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Marinkovic V., Masic B., Milosevic N.

in

Sauveur B. (ed.).
L'aviculture en Méditerranée

Montpellier : CIHEAM

Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 7

1990

pages 41-44

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=CI901577>

To cite this article / Pour citer cet article

Marinkovic V., Masic B., Milosevic N. **Performance of the first Yugoslav hybrid broilers "Prelux-Bro" and some imported hybrids as reviewed in official tests in Serbia from 1981 to 1987.** In : Sauveur B. (ed.). *L'aviculture en Méditerranée*. Montpellier : CIHEAM, 1990. p. 41-44 (Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 7)



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Performance of the first Yugoslav hybrid broilers "Prelux-Bro" and some imported hybrids as reviewed in official tests in Serbia from 1981 to 1987

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The first Yugoslav broiler hybrid "Prelux-Bro" was developed in 1969 at Biotehniška fakulteta (Faculty of Biotechnics), Ljubljana, VTOZ za živinorejo (Animal Husbandry Department), Domžale, under the leadership of professor Dr. Franc Ločniškar ; the Institut za stočarstvo (Research Institute of Animal Husbandry), Belgrade (Zemun Polje) joined the "Prelux-Bro" breeding programme in 1976. In 1981 the Institut za primenu nauke y poljoprivredi (Institute for Application of Science in Agriculture), Belgrade, initiated a series of regularly performed official Random Sample Broiler Tests, supervised by its experts. Pavlovski and Mašić (1984) and Mašić *et al.* (1987) have already reported on the breeding programme realized at Institut za stočarstvo, Belgrade (Zemun Polje), as well as some of the results obtained with "Prelux-Bro" broiler breeders and broilers in the Socialist Republic of Serbia to 1985.

The eight official Random Sample Broiler Tests which have been performed in Serbia from 1981 deal both with the first Yugoslav broiler hybrid "Prelux-Bro" and with well-known imported broiler strains "A" and "B", extensively used throughout the world, especially in Western Europe and North America and in Yugoslavia as well. One of the tests was performed in 1981 at Novi Sad (Čirić *et al.*, 1982) and others were performed at Zemun Polje in 1981 (Milošević *et al.*, 1984), in 1982 (Milošević *et al.*, 1984), in 1983 (Pavlovski *et al.*, 1984), in 1984 (Milošević *et al.*, 1985), in 1985 (—, 1986), in 1986 (Pavlovski *et al.*, 1987) and in 1987 (unpublished data). These tests examined, among other things, the most important performance characteristics of the mentioned strains, namely : live mass at the end of the test (49 days of age - average for all tests), feed conversion, mortality of chicks and economic efficiency (the difference in value of live body mass produced and value of feed consumed per one-day old chick housed).

Performance characteristics in all eight tests for the Yugoslav hybrid "Prelux-Bro" and the average for imported strains "A" and "B" are presented in **Table 1**. These data show that in all tests "Prelux-Bro" has final body mass smaller than the average body mass of imported strains "A" and "B", but with considerably lower mortality. In all eight tests, imported strains had 12.73% higher final body mass than "Prelux-Bro", but mortality was three times higher. Average mortality of imported strains in all tests was 8.77%, which could be considered as relatively high but it is practically equal to the average mortality of broilers on state farms in Croatia from 1980 to 1984 (8.78%), as calculated on the basis of data presented by Božičković *et al.* (1986). As for the feed conversion, it was better in "Prelux-Bro" in five tests, and in imported strains in three tests. Summing up the results from all the tests, we came to the conclusion that imported strains have feed conversion inferior by 3% to the "Prelux-Bro" value. The characteristic that could be the most important for broiler producers is economic efficiency ; in this trait "Prelux-Bro" was better in five tests, and imported strains in three tests. Summed results practically show no significant

difference in economic efficiency between broilers "Prelux-Bro" and the mentioned imported strains. To sum up, it is obvious that "Prelux-Bro" could be successfully compared by its performance characteristics with well-known imported strains "A" and "B".

We think that the data presented as well as the fact that one more broiler hybrid ("Jata") has been developed in Yugoslavia in the last few years, could be a certain stimulus for Mediterranean (or any other) countries intending to develop their own, authentic poultry industries, less dependent or independent of the big international poultry breeding companies.

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Table 1: Performance of "Prelux-Bro" of (a) and average of imported strains "A" and "B" (b) in eight official Random Sample Broiler Tests in Serbia (from 1981 to 1987)

Test		Final live body mass,g	Feed conversion	Mortality, %	Economic efficiency, din.
Novid Sad, 1981	a	1850.2	2.180	2.25	49.250
	b	1917.3	2.220	5.19	47.872
Zemun Polje, 1981	a	1303.9	2.520	1.00	25.333
	b	1472.5	2.656	9.50	22.077
Zemun Polje, 1982	a	1420.7	2.129	1.33	39.77
	b	1583.5	2.119	6.00	27.58
Zemun Polje, 1983	a	1505	2.253	4.50	40.234
	b	1773	2.496	12.75	34.288
Zemun Polje, 1984	a	1470.3	2.367	3.00	5.45
	b	1721.1	2.402	8.00	2.25
Zemun Polje, 1985	a	1381.5	2.410	4.50	21.98
	b	1562.8	2.465	10.25	33.13
Zemun Polje, 1986	a	1313.0	2.342	3.00	141.45
	b	1481.5	2.327	9.25	152.24
Zemun Polje, 1987	a	1572.0	2.330	3.50	284.32
	b	1812.5	2.400	9.25	288.15
All tests - average	a	1477.0	2.316	2.885	75.97
	b	1665.0	2.386	8.774	75.95
"b" as % of "a"		112.73	103.02	304.12	99.97