

A PRELIMINARY NOTE ON THE VARYING RESPONSE OF DIFFERENT MILLET STRAINS TO LOCAL AREAS

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The wide extent to which *Jonna* and *Korra* crops are cultivated in the Cuddapah and Kurnool districts on account of their being the staple food crops of the area, amply justify the need for effecting improvement in the productive power of these crops. A detailed examination of the existing agronomic practices in the locality reveals that apart from the essential principles underlying the system of cultivation, there exist many differences in the several agronomic aspects of raising these crops, mainly due to soil and environmental variation. The several modifications of agricultural practices adopted in these two districts, with special reference to time of sowing, spacing, seed-rate, rotation and other factors, form an interesting subject of study to the agronomist. The many varieties of *Jonna* and *Korra* grown in the tract, though they are essentially "*Pacha Jonnas*" and "*Sena Korras*" differ in their characters, with these variations in soil fertility and environmental factors.

Five strains of *Cheruku Pacha Jonna* and *Sena Korra*, varieties evolved at the Agricultural Research Station, Nandyal, were grown in several places in these two districts, in comparison with the respective locals during the 1935-36 season, with a view to ascertain the reaction of these strains to the changes in environmental conditions. The layout adopted in all the cases was randomised blocks, with six replications. The following tables give the percentage yields of the several strains in *Jonna* and *Korra* in the different localities. Their statistical significance has been worked.

Summary of the results of *Jonna* trial plots in Kurnool and Cuddapah districts 1935-36.

Percentage yield of grain over control.

Taluk	Place	Strains.					Whether.Critical signi- ficant or not	diffe- rence	
		Local Type (control)	6.	25/102	25/106	28/3			29/68
Nandyal.	Kanala	100	124.0	108.0	113.0	126.5	120.0	Yes.	10.65
do.	Ayalur	100	83.0	173.0	111.0	95.5	102.0	Yes.	10.00
Allagadda	Chagalamuri	100	135.0	116.0	131.5	110.5	122.0	Yes.	23.87
Koilkuntla	Koilkuntla	100	93.0	105.0	108.5	92.0	99.5	No.	
do.	Dornipad	100	91.5	108.0	97.5	86.5	88.7	No.	
Kurnool	Nanoor	100	118.0	121.5	106.0	103.0	119.0	No.	
Cuddapah	Ramaraja palli	100	105.0	68.0	152.5	107.0	118.5	Yes.	10.51
Rajampet	Kuchuvuri palli	100	154.5	152.5	130.0	140.0	140.0	Yes.	16.31
"	Noonavari palli	100	135.5	132.0	126.0	132.0	141.5	Yes.	20.44
Proddatur	Chinnadandlur	100	107.0	103.0	103.0	107.0	103.0	No.	
Giddalur	Giddalur	100	101.0	116.0	105.5	95.5	121.0	No.	

**Summary of the results of the Korra trial plots in Kurnool and
Cuddapah districts.—1935—'36.**

Percentage yield of grain over control.

Taluk.	Place.	Strains.						Whether signific- ant or not.	Criti- cal differ- ence.
		Local (control).	No. 43.	No. 69.	No. 125.	No. 132.	No. 140.		
Nandyal.	Kanala.	100	112.0	120.0	129.0	143.5	118.5	Yes.	20.55
Giddalur.		100	77.0	81.0	92.5	82.0	68.0	Yes.	19.38
do.	Cambum.	100	82.5	111.0	123.0	125.0	125.0	No.	
Kurnool.	Gudur.	100	130.0	92.0	137.0	107.0	76.0	Yes.	16.73
Cuddapah.	Allanikhanpalli.	100	95.0	141.0	139.0	156.0	125.5	Yes.	6.46
Nandalur.	Hastavaram.	100	181.0	169.0	178.5	178.5	202.5	Yes.	16.50
Proddatur.	Korrapad.	100	91.7	101.7	101.7	92.0	92.0	No.	
do.	Peddasettipalli.	100	144.5	81.0	111.0	36.5	103.0	Yes.	13.22

Out of the 11 trials conducted, in *Jonna* and eight trials in *Korra*, there was a significant difference in six cases in the former and six in the latter. These results would indicate the variations in yields of the different strains due to variations in soil fertility. The differential response of the same strain at the different centres is also apparent in both the crops. It is clear from these results that in both *Korra* and *Jonna* crops, a cosmopolitan type of strain satisfying the requirements of both the districts, covering a wide range of soil variation, is practically a difficult object to achieve. But on the other hand by a study of the results of systematically conducted trial plots of the several strains, it might be possible to fix a type, suited to each of the localities. In addition to this, these trials would mark out the different Zones of varying cropping powers; armed with this knowledge of the relation of the several strains to the different localities, the question of spreading and popularising a strain in such well-established zones, is much simplified.

The above results are only those of one year. It is proposed to conduct these trials for two more seasons with a view to acquire information regarding the relation of these strains not only to changes in soil variation but also their relation to seasonal variation.

Research Notes.

A Note on the occurrence of *Pemphres Affinis* on *Hibiscus esculentus* in Malabar.

During my work at the Agricultural Research Station, Taliparamba in 1933, I observed the presence of *Pemphres affinis* adults on almost all *Hibiscus esculentus* plants found on the Farm. By keeping the stems, adult insects were also reared out. With a view to ascertain whether the insect was attacking cotton or was only a casual visitor to the *Hibiscus esculentus* plants a minute examination of all the varieties of cotton—*Uganda*, *Buganda*, *Durango*, *Zululand Hybrid*, and *Karunganni*—was made. It was an agreeable surprise to find that all the cotton varieties showed complete immunity from *Pemphres* infestation.