Agricultural **BIOTECHNOLOGY** Research Institute
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O/C

No.....169.....
Date 10-2-2025

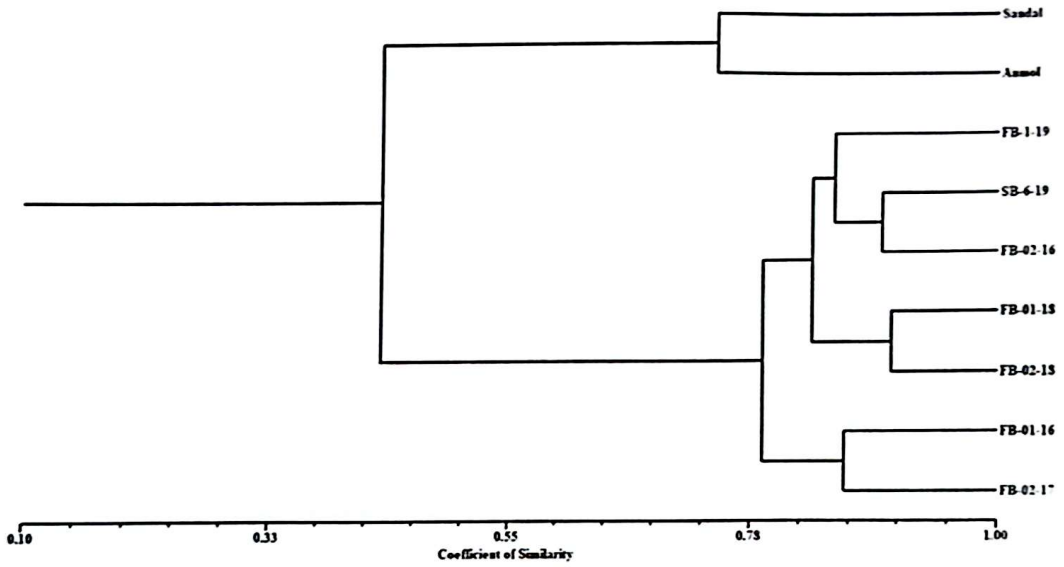
DNA Fingerprinting Report of Berseem

Sample Reference: Berseem Seeds
Sample receiving date: 18-04-2024
Customer Name: Principal Scientist
Customer/ Department: Fodder Research Substation,Fsd.
Name of Candidate Line for Approval: FB-01-18
Name of Testing Method: PCR-SSRs
Sample Status: Seeds
Report dispatch date: 10-02-2025

Sr. No.	Name of Marker	Size of DNA fragment/Amplicon (bp)		
		Anmol (Check)	Sandal Berseem (Check)	Candidate Line (FB-01-18)
1.	TassR-66	300,400	300	280, 300, 320
2.	TassR-68	270, 275, 400	275, 280, 400	270, 310
3.	TassR-74	330, 380, 400,450,500,550	380, 400, 550	380, 400, 500
4.	TassR-76	420,500	380,420	420
5.	TassR-78	225, 250, 300	225, 250, 400, 450	225, 265
6.	TassR-82	400, 380, 450, 500	400,380, 450, 500	330, 380, 400, 450, 500
7.	Tassr-64	400,420, 480, 500	400, 500	140, 160, 225, 480
8.	IGFRI-SSR6	175, 450, 500	175, 500	380, 450
9.	IGFRI-SSR4	140, 150, 160, 175, 220, 225, 240, 245, 260, 380	140, 160, 175, 220, 225, 240, 245, 260, 380	140, 150, 160, 220, 225, 260, 270, 300, 380, 400
10.	IGFRI-SSR8	125, 180, 190, 200, 250	125, 180, 190	-
11.	IGFRI-SSR11	160, 170, 175	160, 170, 175, 180	160, 170
12.	IGFRI-SSR10	125, 150, 210,300, 340	100, 120, 155, 300, 340	115, 300, 530
13.	TassR-99	350	350	350
14.	TassR-92	330, 350, 380	330, 350, 380	300, 330, 350, 380
15.	TassR-100	100, 110, 160, 180, 220	100, 110, 160, 180, 200	160, 180, 200, 220
16.	TassR-103	275, 290, 350,400	275, 290, 350,400	80, 145, 290
17.	TassR-107	225, 250, 275, 300, 320	225, 250, 275, 300, 320	250, 275, 300
18.	TassR-108	225, 275, 300, 330	170, 225, 275, 300, 330	135, 360, 370, 380, 430, 480,490

19.	TassR-109	200, 210, 220, 250, 270, 300	200, 210, 220, 250, 270, 300	270, 275, 280, 300, 350,360, 380
20.	TassR-110	225, 250, 280, 300	225, 250, 280, 300	300, 380, 385, 400
21.	TassR-111	200, 210, 225, 275, 290, 300	200, 210, 225, 290, 300	275, 290, 300, 420
22.	IGFRI-SSR1	200	200	-
23.	TassR-97	100, 260, 300, 450, 500	100, 260, 300, 450, 500	-
24.	IGFRI-SSR12	60, 70, 80, 85, 110, 150	60, 70, 80, 90	70
25.	IGFRI-SSR15	160, 220, 300	160, 220	220
26.	TassR-101	290, 300, 380, 410, 420	290, 300, 350, 380, 410, 420	290, 350, 380, 410, 420
27.	TassR-83	350, 380, 410, 450	350, 450	350, 450
28.	IGFRI-SSR-3	300	300	70
29.	TassR-44	310, 320, 330, 350, 390, 400, 420, 450	310, 320, 330, 350, 380, 390, 400, 420, 450	310
30.	TassR-47	100, 160, 350, 400, 480	310, 320, 350, 400, 450, 480, 500	320, 350, 400, 450, 480
31.	TassR-50	310, 320, 380, 480	310, 320, 330, 340, 460, 470	-
32.	TassR-91	260, 270, 280, 320, 360, 370, 380	250, 260, 270, 280, 350	280, 320, 350, 360, 370
33.	IGFRI-14	250	250	125, 140
34.	TassR-90	220	300, 380	220, 380
35.	TassR-65	350, 370, 450	350, 370, 450	380, 450
36.	IGFRI-5	250, 300	330	380, 480, 500, 530
37.	TassR-84	250, 300, 380, 390, 450, 500	250, 380, 390, 450, 500, 150	340, 390, 400, 490, 500
38.	TassR-2	190, 195, 200, 240, 250, 275	190, 195, 240, 250	180, 190, 200, 225, 240, 250
39.	TassR-3	400, 500	400, 500, 600	480, 500, 530, 600
40.	TassR-8	380, 500	380, 500	180, 200, 400, 420
41.	TassR-77	260, 330, 350	260, 330, 350	200, 225, 300, 330, 400, 500
42.	TassR-27	330, 430, 500	330, 430, 500	330, 400, 500
43.	TassR-29	250, 320, 330	250, 320	290, 300, 330, 340
44.	TassR-40	180,260, 300	180, 200, 260, 300	225, 240, 275, 300, 320, 340
45.	TassR-42	380, 420	300, 320, 380, 420	380
46.	TassR-13	120, 150, 300, 380, 500	120, 150, 300, 350, 380	150, 300
47.	TassR-21	240, 250, 260, 270, 310, 320, 330, 350	240, 250, 260, 270, 290, 320, 350, 400	170, 175, 200, 245, 250, 260, 270, 310, 350
48.	TassR-20	220, 225, 250, 255, 275, 300, 320, 360, 400, 420	220, 225, 250, 255, 275, 300, 320, 360	220, 255
49.	TassR-31	180, 250, 380, 400, 410, 490	250, 260, 320, 380, 400, 410, 490	180, 380, 400, 410, 490, 500, 530
50.	TassR-56	380, 400, 500	380, 400, 420, 450, 500	370, 480, 500

Cultivar Identification Diagram (CID)



Results/Remarks

Cultivar Identification Diagram (CID) presenting the association among standard variety (Anmol) and candidate variety (**FB-01-18**) was generated by Unweighted paired group method with arithmetic means (UPGMA). X-axis represents genetic similarity coefficient between genotypes. CID results concluded that candidate variety **FB-01-18** varied significantly from the standard variety i.e. Sandal berseem and Anmol (55% and 59% dissimilarity) respectively.

	Analyst/Prepared By:	Focal Person/Checked By:	Chief Scientist/ Director
Signature:			
Stamp:			
Name:	**Dr. Shamsa Kanwal**	**Ms. Shakra Jamil**	**Dr. Sajid Ur Rahman**
Designation	**SO**	**Botanist Biotechnology**	**Chief Scientist**