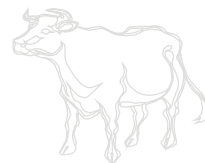


# PROGRAMS OF NATURAL FOOD AND ALTERNATIVE SYSTEMS IN PRODUCTION OF TABLE EGGS

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Industrial production of table eggs provides eggs for consumers throughout the year in large quantities and at relatively affordable price. Relatively poor quality of this eggs (watery white of not so distinct taste and aroma, white colour of yolk, weak and breakable bones, poor egg shell quality,etc.), as well as reduction of prices because of high supply, and certain nostalgia for „good old times“, have influenced the perception of table eggs as unhealthy and unnatural.

On the other hand, changes in main principles of production of table eggs in EU countries, as well as tendency for harmonization of our legislation with EU Directives relating primarily to preservation and improvement of farm animal welfare, environment protection and food safety, **have caused intensive growth of numerous programs for production of natural (ecological, biological, organic) table eggs in our country.**

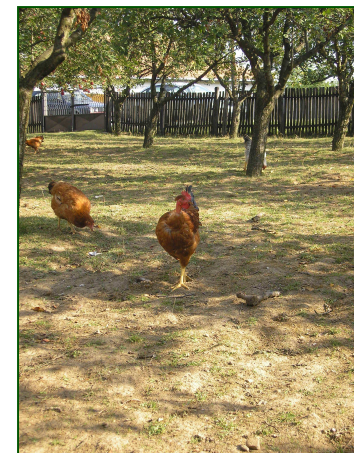


## SYSTEMS OF PRODUCTION TABLE EGGS

**Battery (cage)** cage systems will be allowed, i.e. significantly more spacious cages for larger groups of hens equipped with perches and sand troughs for scratching and plucking.

**Non-battery systems** in European Union include:

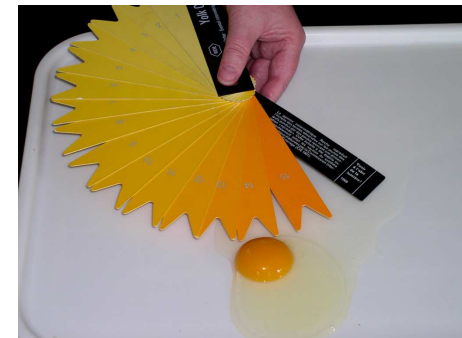
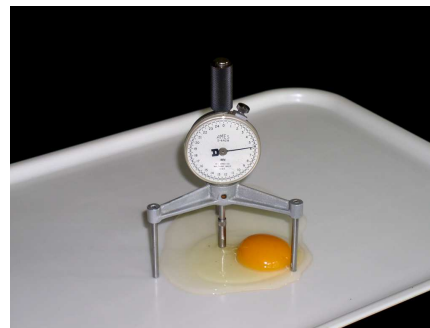
- a) Eggs from free range
- b) Eggs from semi-intensive system
- c) Eggs from deep liter
- d) Eggs from aviary system



## Research in our country

**In our country, the research of the quality of eggs from layers housed in different systems started in 1967.**

**Can be concluded that eggs from free range system had the best interior quality of egg white expressed through albumen height and HU and most intensive yolk colour.**



## **Marketing strategy and consumer attitudes**

In year 1981 70,6% of questioned consumers thought that battery system was acceptable as production method, and one decade later this percentage was reduced to 54,6%, and two decades later to 35,6%.

During this period the percentage of consumers in favour of banning of cage system almost doubled from 6,4% to 10,3% and 13,2%, respectively.

In mentioned research years number of consumers which were willing to pay higher price by 10% for eggs of guaranteed and controlled quality or from free-range system increased from 46% to 63% and 71,5%.

Obviously, number of consumers adherent to the free-range and banning of battery system on Belgrade market increased considerably which is in accordance with similar trends and new directives of EU.





## Program of production of eggs in free-range system

Researchers of the Institute for Animal Husbandry, Belgrade-Zemun developed the Program of production of table eggs of special quality, financed by several producers from Republic of Serbia. In this paper, because of limited space, we will present only basis of the stated Program.



## Short review of technological process

### Building and equipment

### Selection of layer hens

Rhode Island, New Hampshire, Amrook, Plimuth rock

### Free range – pasture

### Nutrition

Cereals are basis of the diet (minimum share of 50%);

No animal additives, feeds produced from GMO ingredients;

Limited number of additives:

*Enzymes*

*Probiotics*

*Prebiotics*

*Phytobiotics*

Green and juicy (root-tuberous) feeds

### Water quality



## **Environment and production conditions**

***Temperature***

***Ventilation/ air flow and air humidity***

***Floor surface and free range space***

***Feeding space***

***Drinking space***

***Nests***

***Health protection***

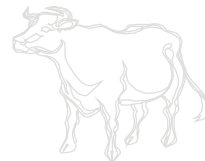
***Procedure with eggs***





## Conclusion

Recommended Program of production of table eggs will result in product with slightly lower content of cholesterol and ideal ratio of unsaturated and saturated fatty acids, i.e. product of known and guaranteed quality, which will satisfy the demands of the domestic and foreign consumers who prefer natural food.



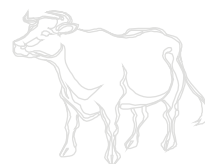
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Thank you for your attention !



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