

Pleiotropy

Linkage

(1997 Coyle Smith)
Selection Criteria

1956 Li 1921 Wright)

(1960 Wright

%65.22

%10.28

2.48

(1999)

(2000)Azhar Ahmad

(2000

Hussain)

Abdalla Abdelrahman

Naveed (2003)

(2001)

(2000) Davidonis Bradow (1995)

Preetha (2006)

Ahuja (2004)

Kumari Reddy (2004)

Salahuddine (2010)

Ekinci (2008)

Alishah (2007) Raveendran

(2010)

4-) Gossypium hirsutum L.

2002 2001

(189- - 122- Pamir 1-

310-

5-

1-

4

2001-4-5

0.25

0.75

Full diallel

(1999)

crosses

(1956) Griffing

Fixed Model

81 (= n) n2

2002-4-12

Triple lattice design partially balanced (9×9)

Le Clerg) (

36

36)

81

0.75

4

(1962

3 . 0.25
) . (1999)

(5)

(/) () (/)
(/) ()
:

$$r_{gij} = \frac{\sigma g_i g_j}{\sqrt{\sigma^2 g_i \sigma^2 g_j}}$$

$$r_{pij} = \frac{\sigma p_i p_j}{\sqrt{\sigma^2 p_i \sigma^2 p_j}}$$

- : r_{gij}
- : r_{pij}
- : $\sigma g_i g_j$
- : $\sigma p_i p_j$
- : σ^2

Cause	Direct Effect			(rgij)
Effect	Cause	Indirect Effect		Effect
Affected-		.Other Causes		Paths
Causal- ()				variable
Li				variable
		(1985) Chaudhary Singh		(1956)

) () .() (

(Selection Indexes)

(1951) Robinson .

1

(X1)

Reddy (2004)

Naveed (2000)

Hussain

.(2010) Ravikesavan Ashokkumar (2004) Kumari
(X2)

(2010)

Ekinci (2000)

Hussain

(X3)

Ravikesavan Ashokkumar (2008)

Alishah (2000)

Hussain

.(2010)

Salahuddine (2010)

Ekinci (2010)

(X4)

(2)

Naveed

Preetha (2006)

Ahuja (2004)

Kumari Reddy (2004)

Salahuddine (2010)

Ekinci (2008)

Alishah (2007) Raveendran
(2010)

(X5)

Azhar Ahmad (1999)

(2010) Ravikesavan Ashokkumar (2000)

Hussain (2000)

(X6)

Preetha (2006)

Ahuja (2001)

(2000) Azhar Ahmad

(2010)

Ekinci

(2010) Ravikesavan

Ashokkumar (2007) Raveendran
(2010) Salahuddine

(2007) Raveendran
Salahuddine

(1971) Thomson (1958)
(1999)

Miller

(X7)

Ahuja

(2010) Ravikesavan Ashokkumar (2006)

(X8)

(X9)

Ashokkumar (1999)

(1958)

Miller

(2010) Ravikesavan

(X10)

(1)

(1966) Richmond Ray

(2008)

Alishah

(X11)

)

(

(2010) Ravikesavan Ashokkumar

(100)

(2000) Azhar Ahmad

Al- (1973) Harrell Culp (1958) Al-Jibouri (1958) Miller
(1995) Abdalla Abdelrahman (1982) Marsoomi
(1971) Thomson

(X12)

Khan (2000) Azhar Ahmad (1995) Abdalla Abdelrahman
Ravikesavan Ashokkumar (1991a)
(2010) Salahuddine (2010)

(X13)

()

(1973) Harrell Culp (1958) Miller
(1986b) (1986a) Zhou
(2003) (1990) Kreig Morrow
(1995) Abdalla Abdelrahman

(1995b) Abdalla Abdelrahman

(X14)

(2001) (1967) Bhatt

(X15)

Coyle Smith (1995) Abdalla Abdelrahman (1991) Khan
(2000) Azhar Ahmad (1997)

(X16)

Ashokkumar (1995) Abdalla Abdelrahman)
(2010) Ravikesavan

(2000) Azhar Ahmad
Thomson (1958) Miller

(3 2)

(2)

()
 ()
 (2004) Kumari Reddy (1999) (1991) Khan (1986a) Zhou
 (2008) Alishah (2007) Raveendran Preetha (2006) Ahuja
 ..(2010) Salahuddine (2010) Ravikesavan Ashokkumar
 . (2000) Hussain (1973) Kotaiah
 %10 %90

- .1999 .
 . 14-8 : (4) 4 .
 . 1999 .
 . 10 .
 . 2001 .
 (*Gossypium hirsutum* L.)
 . 129 . - -
 .2003 .
 .106 - 97 : (4) 3 .
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GENOTYPIC, PHENOTYPIC CORRELATIONS AND PATH COEFFICIENT ANALYSIS IN COTTON.

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ABSTRACT

Field experiment was carried out at State Board for Agricultural Researches. The objectives were to study genotypic and phenotypic correlations and path coefficient analysis for eighteen characters included growth, yield and its components, and fiber quality traits for 9 varieties (Marsoomi-4, Ashur-1, Abu Ghraib-5, Cocker-310, Lashata, Kafco-1, Pamir, Rabia-122, Pac-cot- 189) of cotton (*Gossypium hirsutum* L.), its crosses and reciprocal crosses. The traits for 72 single crosses and 9 parents were tested during 2002 using partially balanced Triple Lattice Design with three replications. Results of genotypic and phenotypic coefficient correlation values were obtained for lint yield with seed cotton (0.933 and 0.914 respectively), number of open bolls (0.559 and 0.546 respectively), number of sympodial, seed index, plant height, and recently fineness. path coefficient analysis revealed that plant lint yield and number of open bolls obtain highest positive direct effect in seed cotton were 0.947 and 0.402 respectively then number of seeds per boll and highest positive indirect effect through lint yield. Can be conclude to use lint yield and number of open yield as a selection criteria because it gave highly positive genetic correlation and highly direct effect depending upon results of genotypic and phenotypic correlations and path coefficient analysis.