moncho Ald

)

(

(

.(Taleie & Baigi, 1995)

Singh & Chaudhary

Dana & Dasgupta (2000) Chaudhary et al. (1985)

Ghanadha et al. (2000) Rameh et al. (2001)

Alami & (1997) Mansory & Ahmady (1997)

(1996) Farshad far (1999) Chogan (1995) Vejdani

(1954) Hayman

(Moncho*)

(*)

(SCA)

/	*	/	**	/	*	/	**	/	*	/	*
/		/	**	/	**	/	**	/	**	/	*
/		/	*	/	*	/	*	/	*	/	*
/		/	*	/	*	/	*	/	*	/	*
/	*	/	**	/	**	/	**	/	**	/	*
/	**	/	**	/	**	/	**	/	**	/	*
/	**	/		/	*	/	**	/	**	/	*
/	**	/	**	/	**	/	*	/	**	/	*
/		/		/	**	/		/	*	/	*
/		/	**	/		/	*	/	*	/	*
/	**	/	**	/	**	/	**	/	**	/	*
/		/		/	**	/		/		/	*
/	**	/	**	/	*	/	**	/	**	/	*
/		/		/	**	/		/	**	/	*
/	**	/	**	/	*	/	**	/	**	/	*
/		/		/	**	/		/	*	/	*
/	**	/	**	/	*	/	**	/	**	/	*
/		/		/	**	/		/	**	/	*
/	**	/	**	/	*	/	**	/	**	/	*
/		/		/	**	/		/	**	/	*
/	**	/	*	/	**	/	*	/	**	/	*
/		/		/	**	/		/	**	/	*
/		/	**	/		/	**	/	*	/	*
/		/		/		/		/		/	S.E(gi)
/		/		/		/		/		/	CD(0.05)
/		/		/		/		/		/	CD(0.01)

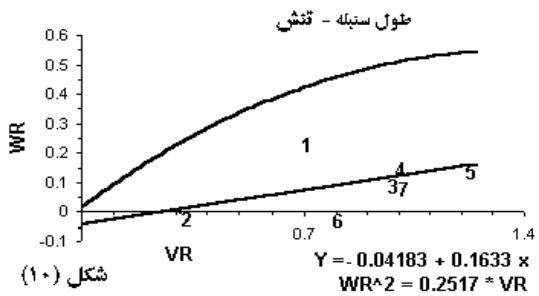
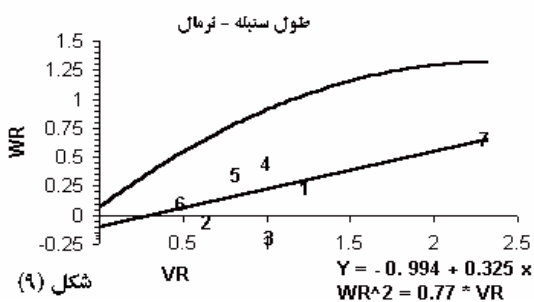
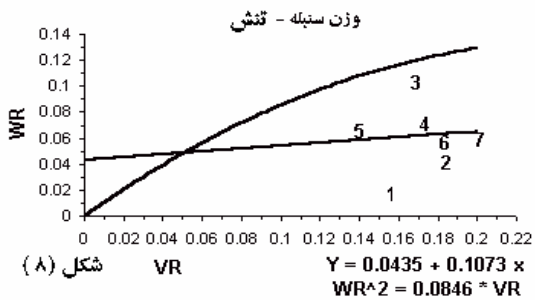
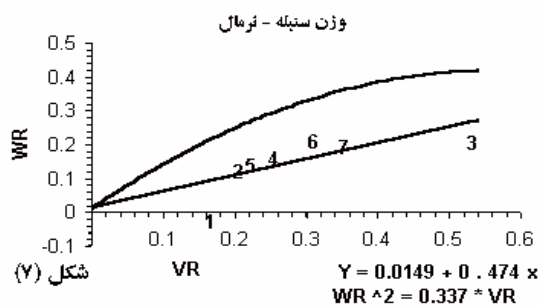
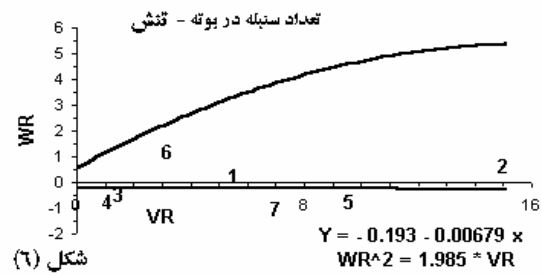
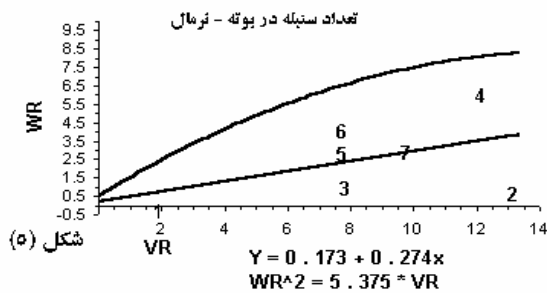
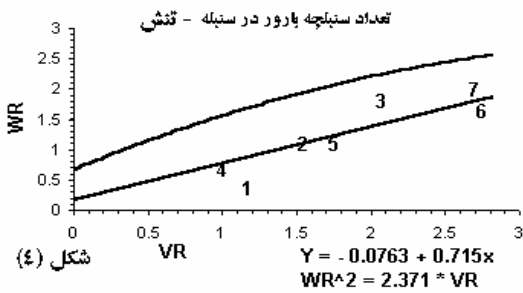
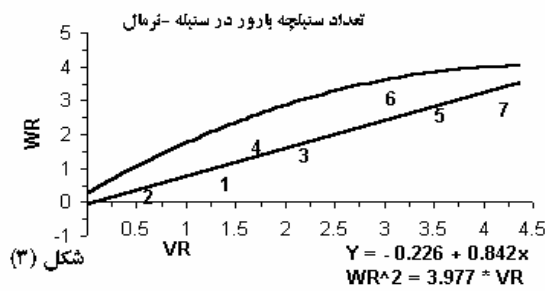
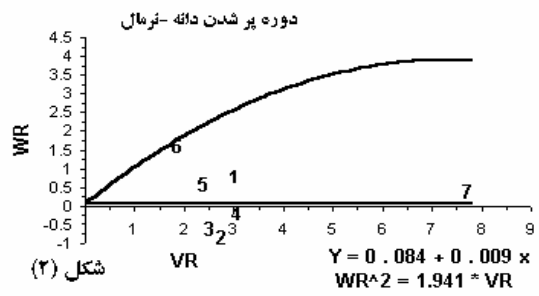
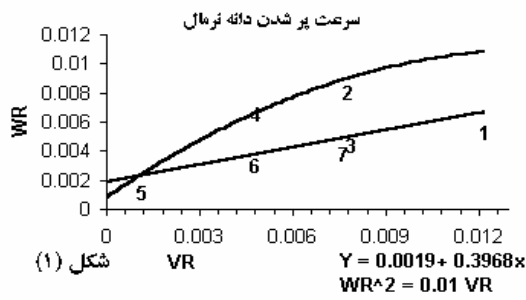
/		/	**	/	**	/	**	/	*	/	*
/	**	/	**	/	**	/	**	/	**	/	*
/		/		/	**	/	*	/		/	*
/	*	/	*	/	*	/	*	/	**	/	*
/	**	/	**	/	*	/	*	/	**	/	*
/		/	**	/	**	/	**	/	**	/	*
/	**	/		/	**	/		/	*	/	*
/	**	/	**	/	**	/	**	/	**	/	*
/		/		/	**	/	**	/	**	/	*
/	**	/	**	/	**	/	**	/	**	/	*
/		/	**	/	*	/	*	/	**	/	*
/	**	/	*	/	*	/	*	/	**	/	*
/		/		/	**	/	*	/	*	/	*
/	**	/	**	/	**	/	*	/	*	/	*
/	**	/	**	/	*	/	*	/	*	/	*
/	**	/	*	/	*	/	*	/	*	/	*
/	**	/		/	**	/	**	/	*	/	*
/	**	/		/	*	/	**	/	*	/	*
/		/		/	*	/	**	/	*	/	*
/		/		/		/		/		/	S.E(gi)
/		/		/		/		/		/	CD(0.05)
/		/		/		/		/		/	CD(0.01)

** *

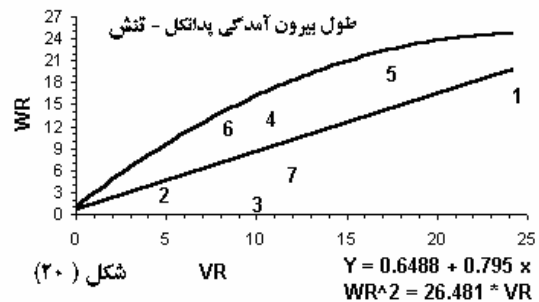
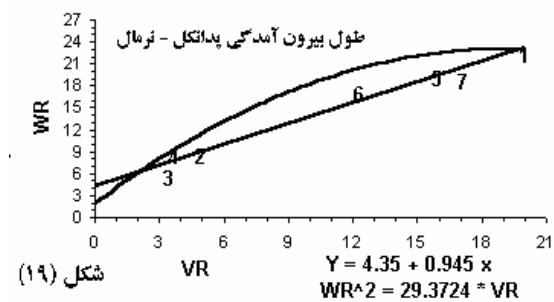
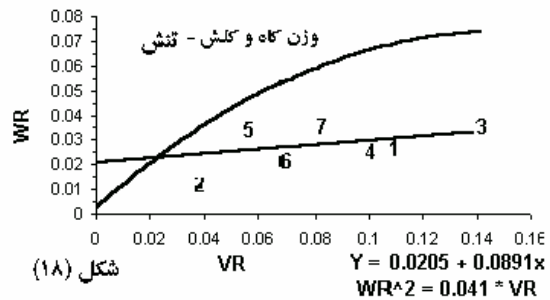
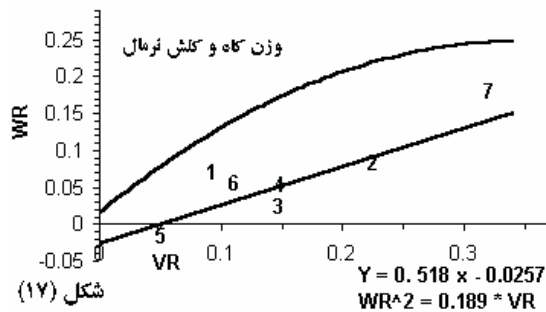
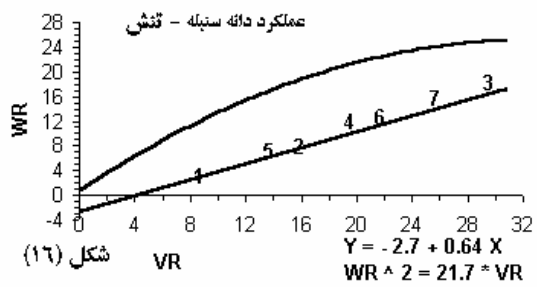
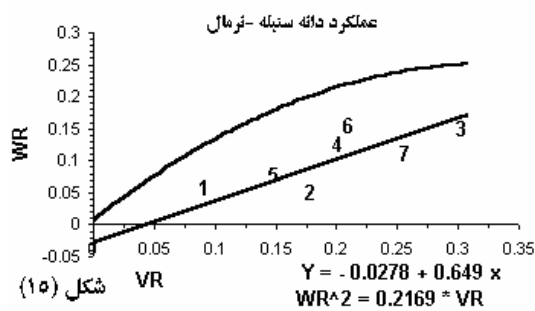
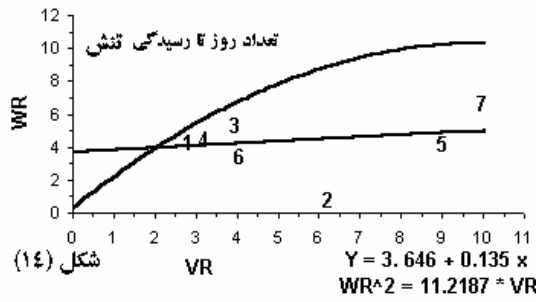
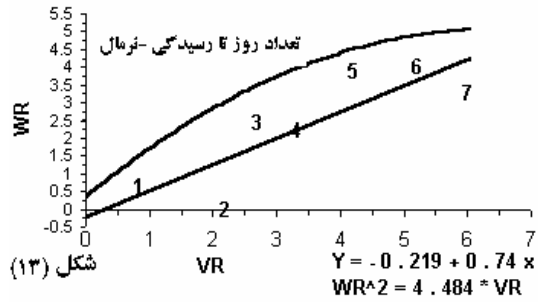
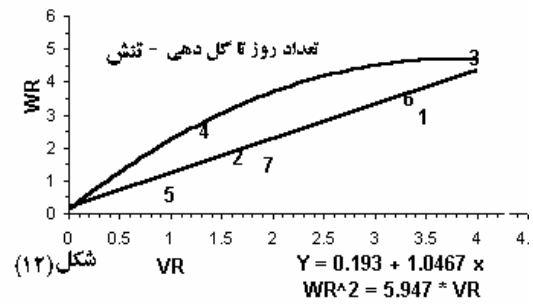
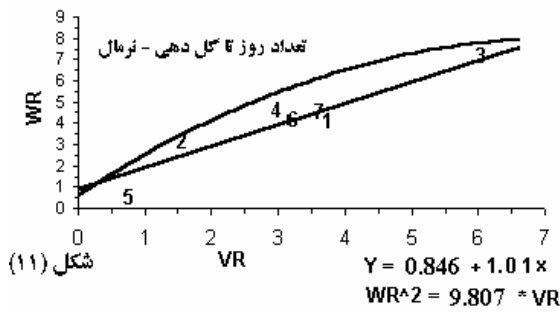
/	/	/	/	/	/	/	/	/	/	(mp)
/	/	/	/	/	/	/	/	/	/	(mfl)
/	/	/	/	/	/	/	/	/	/	(mfl-mp)
/	/	/	**	/	/	**	**	/	**	(VD)
/	/	/	/	/	/	/	/	/	/	(F)
/	**	**	**	**	**	**	**	**	**	(H1)
/	**	**	**	**	**	**	**	**	**	(H2)
/	**	/	**	**	**	**	**	/	**	(hh)
/	**	/	**	**	**	**	**	/	**	(VE)
/	/	/	/	/	/	/	/	/	/	(H1/D) ^{1/2}
/	/	/	/	/	/	/	/	/	/	(H2/4H1)
/	/	/	/	/	/	/	/	/	/	(h ² _B)
/	/	/	/	/	/	/	/	/	/	(h ² _N)
/	/	/	/	/	/	/	/	/	/	(D/D+E)
/	/	/	/	/	/	/	/	/	/	(H1-H2)
/	/	/	/	/	/	/	/	/	/	(h)
/	/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	/	((4DH1) ^{1/2} +F)/((4DH1) ^{1/2} -F)
/	/	/	/	/	/	/	/	/	/	(0.5 * F) / (D (H1- H2)) ^{1/2}

/	/	/	/	/	/	/	/	/	/	(mp)
/	/	/	/	/	/	/	/	/	/	(mfl)
/	/	/	/	/	/	/	/	/	/	(mfl-mp)
/	**	**	/	**	**	**	/	**	**	(VD)
/	/	/	/	/	/	/	/	/	**	(F)
/	**	**	**	**	**	**	**	**	**	(H1)
/	**	**	**	**	**	**	**	*	**	(H2)
/	**	/	**	**	**	**	/	/	/	(hh)
/	*	/	**	**	/	**	**	/	**	(VE)
/	/	/	/	/	/	/	/	/	/	(H1/D) ^{1/2}
/	/	/	/	/	/	/	/	/	/	(H2/4H1)
/	/	/	/	/	/	/	/	/	/	(h ² _B)
/	/	/	/	/	/	/	/	/	/	(h ² _N)
/	/	/	/	/	/	/	/	/	/	(D/D+E)
/	/	/	/	/	/	/	/	/	/	(H1-H2)
/	/	/	/	/	/	/	/	/	/	(h)
/	/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	/	((4DH1) ^{1/2} +F)/((4DH1) ^{1/2} -F)
/	/	/	/	/	/	/	/	/	/	(0.5 * F) / (D (H1- H2)) ^{1/2}

** *



Moncho Ald "s" Warbler



Moncho Ald "s" Warbler

- (1993, 1994) Kheirallah et al. ()
- (1997) Ghandi et al.
- (2002) Musavi
- Nic-Khah
- Babu & Kumar (1997) Ghandi et al. (1999)
- (2004) Etminan (2002) Musavi (1995) ()
- (2002) Musavi (2004) Etminan
- (1995) Taleie & Beigi (1993) Kheirallah et al.
- (1976) Edwards et al. (1980) Eghbal
- (1993) Kheirallah et al.
- Kheirallah et al. (1994)
- Yap (1976) Edwards et al.
- (1999) Nic-Khah (1972) & Harvey
- (1999) Nic-Khah
- ()
- ()
- (1978) Baker
- (1995) Taleie & Beigi (1999) Nic-Khah

REFERENCES

1. Alami, S. & Vejdani, P. (1995). Study of combining ability for quantitative traits in yield. *Seed and Plant Journal*, 2(1), 18-26. (In Farsi).
2. Babu, V. R. & Kumar, S. S. (1995). Combining ability analysis for wheat in normal and stress environments. *Annals of Agri Res*, 1995, 16 (1), 23-27.
3. Baker, R. J. (1978). Issues in diallels analysis. *Crop Science*, 18, 533-536.
4. Chogan, R. (1999). Study of combining ability (GCA, SCA) in lines maize for seed and plant, 15(3), 284-294.
5. Cokerham, C. C. (1963). Estimation of genetic variance. In: W. D. Hanson and H. F. Robinson, (eds)., *Statistical genetics and plant breeding*, pp. 53 – 94. NASNRC publ.982.

6. Chaudary, A. K., Chaudhary, L. B. & Sharama, K. C. (2000). Combining ability estimates of early generation inbred lines derived from maize populations. *Indian Journal of Genetics and Plant Breeding*, 60(1), 55 – 61.
7. Dana, I. & Dasgupta, T. (2001). Combining ability in blackgram. *Indian Journal of Genetics and Plant Breeding*, 61 (2), 170 – 171.
8. Edwards, L. H., Ketata, H. & Smith, E. L. (1976). Gene action of heading date, plant height, and other characters in two winter wheat crosses. *Crop Sci*, 16, 275- 277.
9. Etminan, A. R. (2004). *Study of inheritance in some of quantitative and qualitative traits in bread wheat via diallel method*. M. Sc. thesis, University of Tehran.
10. Farshad far, M. (1996). *Applied of quantitative genetic in plant breeding*. publisher taghe bostan.
11. Gardner, C. O. & Eberhart, S. A. (1972). Analysis and interpretation of the variety cross diallel and related populations. *Biometrics*, 22, 439 – 459.
12. Ghandi, A., Zali, A. & Vojdani, P. (1997). The study of combining abilities (GCA, SCA) of different traits of wheat using diallel cross design. *Seed and Plant*. 31-40.
13. Ghannadha, M. R. & Torabi, M. (1997). Resistance inheritance to yellow rust in wheat line. *Iranian Journal of Crop Science*, 29 (10),131-138.
14. Griffing, B. (1956a). Concept of general and specific combining ability in relation to crossing system. *Aust J Biot Sci*, 9, 463 – 493.
15. Griffing, B. (1953). Concept of general and specific combining ability in relation diallel. Crossing systems. *Australia J Boil Sci*, 9 (16), 443-446.
16. Gusciora, V. M. (1987). Ganalysis of plant height in winter wheat varieties. *Referativnyi Journal*, 40, 65 – 200.
17. Hayman, B. (1954). The theory of analysis of diallel crosses. *Genetics*, 39-78.
18. Honarnejad, R. (2001). Study of correlation between some of quantitative traits and grain yield in rice using path analysis. *Iranian journal of Crop Science*, 25-36.
19. Honarnejad, R. (2002). Combination or heritability in some of quantitative and qualitative traits in variation population (F₂) in tabacum. *Seed and Plant Journal*, 12(4), 49-58.
20. Iqbal, S., Parodas, R. S. & Singh, S. (1980). Relative efficiency of diallel partial, partial diallel and triple cross desins for studying genetic architecture of som traits in wheat. *Indain Journal of Genetic and Plant Breeding*, 46(3), 530-540.
21. Jinks, J. L. & Hayman, B. I. (1953). The analysis of diallel crosses. *Maize Genet. Coop. News*, 27, 48 - 54.
22. Jinks, J. L. (1954). The analysis of continouse variation in a diallel cross of nicotiana rustica varieties. *Genetic*, 39, 767-788.
23. Kheiralla, K. A., El-Defrawy, M. M. & Sheriff, T. H. I. (1993). Genetic analysis of grain yield, biomas and harvest index in wheat under drought stress and normal moisture conditions ii. *Assiut Journal of Agricultural Sciences*, 24 (3), 163 – 183.
24. Kheiralla, K. A. (1994). Inheritance of earliness and its relation with yield and drought tolerance in spring whwat i. *Assiut Journal of Agricultural Sciences*, 25 (5), 129 –139.
25. Kempthorne, O. (1956). The theory of diallel cross. *Genetics*, 41, 451 – 459.
26. Lee, J. & Kaltsikes, P. J. (1972). Supplemental information on the use of computer program for the Jinks-Hayman diallel analysis of data from F₁, F₂ and F₃ generations. *Crop Sci*, 12, 633.
27. Ma, S. F. (1988). An analysis of combining ability and heritability for agronomic characters in spring wheat parents. *Ningxia Journal*, 61, 22 –27.
28. Malik, A. J., Chowohory, A. R., Pajpur, M. M. & Siddiqui, K. A. (1988). General and specific combining ability estimates in spring wheat diallel crosses. *Pakistan J of Agri Res*, 9 (1), 10- 15.
29. Mansory, R. & Ahmady, W. (1997). Study of combining and kind action gene in Sesamum indicum with dai allel method. *Iranian Journal of Crop Science*, 29(1), 47-56.
30. Musavi, S. S. (2002). *Genetic study of drought resistance in wheat by diallel method*. M. Sc. Thesis, University of Tehran.
31. Nic khah, H. R. (1999). *Evaluation and study of inheritance drought tolerance in bread wheat*. M. Sc. Thesis, University of Tehran.
32. Nooral, I., et al. (1986). Genetic architecture of Some agronomic characters and resistance to leaf rust in spring wheat. *Wheat, Barley and Triricale*, 4 (2), 1054.
33. Rameh, A., Rezai, A. & Arzani, A. (2000). Estimate of genetic parameter for yield and component yield in inbred lines maize with diallel method. *Iranian Journal of Crop Science*, 4(2), 95-104.
34. Roy, D. (2000). *Plant breeding*. Analysis and exploitation of variantion. NAROSA puplishing House. New Dehli.

35. Singh, R. K. & Chaudhary, B. D. (1985). *Biometrical methods in quantitative genetic analysis*. Kalyani publishers. New Dehli.
36. Taleie, A. & Beigi, A. (1995). Study of heritability and hitrosis in bread wheat via daiallel method. *Iranian Journal of Agricultural Sciences*, 27 (2), 97-110.
37. Tousi Mojarrad, M., Bihamta, M. R. & Khodarahmi, M. (2009). Genetic variation for grain yield and dry matter remobiliazation to seed in bread wheat genotypes in normal and drought conditions. *Iranian Journal of Field Crop Science*, 40(3), 205.
38. Walter, D. E. & Morton, J. R. (1978). On the analysis of variance of half diallel table. *Biometrics*, 34, 91 – 94.
39. Yap, T. C. & Harvey, B. L. (1972). Inheritance of yield components and morpho –physiological traits in barley (*Hordeum vulgare* L.). *Crop Sci*, 12, 283- 286.