

SUITABILITY OF NEW NS SUNFLOWER HYBRIDS FOR COMBINE HARVESTING

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Tests conducted in the period 1985-1987, in which new NS sunflower hybrids (NS-H-15, NS-H-45, and NS-H-43) were compared against NS-H-26-RM, showed that the hybrids behaved differently in harvest. The differences were observed in plant habit - position of the head, moisture content in seed at harvest, losses at harvest, and the quality of harvested seeds. The distribution of the height of heads is given in Table 1.

Tab. 1 - Distribution of height of heads (1985-1987)

No.	H y b r i d	Distribution of height in %			
		<100	125	150	175
1.	NS-H-26-RM	8,9	28,2	52,9	10,0
2.	NS-H-15	21,1	27,8	48,2	2,9
3.	NS-H-43	6,7	25,6	45,5	22,2
4.	NS-H-45	6,7	38,9	52,2	2,2

Considering of the height of heads per test years, the distribution was fairly uniform. Although the heads were mostly in group 2 and 3, the average covers all four groups. It means that the height and position of the heads depended on the climatic conditions of the year of growing.

Percentages of lodged and broken plants are presented in Table 2.

Tab. 2 - Percentage of lodged and broken plants (1985-1987)

No.	H y b r i d	G o d i n a			$\bar{X}_{(1-3)}$	$\bar{X}_{1 \text{ and } 3}$
		1985-1	1986-2	1987-3		
1.	NS-H-26-RM	0,40	14,67	5,43	6,89	2,92
2.	NS-H-15	0,50	21,67	4,84	9,00	2,67
3.	NS-H-43	2,30	26,49	19,35	16,05	10,82
4.	NS-H-45	0,70	29,57	6,38	12,22	3,54

If the consequences of a stormy wind in 1986 are disregarded, the obtained average values are satisfactory since the percentages of lodged and broken plants were not high (2,67-3,54%).

The losses on the drum of combine harvester are presented in Table 3.

Tab. 3 - Average losses on the drum (198501987)

No.	Year	H i b r i d i			
		NS-H-26-RM	NS-H-15	NS-H-43	NS-H-45
1.	1985-1	1,37	1,12	0,66	0,56
2.	1987-1	2,14	3,41	3,50	4,06
3.	1987-3	2,36	1,82	1,86	1,50
Average(1-3)		1,95	2,12	2,01	2,04
Average(1 i 3)		1,86	1,47	1,26	1,03
Index		1,00	0,79	0,68	0,55

in the optimum conditions for the harvest (the 1st and the 3rd test year), the losses with the new NS hybrids were lower by 30-45% in relation to those in the control hybrid. The differences were significant.

The new hybrids had a somewhat higher quality of the harvested seeds than the control hybrid NS-H-26-RM. This is important for the storage and processing of sunflower seeds. The new NS hybrids were also more tolerant to a longer harvest which is another positive characteristic.