STUDY ABOUT SOME KINDS OF SPRING TWO-ROW BARLEY CULTIVATED IN THE PLAIN OF BRAILA BETWEEN 2004 - 2006 REFERRING TO THE MAIN INDEXES OF QUALITY BEING IMPORTANT FOR THE MALT PRODUCTION

STUDIU ASUPRA CÂTORVA SOIURI DE ORZOAICĂ DE PRIMAVĂRĂ CULTIVATE ÎN CÂMPIA BRĂILEI ÎN PERIOADA 2004 – 2006, PRIVIND PRINCIPALII INDICI DE CALITATE IMPORTANȚI PENTRU FABRICAREA MALȚULUI

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Abstract. *This study is an analysis of the main physico-chemical quality indexes of the three kinds two-row barley, being important for a quality malt production.*

This work presents the results obtained in the last three years (2004-2006), through parameters monitorization of two-row barley production.

Results determinations accomplished to the beans of two-row barley for beer have been compared to the main parameters which must have to be used-up in the industry of the beer. The basic staple used for obtaining the malt and the beer is the barley and two-row barley.

Rezumat. *Acest studiu este o analiza a principalilor indici de calitate fizico-chimici a trei soiuri de orzoaica de primavara, importanti pentru fabricarea unui malt de calitate.*

Aceasta lucrare prezinta rezultatele obtinute in ultimii trei ani (2004-2006), prin monitorizarea parametrilor productiei de orzoaica de primavara.

Rezultatele determinarilor efectuate la boabele de orzoaica de primavara pentru bere au fost comparate cu parametrii principali pe care trebuie sa-i indeplineasca pentru a putea fi utilizate in industria berii.

The basic staple used for obtaining the malt and the beer is the barley and two-row barley.

The effective quality of barley and two-row barley represents a resultant of interactions a kind, technology of the culture and environmental conditions.

The kind is the main factor which influences about uniformity, amilotic activity and the efficaciousness of the in extract, but it is in the same time determinant and referring to the specific reaction to the variation in time and space, intensity of the impact with the limitative factors of environment which cannot be avoid through technology.

The non-observance of specific technologies of the culture of fated barley the brewage as the: Bear off moderate doses of fertilization with azote, the failure optimum densities of the field, the non-observance of the links of the key ale the

flux of harvest the storage (likewise with one used for the production seeds) can lead to a complete obtain of not good harvests for malting and obtaining the beer.

In this work we have proposed to analyse from physico-chemical and technological viewpoint several kinds of tow-row barley.

MATERIAL AND THE METHOD

There were analysed a number of 2 kinds of two-row barley for beer (Thuringia, Annabell) being cultivated during 2004-2006 and the kind Xanadu in 2006, identical conditions, in the Plain of Braila.

The biologic material was analysed from organoleptic viewpoint, physico-chemical, technological and compared to the standards in the industry of malt remake. The analyses were efectuated in Comcereal Braila lab analyses.

The Result determinations efectuated to the beans of tow-row barley for beer were compared with the main parameters which must be for being used in the industry of the beer.

RESULTS OBTAINED

Conditii of standard quality (SR 13477/2003) ale barley for beer, necessary the industry of the beer MMB, g min. 42 Bodies Straine max. 3, Humidity Max. 14, Beans The big maul of 2,5 mm, min 85% germinations min 95% viability min 98% contained of the protein su max 11,5 % purity the kind min 93%.

The organoleptical analyses of the proofs of barley and studied two-row barley corresponded to the in force standards.

The results obtained after the physico-chemical analyses of the two-row barley to the proofs the average influence about the genotype of one in three years of the culture to the kinds Annabell and Thuringia.

We appreciate that the sortments I and II (and the uniformity), was influenced by the the climatic factors in modes particularly, because the technology wasn't modified.

The assortment I and II presented the average values contained between 89,33 to the kind Annabell and 90,42 to the kind Thuringia, respectively 92 to the kind Xanadu in the year 2006. The studied kinds were conformed to technical requests and recommended by the international organisms.

The humidity to all the proofs analysed in two years had the average values diminished what they framed in the limits of the requests recommended by international organisms and STAS what shows that cropping and the storage it had been made in good conditions.

The viability Registered normal values of the standards for the industry of the beer (the table.1).

All the proofs of two-row barley being analysed were responsive to the water.

Table 1.

RESULTS OBTAINED

PROBA		The humidity (%)	Foreign bodies (%)	The assortment (%)	Viability (%)	The protein (% su)
STAS		max 14	max 3	min 85	min 98	max 11,5
THURINGIA	2004	13	1,89	91,25	99	11,10
	2005	12,87	2,36	92	98	11,63
	2006	12,69	4,16	88	100	9,92
	media	12,85	2,80	90,42	99	10,88
ANNABELL	2004	12,5	1,5	93	100	10,53
	2005	13,6	3,21	87	99,00	10,79
	2006	12,22	3,68	88	99,86	9,87
	media	12,77	2,79	89,33	99,62	10,39
XANADU	2004	-	-	-	-	-
	2005	-	-	-	-	-
	2006	12,65	4,48	92	98	9,0
	media	-	-	-	-	-

For obtaining the beer the content of protean substances of beans of two-row barley is above 12 from substance dried because across this limit the barley becomes malt and results malts with a low randament. The cultivated kinds presented different values from one year to another below the appearance accumulation of protean substances, but on the average they framed in the standard in force limits, these oscillating between 10,88 to the kind Thuringia (fig.2) and 10,39 to the kind Annabell (fig.1), respectively 9,00 to the kind Xanadu in the year 2006 (fig.3 si fig.4).

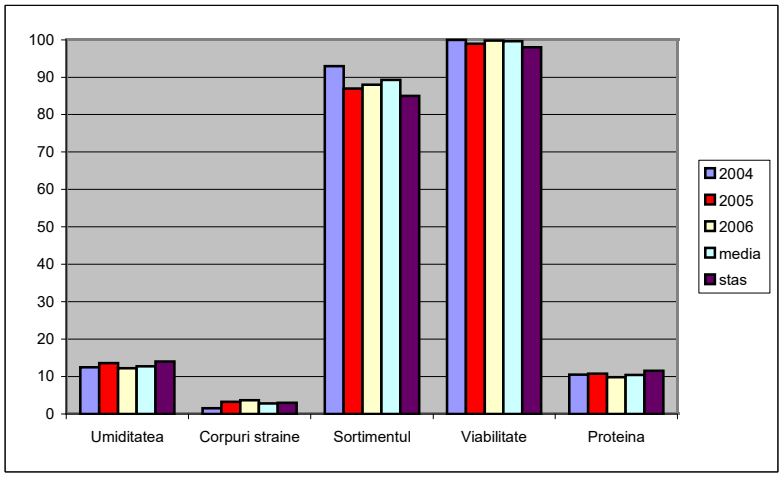

Figure 1 -The main indexes of quality of the kind annabell

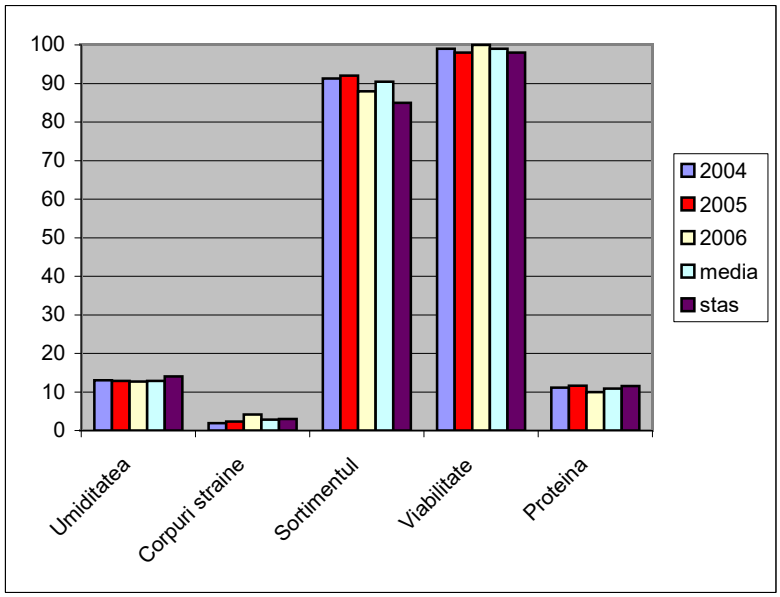

Figure 2 - The main indexes of quality of the kind thuringia

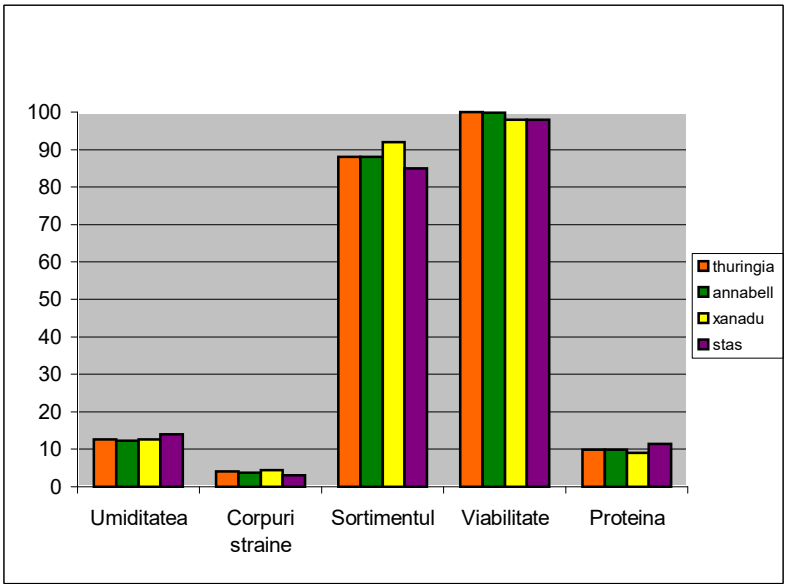

Figure 3 - The difference between kinds of 2006

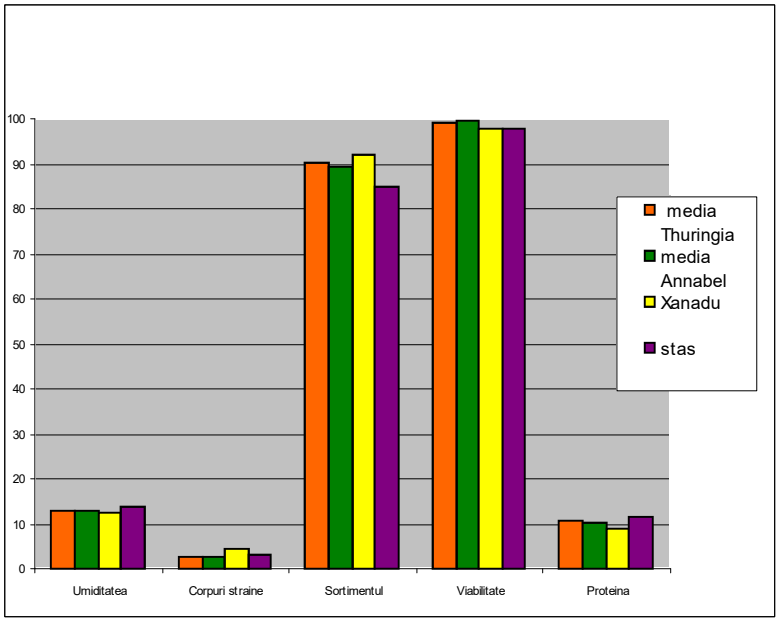

Figure 4 - The difference between kinds

On ensemble, on the strength of physico-chemical determinations efectuated it appreciate as the studious kinds, corresponding the recommendations of the international organisms and STAS for the industry of malt and the beer.

CONCLUSIONS

On the strength of determinations efectuated about the proofs of two-barley we can do the next general appreciations:

The kinds Annabell and Thuringia presented the in on the average values for the main physical and chemicals indicators which could be integrated in the standards for the industry of the beer. The germinative energy the assortment, protein content.

The kinds Annabell and Thuringia presented low values in protein content and superior to starch, very good parameter for the industry remaking the malt.. It can be appreciate that the kind Xanadu presents the view for the industry of malt.

The observations will continue and get thoroughly into.

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