

Angora Rabbit Fiber Production in the World and Turkey

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Abstract Angora rabbit is the oldest known breed of rabbit. Its origin is in Anatolia but it is rare in Turkey now. Angora is a keratinous textile material, produced by the long-haired Angora rabbit. The fiber obtained from Angora rabbit is used in textiles. This fiber is one of the luxury fine fibers. It is grown in China, Chile, France, Germany, Argentina, Brazil, India, Korea and Hungary.

Keywords: Angora rabbit, fiber, wool, textile

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1. Introduction

Angora rabbit is a type of rabbit that its origin is in Anatolia but it is rare in Turkey now. Angora rabbit is short, and has round head, medium sized, erect ears. Their eyes are red due to the albino. They don't have coloring pigments in their bodies. They have thin and long legs covered with feathers. They usually weigh 3.5 to 4 kg. and females are heavier than males [1]. They must be hosted at temperatures between 10-25°C and humidity between 60-70% [2].

Angora fiber is a keratinous textile material, produced by the long-haired Angora rabbit. This fiber is one of the luxury fine fibers. These specialty wools only represent 3% of world clean wool production, but their price can be 10 to 30 times more than that of sheep wool [3]. Angora wool is soft, thin, fluffy and light. Angora rabbit fiber is third in terms of quantity after merino wool and mohair, is ranked first in terms of quality [4,5]. Primary yield of Angora rabbit is wool. The second, the third and the fourth degree yields are meat, fur/leather, and manure and slaughterhouse waste respectively [6].

Angora rabbit is the oldest known breed of rabbit. It spread all over the world from Ankara province. Rabbits were taken by Galatians, Phrygians and British sailors to France and England in the past [7,8].

2. Harvesting of Angora Rabbit Fiber and Its Classification

Angora wool is produced by the Angora rabbit [9]. Annual average 800-900 g wool can be obtained from a rabbit. The wool quality is inherited; but race, gender, age, weight, season, pregnancy status and exc. affect the yield. Also temperature and nutrition have indirect effects. A

pure culture, good feeding and selection are needed to achieve wool having better quality. Wool yield in female rabbits is 15-20% higher than in men [7].

Angora rabbit fibers are collected by plucking or shearing, and then sorted by length and cleanliness. Brightness of wool, specific weight, softness, elasticity, length, diameter, dirt level are factors that determine the quality of the wool [10].

Angora rabbit fibers are divided into two groups in trade as plucked and trimmed. They are classified according to their cleanliness and length. A classification example in USA:

- a) Plucked fibers
- b) Shorn fibers
 - 1st class fibers; 5,5- 7,5 cm
 - 2nd class fibers; 4,5- 5 cm
 - 3rd class fibers; 2,5- 4 cm
 - 4th class fibers; matted fibers
 - 5th class fibers; dirty and stained fibers [10].

Another classification is based on the length and cleanliness:

- 1st quality hairs that is longer than 6 cm and clean.
- 2nd quality hairs that is shorter than 6 cm and clean,
- 3rd quality hairs that is obtained from the neck and the feet. They are clean but matted [7].

Dirty hairs have no value regardless of the length [7,11].

Two white race rabbits origin from France and England are taking advantage around the world for Angora rabbit wool production as commercial purposes. French Angora rabbit has usually rough bristles (hairs) however; fibers are short and obtained by plucking. German Angora rabbit has woolly shirt that are usually more subtle, soft type and fleecing [9].

Key features of angora rabbit fiber are light weight and high heat retention capacity. These fibers are used alone or mixed with other fibers in making garment, hats, blanket etc. Angora rabbit fiber is softer and longer than other rabbits. The use of fiber does not cause an allergic

reaction. On the other hand, it helps skin to breathe by allowing perspiration. Angora wool has 7-8 times more heat retention capacity than other wools. Due to its natural felting property, it is also used in products such as hats and shoes [2,7].

3. Angora Rabbit Fiber Production in the World

Angora rabbit is grown in China, Chile, France, Germany, Argentina, Brazil, India, Korea and Hungary. Angora rabbit wool production is approximately 10000 tons over the world. 90% of this production is carried out by the China [7]. China has about 50 million Angora rabbits and 8000-10000 tons of Angora rabbit wool production. Approximately 50% of the production in China is exported to Europe, Japan and the Republic of Korea but at the same time developing their own Angora rabbit wool processing industry. France, Finland, the Czech and Hungary are major European countries in Angora rabbit wool production after China in the world. However Chile one of the South American countries, is a significant Angora wool producer. India, Australia and New Zealand also have their own Angora rabbit wool but India could not enter the market. India is the only county being the Angora fiber manufacturer, handler and consumer. Angora wool products markets of India are mainly Japan, Hong Kong, North America and Western European [9]. Angora wool processing countries are Italy, Japan, Germany, France and the United States of America [7].

Angora rabbit fiber production in the world can be divided into 3 periods: During the first period, from 1950 to 1976, world production increased slowly from 900 tons a year to 1200 tons. It may therefore be considered to have been around 1000 tons a year during this period. The second period lasted 12 years, from 1976 to 1988. At the end (1988), angora production was ten times greater than in 1976. During the third period (from 1988), production remained at a high level (Figure 1) [10].

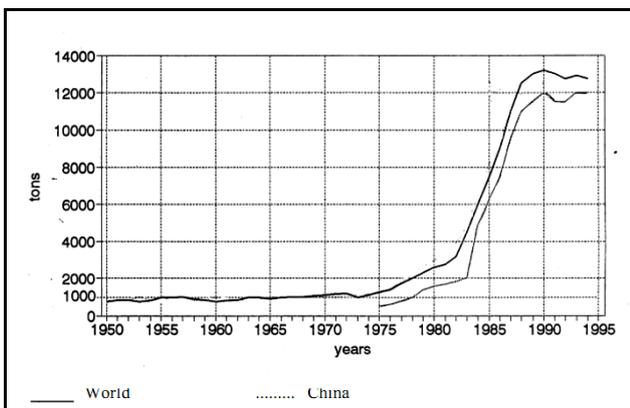


Figure 1. Raw Angora rabbit fiber production in the world and China [3]

After 2000 Angora rabbit fiber production began to decline in the world and it still continues. Angora rabbit wool production is affected from the changes in fashion like mohair fiber. Therefore the steady decline in the production of the fiber is postulated substantially in popularity. Angora rabbit wool is used more in fur trade,

felt production and it is used in different products as a mixture with other fabrics. However, the downward trend in fur in world trade also negatively affected Angora wool production and processing industry [9].

In Figure 2, the three periods of evolution of raw angora prices from 1960 up to 1995 can be seen clearly. There was an initial equilibrium during the first period up to 1976. During the second period, price was 60% higher, followed by market collapse in the third period [3].

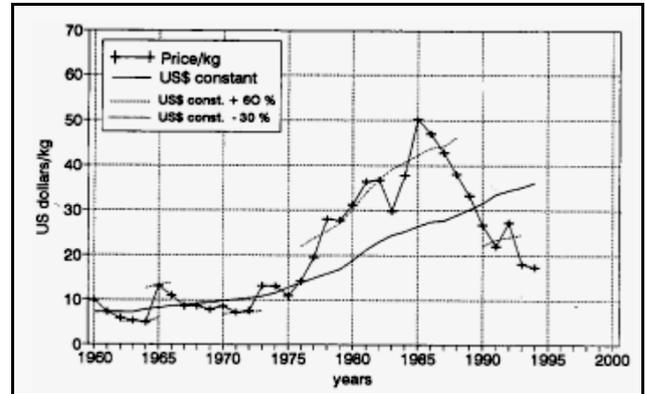


Figure 2. Raw angora world price (Average price of French imports) [3]

During the first period (1950-1976), production and demand were closely matched. However, the angora market was not steady. Demand increased each three or four years. When there was no more in storage, there was first a high price followed by a collapse in trade because of a lack of supply. During the second period (1976-1988), there was a sharp increase in the demand which increased to a higher level than earlier. The new price was now higher than earlier. During the third period (1988-1995), demand remained constant, but supply increased, as producers adapted to meet the new demand. New suppliers (Chile, Hungary) entered the market or boosted their production (China, Argentina, and France). At first, prices fell once more to their former level, but, with more and more being supplied and a stable demand, prices fell further (Figure 2) [3].

4. Angora Rabbit Fiber Production in Turkey

Angora rabbit fiber is a product that is used for many years in domestic market of Turkey. Nowadays Turkey supplies angora wool by importation from external markets. During 1990-2000 5-147 tons of angora wool was imported [2]. Angora wool import has continued since 2000. In particular, China is the main country that Angora rabbit wool was imported. In fact, Angora rabbit can be grown successfully in nearly all regions (which are not too hot) of Turkey.

In Turkey there was a rapid decrease in the establishment of enterprises of Angora rabbit in the early 1990's. But collecting and marketing of the Angora rabbit fiber in farms could not be achieved effectively. For this reason raw Angora rabbit fiber that is required for the sector have been imported from abroad especially China. This led to closure the vast majority of businesses [9]. Angora wool imports of Turkey from China are given in the Figure 3 [12].

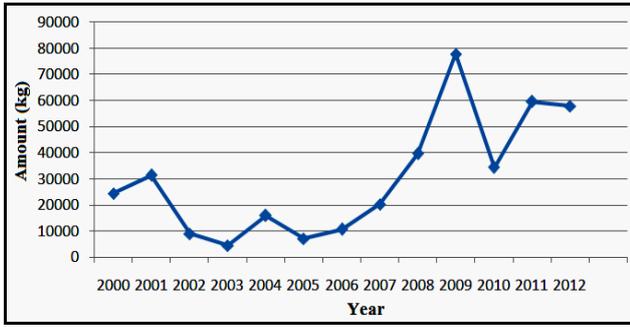


Figure 3. Turkey's Angora rabbit fiber import (kg) from China

According to Figure 3, it can be said that import of Angora rabbit wool from China is increasing. So that the amount of foreign exchange that paid for Angora rabbit wool increases as shown in Figure 4 [12].

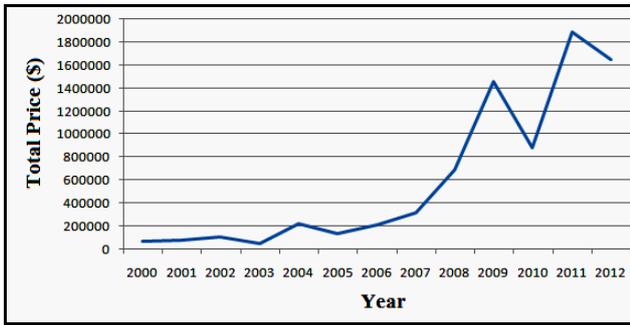


Figure 4. Angora rabbit fiber import (\$) from China

5. Conclusion

Angora rabbit is not just an economic issue; it is worth bearing in culturally. It must be seen as a source of culture so it should be cultivated in its homeland and also in other

countries. Due to the world Angora rabbit fiber production is very low, its production should be supported by giving incentive credits to angora wool producers. Furthermore the attention of ministries and relevant institutions' should be pulled and some support projects should be prepared. And also the best Angora rabbits in terms of both wool yield and quality should be selected for rising.

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