

()

()

//

G.barbadense G.hirsutum (2n=4x=52)

(G.arboreum G.herbaceum (2n=2x=26))

)

(

G.herbaceum

×

%

G.barbadense

G.hirsutum G.arboreum

MS3

G.barbadense

()

(2n=2x=26)

(2n=4x=52)

(K A)
()

()

C3,E1, E4 , A1,A2,D1,D3-d

A1, C3 , E2 , E4

G.hirsutum

G.barbadense

()

()

()

()

()

()

()

(AD)1 × A2

(*Gossypium hirsutum* var. sahel)

(*G.barbadense* var. barbadense1518)

(*G.herbaceum* var. Hashemabad landrace)

(*G.arboreum*)

(AD1)

()
G.hirsutum

6. in- ovulo embryo culture
7. transient

1. Phylogenetic
2. *in situ*
3. embryo culture
4. *in vitro*
5. Stewart and Hsu (1977)

...

()

)

(

/

(:)

%

G.barbadense *G.arboreum*

G.herbaceum

G.herbaceum × *G.arboreum* ()

G.hirsutum

G.barbadense

:

1. *G.hirsutum* × *G.herbaceum*

2. *G.hirsutum* × *G.arboreum*

3. *G.barbadense* × *G.herbaceum*

4. *G.barbadense* × *G.arboretum*

5. *G.herbaceum* × *G.arboreum*

()

BT a

BT+ IAA(2mg l⁻¹) + Kin(0.5mg l⁻¹) + CH(250 mg l⁻¹) + NH₄Cl₂(860 mg l⁻¹) + Sucrose(%4)

: MS1 b

MS+IAA(1.5 mg l⁻¹) + Kin(0.5 mg l⁻¹) + CH(250mg l⁻¹) + Sucrose (%3)

: MS2 c

MS+IAA(1.5 mg l⁻¹) + Kin(0.2 mg l⁻¹) + CH(250mg l⁻¹) + Sucrose (%3)

: MS3 d

MS+IAA(2 mg l⁻¹) + Kin(0.5 mg l⁻¹) + CH(250 mg l⁻¹) + Sucrose (%3)

() SH

±

-
1. Baseley and Ting
 2. Moorashig and Skoog
 3. Stewart and Hsu

) *G.hirsutum* ()

G.barbadense (

()

G.barbadense × *G.herbaceum*

G.hirsutum × *G.herbaceum*

G.barbadense × *G.arboreum* ×

G.hirsutum × *G.arboreum* ×

G.herbaceum × *G.arboreum*

()

()

()

()

()

()

G.arboreum

()

G.herbaceum)

%

(*G.arboreum*

(×)

%

%

(%)

()

()

G.herbaceum

G.arboreum

G.hirsutum

G.barbadense

G.hirsutum × *G.herbaceum*

G.barbadense × *G.herbaceum*

G.hirsutum × *G.arboreum*

G.barbadense × *G.arboreum*

G.herbaceum × *G.arboreum*

...

:

BT	MS1	MS2	MS3
			<i>G. herbaceum</i>
			<i>G. arboreum</i>
			<i>G. hirsutum</i>
			<i>G. barbadense</i>
			<i>G. hirsutum</i> × <i>G. herbaceum</i>
			<i>G. barbadense</i> × <i>G. herbaceum</i>
			<i>G. hirsutum</i> × <i>G. arboreum</i>
			<i>G. barbadense</i> × <i>G. arboreum</i>
			<i>G. herbaceum</i> × <i>G. arboreum</i>

(\sqrt{x})	(MS)	(\sqrt{x})	(\sqrt{x})
ns	ns	ns	
**	**	**	
**	**	**	
*	**	**	×
	%	: **	%
		%	: *
			%
			: n.s

G. herbaceum ×

G. arboreum *G. herbaceum* *G. arboreum*
| | |

**G. herbaceum* *G. barbadense*
| | *G. barbadense*

G. hirsutum *G. barbadense* ()

G.hirsutum × *G.herbaceum* ()
G.hirsutum × *G.arboreum* ()
/ *G.barbadense*)
.(/

%

.()
G.herbaceum *G.barbadense*
/ /
.()

G.barbadense × *G.herbaceum*

/ *G.hirsutum* *G.barbadense*
.()

/ ± / ^b	/ ± / ^a	<i>G.herbaceum</i>
/ ± / ^b	/ ± / ^a	<i>G.arboreum</i>
/ ± / ^a	/ ± / ^b	<i>G.hirsutum</i>
/ ± / ^d	/ ± / ^d	<i>G.barbadense</i>
/ ± / ^b	/ ± / ^{bc}	<i>G.hirsutum</i> × <i>G.herbaceum</i>
/ ± / ^c	/ ± / ^d	<i>G.barbadense</i> × <i>G.herbaceum</i>
/ ± / ^{bc}	/ ± / ^c	<i>G.hirsutum</i> × <i>G.arboreum</i>
/ ± / ^b	/ ± / ^c	<i>G.barbadense</i> × <i>G.arboreum</i>
/ ± / ^{bc}	/ ± / ^a	<i>G.herbaceum</i> × <i>G.arboreum</i>
/	/	LSD

()

(/)	(/)	(/) ^b	<i>G.herbaceum</i>
(/)	(/)	(/) ^{cd}	<i>G.arboreum</i>
(/)	(/)	(/) ^{cd}	<i>G.hirsutum</i>
(/)	(/)	(/) ^a	<i>G.barbadense</i>
(/)	(/)	(/) ^c	<i>G.hirsutum</i> × <i>G.herbaceum</i>
(/)	(/)	(/) ^b	<i>G.barbadense</i> × <i>G.herbaceum</i>
	(/)	(/) ^d	<i>G.hirsutum</i> × <i>G.arboreum</i>

... :

(/) (/) (/)^c *G.barbadense* × *G.arboreum*
 (/) (/)^{cd} *G.herbaceum* × *G.arboreum*

2n=39 2n=52 2n=26
 () () ()
 BT MS3
 BT MS3 ()

G%	N _g	** N _c
/ ^{bc}		BT
/ ^{bc}		MS1
/ ^c		MS2
/ ^a		MS3

LSD = /

: N_g

: G%

: N_c **

() SH

/ *G.barbadense*

/ *G.arboreum*

/ *G.barbadense* × *G.herbaceum*

G. herbaceum × *G.hirsutum* × *G.arboreum*

() *G. arboreum*

G.herbaceum

G.arboreum

G.hirsutum

G.barbadense

G.hirsutum × *G.herbaceum*

G.barbadense × *G.herbaceum*

G.hirsutum × *G.arboreum*

G.barbadense × *G.arboreum*

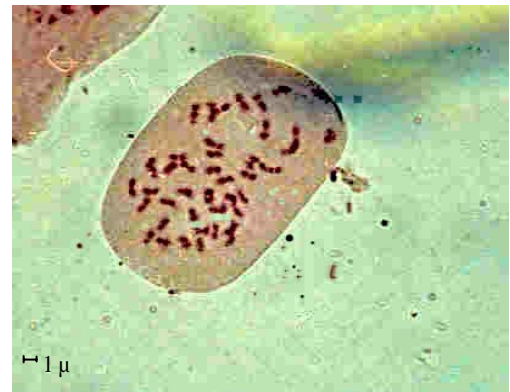
G.herbaceum × *G.arboreum*

()

()

SH

G. barbadense ()



(3X=39)

(*in situ*)



(2n=2x=26)

BT

()

(*G. barbadense*)

(*G. herbaceum*)

MS3

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