

**Trial 9: Response of multicut forage sorghum hybrids/varieties under different nitrogen levels - Ludhiana**

**Green fodder yield (q/ha)**

**Cut-1**

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	229.4	332.1	402.4	436.6	350.1
UPMCH 553	305.3	381.1	457.0	522.6	416.5
CSH 20 MF	329.3	410.7	479.2	512.5	432.9
SSG 59-3	265.5	329.3	393.1	412.6	350.1
Mean	282.4	363.3	432.9	471.1	

CD for varieties = 24.1

S Em± = 16.7

“ “ N-levels = 24.1

CV% = 7.44

“ “ V x N = 48.1

**Cut-II**

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	162.8	189.6	254.4	262.7	217.4
UPMCH 553	167.4	264.6	318.2	334.9	271.3
CSH 20 MF	203.5	240.5	275.7	292.3	253.0
SSG 59-3	226.6	301.6	333.9	353.4	303.9
Mean	190.1	249.1	295.6	310.8	

CD for varieties = 16.9

S Em± = 11.8

“ “ N-levels = 16.9

CV% = 7.73

“ “ V x N = 33.7

**Cut-III**

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	145.4	169.8	177.6	180.9	168.4
UPMCH 553	119.8	127.7	141.0	149.9	134.5
CSH 20 MF	108.8	117.7	127.7	134.3	122.1
SSG 59-3	194.3	203.1	214.2	223.1	208.7
Mean	142.1	154.6	165.1	172.1	

CD for varieties = 8.8

S Em± = 6.18

“ “ N-levels = 8.8

CV% = 6.82

“ “ V x N = 17.8

### Total of 3Cuts

Hybrids/Varieties	Nitrogen levels (kg N/ha)				Mean
	0	50	100	150	
UPMCH 1302	537.6	691.5	834.4	880.2	735.9
UPMCH 553	592.6	773.4	916.2	1007.4	822.4
CSH 20 MF	641.6	768.9	882.6	939.1	808.1
SSG 59-3	686.4	834.0	941.2	989.1	862.7
Mean	614.6	767.0	893.6	954.0	

CD for varieties = 56.9

S Em± = 41.11

“ “ N-levels = 56.9

CV% = 9.03

“ “ V x N = 113.9

### Dry matter yield (q/ha)

#### Cut-1

Hybrids/Varieties	Nitrogen levels (kg N/ha)				Mean
	0	50	100	150	
UPMCH 1302	48.0	68.5	82.2	88.2	71.7
UPMCH 553	59.9	75.6	90.6	103.1	82.3
CSH 20 MF	67.9	84.9	98.0	103.6	88.6
SSG 59-3	56.1	68.5	82.2	85.5	73.1
Mean	58.0	74.4	88.3	95.1	78.9

CD for varieties = 4.34

S Em± = 2.99

“ “ N-levels = 4.34

CV% = 6.59

“ “ V x N = 8.68

#### Cut-II

Hybrids/Varieties	Nitrogen levels (kg N/ha)				Mean
	0	50	100	150	
UPMCH 1302	31.8	37.0	51.4	51.3	42.9
UPMCH 553	33.9	53.1	62.3	66.0	53.9
CSH 20 MF	41.2	46.9	54.4	57.7	50.0
SSG 59-3	44.7	60.9	66.9	71.4	61.0
Mean	37.9	49.5	58.7	61.7	

CD for varieties = 3.14

S Em± = 2.17

“ “ N-levels = 3.14

CV% = 7.24

“ “ V x N = 6.28

### Cut-III

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	24.7	28.9	30.2	30.8	28.7
UPMCH 553	20.4	21.7	24.0	25.5	22.9
CSH 20 MF	19.6	21.2	23.0	24.2	22.0
SSG 59-3	35.0	36.6	38.6	40.2	37.6
Mean	24.9	27.1	29.0	30.2	27.8

CD for varieties = 1.95

S Em± = 1.36

“ “ N-levels = 1.95

CV% = 8.46

“ “ V x N = 3.91

### Total of 3Cuts

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	104.5	134.4	163.8	178.3	143.3
UPMCH 553	114.2	150.4	176.9	194.6	159.0
CSH 20 MF	128.7	153.0	175.4	185.5	160.7
SSG 59-3	135.8	166.0	187.7	197.1	171.6
Mean	120.8	151.0	176.0	186.9	158.7

CD for varieties = 11.51

S Em± = 7.97

“ “ N-levels = 11.51

CV% = 8.71

“ “ V x N = 23.0

### Crude protein (%)

#### Cut-1

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	4.37	4.81	5.25	5.68	5.03
UPMCH 553	5.68	6.12	6.56	7.00	6.34
CSH 20 MF	5.68	6.56	6.56	7.00	6.45
SSG 59-3	4.81	5.25	5.68	6.12	5.47
Mean	5.14	5.69	6.01	6.45	-

#### Cut-II

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	4.81	6.56	7.00	7.43	7.65
UPMCH 553	5.68	6.12	6.56	7.00	6.34
CSH 20 MF	4.81	5.68	6.56	7.87	6.23
SSG 59-3	5.68	6.12	6.56	7.00	6.34
Mean	5.25	6.12	6.67	7.33	-

## IVDMD (%)

### **Cut-1**

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	52.4	56.0	58.8	59.3	56.6
UPMCH 553	57.7	59.0	61.2	63.3	60.3
CSH 20 MF	52.0	53.3	54.0	56.4	53.9
SSG 59-3	49.8	54.4	55.0	55.7	53.7
Mean	53.0	55.7	57.3	58.7	-

### **Cut-II**

Hybrids/Varieties	Nitrogen levels (kg N/ha)				
	0	50	100	150	Mean
UPMCH 1302	48.4	54.0	54.4	54.8	52.9
UPMCH 553	52.6	54.8	55.8	57.2	55.1
CSH 20 MF	48.4	49.4	50.0	56.8	51.2
SSG 59-3	49.0	51.0	52.2	56.8	52.3
Mean	49.6	52.3	53.1	56.4	-

## Yield attributing characters (Cut-1)

Treatments	Plant height (cm)	Tillers/m row length	Leaf:Stem ratio
<b>Genotypes</b>			
UPMCH 1302	123.6	29.9	0.73
UPMCH 553	135.4	36.8	0.63
CSH 20 MF	144.3	44.3	0.76
SSG 59 3	129.9	35.4	0.65
C.D. 5%	9.25	2.05	-
<b>Nitrogen levels (kg N/ha)</b>			
0	113.5	30.2	0.67
50	128.3	36.5	0.68
100	142.2	39.1	0.70
150	149.2	40.5	0.71
C.D.5%	9.25	2.05	-
S Em±	6.40	1.42	-
CV %	8.32	6.78	-