Turkish organic poultry sector: General evaluation and lessons from successful practices

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Key words: Chicken meat, alternative systems, village poultry, information services, Turkey

Author's Background

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Summary

Turkish poultry industry is well developed. Domestic annual chicken meat consumption level is satisfactory but production and consumption are far from satisfactory in terms of variety, almost all poultry products are obtained from chicken species under standard conventional system. Development of organic and similar sustainability- and animal welfare-based alternative production systems is very limited in Turkey. Premium products of alternative systems may be support consumption increases. Also semi-intensive poultry production systems are an effective rural development instrument. It can be said that now the next job is to develop organic poultry especially for meat production because of increasing public criticisms about standard broiler meat. During to developing Turkish organic poultry system, we can utilize some successful practices in the world. This presentation is about a general evaluation on the possibilities of organic poultry meat sector in Turkey.

Background

In order to meet the increasing need for high-quality animal protein requirements of the society, Turkey has developed its poultry sector by way of importing technology and some important inputs from the West. With annual 1.9 million tonnes of poultry meat (nearly all is chicken meat) and 16.5 billion eggs production, Turkey is the largest producer of broiler chicken meat and ranks third in egg production in Europe. The persistent deficiency in red meat production has been compensated with chicken meat, and domestic annual chicken meat consumption has exceeded 20 kg per capita. Almost all poultry meat production and consumption is composed of chicken meat but the development level of turkey and other species' is far from satisfactory in terms of variety. However, the growth rates of production and consumption have recently started to slow down. Despite Turkey's relatively young population, the present level of egg consumption is quite low (185 eggs per capita per year).

While the Turkish poultry industry is successfully importing technology, radical changes have taken place in the West over the last 40 years. Originating solely from the consumer demand, animal welfare- and sustainability-based alternative poultry systems have been developed and the share of their premium products has risen in the total. These products' special taste is particularly important for some consumer segments. Alternative poultry systems are also efficient rural development tools. Organic poultry is the ideal alternative system. However, intermediary systems which have lower standards are more common because of their more reasonable production cost and selling price. In summary, today, the Western poultry sector consists of the conventional segment aiming to produce high volume at low cost and the alternative segment.

In general, animal welfare is the primary factor in the development of alternative systems in the Northern European countries. For the Southern countries, however, the main factor is special taste of products, particularly for poultry meat. In the USA and Australia, sustainability comes first. As layer hens kept in multi-tier cages placed in intensive conventional poultry system, their release from captivity has become a significant matter for the Western public. Therefore, alternative systems have taken a larger share in table egg production. Following the permanent achievements in commercial egg production, this trend is now moving towards chicken meat production.

While the rate of layers housed in cages was 95 % in UK in 1980, it dropped to 51 % in 2013 (44 % free-range and 5 % barn and organic). The share of alternative systems in chicken meat production is limited in Europe despite their frontier role at the beginning. The conventional systems hold nearly 90 % share in chicken meat production in EU-27. In UK, one of the leading countries in alternative animal farming, the share of standard broiler meat is still 79.4 % (11.7 % standart+plus, 5.9 % freedom-food labeled, 2.8 % free-range and 0.3 % organic). The greatest success story in this field belongs to France where conventional standard chicken meat has a 73 % share [% 8 certified, 16 % traditional free-range (*Label Rouge* is specific name in France), 1 % organic and 2 % others].

Organic poultry production has started to develop slowly in Turkey. In 2011, 26.2 million organic eggs and 713 tonnes of organic chicken meat were produced. The share of organic production is too small in total production, as 0.02 % for eggs and 0.04 for chicken meat. We can say that the differentiation is also very limited for poultry production systems and product assortment.

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In the last few years, the Turkish society's interest on chicken meat with respect to health matters has visibly increased. The sensitivity on animal welfare and sustainability, however, is less visible. The Turkish society is presently not aware of the potential of alternative poultry systems in rural development. In fact, this is of critical concern in countries like Turkey having a large rural population (23 %). It is an evident fact that village poultry is extensively practiced in rural areas in Turkey. There is a question of whether these small farmers will become organic chicken growers in the near future.

The aim of this presentation is to evaluate the situation in Turkey with a view to developing a successful organic chicken meat production in the light of our some findings. Some of the successful non-industrial poultry practices and related organizations in elsewhere will also be discussed for benchmarking.

Main chapter

We have been working on contra-industrial poultry production for some time. Some of our studies are about village poultry and some of them are on non-organic alternative chicken meat production systems having intermediate standards. We think that these intermediate systems can be applied more easily than the organic one.

According to our past surveys, more than 80 % of households kept village chicken in the rural area of Çanakkale and Antalya provinces. These two provinces were located in the more developed western region. Women play the main role for raising small flock (average 10-13 chicken/family), and the main goal of production was to meet the families' egg consumption. During the face to face interviews with 346 women, we did not meet anybody who had received extension service for poultry production. About 40 % of respondents in both provinces replied "yes" to the question of "Would you increase your poultry production for household consumption or selling if the state or other institutions provide supports?" In 2005 and 2006, rural poultry became more visible and remarkable because of Avian Influenza events in village flocks. However, there are still major shortcomings in extension service, disease prevention, breeding, and access to the market. Both academic and other public institutions are quite insensitive to the topic. There is also not any NGO which exerts efforts in this regard.

Of course, there are many successful examples on supporting small producers in the world. Among these ATTRA (The National Sustainable Agriculture Information Service) in USA is rather remarkable. The main goal of this program is to provide high value information and technical assistance to farmers, extension agents, and others involved in sustainable agriculture in US. As in other areas, ATTRA's publications about organic poultry are also excellent. In addition, there are too many different successful programs led by Australia for developing rural poultry in Africa. On the other hand, in Turkey we are able to adapt the old traditions of Western countries' hobby- and show-poultry.

In recent years, public interest in Turkey has dealt with the healthiness of chicken meat. The main elements of the debate are antibiotics, GMO and animal by-product feedstuffs, and welfare of chickens. Because conventional poultry production system began to be questioned, we decided to research the alternative chicken meat production systems [extensive-indoor (EI), free-range (FR) and traditional free-range (TFR)]. We designed our experiment according to EU legislations. The chickens from fast- and slow-growing (FG and SG) genotypes were raised in EI and FR systems; in TFR production only SG chicks were used. Slaughter ages were 56 and 63 days of age for EI and FR chicks, and 82 days for TFR group. Cooked breast meat samples were served to 80 consumer panelists. The untrained panelists evaluated samples for general acceptance on ten-point scales (1=dislike extremely and 10=like extremely). Data were evaluated by analysis of variance.

Table 1: The effect of slaughter age, raising system and genotype on general sensory acceptance of broiler chickens' breast meat

		Slaughter age	
		56^{th} day	63^{th} day
Raising System	Extensive Indoor	6.08	5.81
	Free-range	5.84	6.07
	P value	***0.892***	
Genotype	Fast-Growing	6.20	5.99
	Slow-Growing	5.72	5.89
	P value	***0.006***	
Slaughter Age	56^{th} day	5.96	
	63^{th} day	5.94	
	P value	***0.835***	

As seen in Table 1, raising system did not affect the acceptability, but genotype effect was found significant ($P<0.01$) where standard FG birds performed higher scores. The difference between genotypes was more prominent at early slaughter age. In addition, the breast meat of SG birds slaughtered at 82 days of age in TFR system had the highest score (6.19, not given in table). It is clear that the acceptability rose with increasing slaughter age. However, there was not any positive effect of grazing and slow-growing genotype usage on the general acceptance of meat. Most of the panelists in our study were university students. It is not surprising that young people who were accustomed to standard broiler chicken meat did not show any tendency to SG birds' meat. But older consumers may react differently. Nevertheless, we think that the animal welfare and sustainability issues should be prioritized than flavor of alternative chicken meat in Turkey. Furthermore, people's attention can be drawn to the fact that GMO-feedstuffs are not used in organic poultry, and this system positively contributes to rural development.

It is clear that Turkish poultry sector has a higher standard as in Western countries. It is noteworthy that irresponsible criticism of the poultry industry may negatively affect the nutritional conditions of disadvantaged consumers. On the other hand, having been accustomed to persistent growth in recent years, local industry is presently disturbed by incoming questions on the prevalent standard production model. Because of these bothers, some representatives of industry and even some academicians are claiming that organic poultry is a kind of scam. According to these people, organic eggs are actually standard eggs which are purposefully contaminated with feces, and organic chicken meats are generally produced from culling layer hens. Such abuses can be encountered from time to time but organic poultry cannot be tagged with this. I believe that our consumers need the correct and objective informative channels about the poultry production systems, conventional or alternatives.

Several large integrated companies had started free-range broiler production during the last 10 years but most of them stopped. They could not advertise their new products not to damage the main segment. Therefore organic and other alternative poultry production should be left to small farmers. At this point, French *Label Rouge* (LR) poultry meat production system can be taken as a very successful practice. This pasture-based contra-industrial system provides premium products to consumers, increases farmer income, and strengthens rural development. I believe that we can learn valuable lessons from this concept with respect to quality, animal welfare, origin and guarantee. It is known that several researchers in USA have paid attention to LR system for benchmarking.

Although there is an apparent interest to organic products in Turkey, it is difficult to claim that the public is confident about the certification system. Ministry of Food, Agriculture and Livestock of Turkey has prepared the required legislative framework and is primarily responsible for its application. The Turkish practice can be further improved by deriving useful clues from the National Organic Program (NOP) in the USA. NOP is the federal regulatory framework governing organic food and also the name of the organization in the Department of Agriculture.

There are also successful NGO (Non Governmental Organization) case studies in UK such as "Soil Association" has played a leading role on developing and certifying organic agriculture and, RSPCA (Royal Society for the Prevention of Cruelty to Animals) because of especially its "Freedom Food" farm assurance and food labeling scheme dedicated solely to improving farm animal welfare. At present, Turkish NGOs on this specific subject is not well-developed.

In order to nurture Turkish organic poultry, sufficient technology and adequate agricultural extension are of vital importance. Agricultural extension is under the responsibility of the Ministry of Food, Agriculture and Livestock but lacks related mechanisms attracting related academicians directly into subject. Introduction of a framework for long-term cooperation is suggested.

In fact, there is limited scope for academicians to make large contributions to industrial poultry. However, there is a great research and contribution potential in organic poultry with respect to huge and complicated genotype-environment interactions. On the other hand, breeding new Turkish local genotypes suitable to organic and other alternative systems will be able to alleviate the existing import-dependent procurement.

Core messages and conclusions

The symptoms of boredom are observed among Turkish consumers since 60 % of the total meat consumption is met by standard industrial chicken meat. However, it should be underlined that the long list of homework for organic poultry necessitates a close and long-termed cooperation among the stakeholders.