Chapter 3

Crop Distribution

Distribution of different field crops all over the world depends upon several factors such as: climate, growing season, altitude, rainfall, wind, soil, slope, and other factors. However, the distribution of the main field crops can be presented as follows (according to FAO statistic, 2009):

1- Wheat:

China occupied the first rank in the world production of wheat followed by India, Russian Federation, United states, France, Canada and Pakistan (Fig. 3).

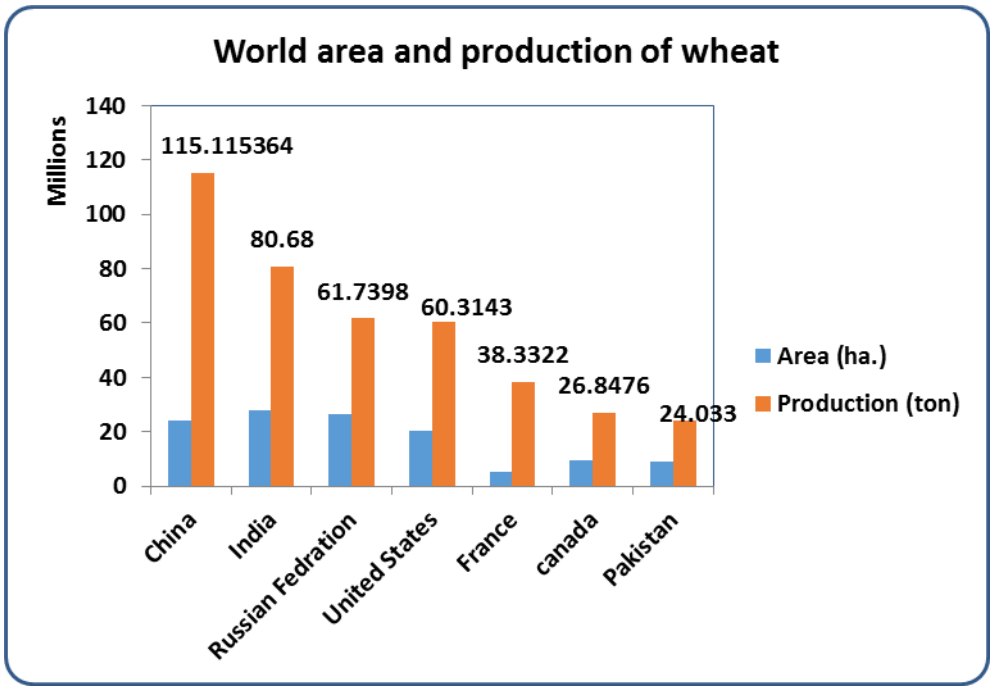

Fig. 3: World area and production of wheat.

http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor

2- Barley:

Russian Federation produced the highest world production of barley followed by France, then Germany, Ukraine, Australia, United States and finally Morocco (Fig 4).

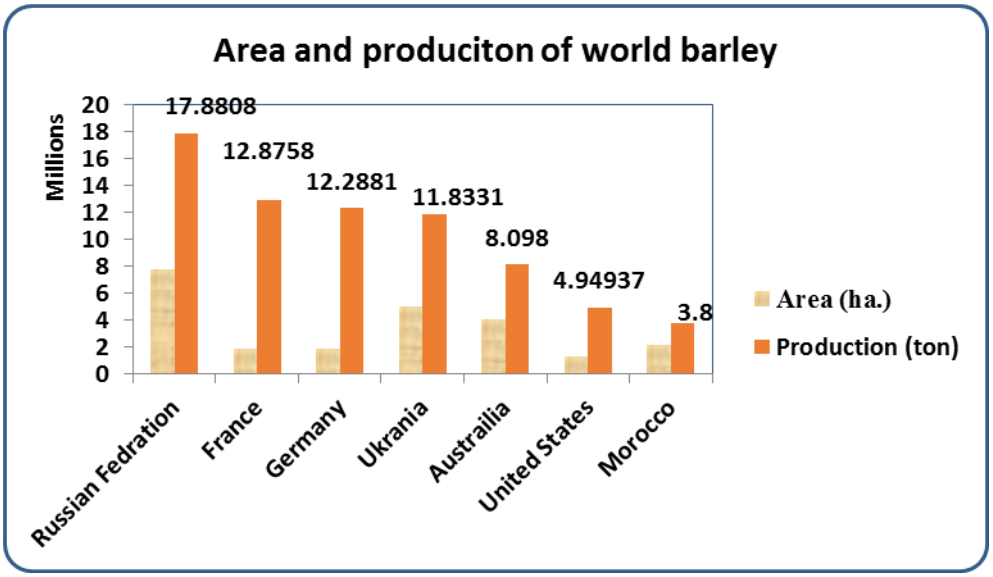

Fig. 4: World area and production of barley.

3- **Rice**:

Regarding world rice production, China occupied the first rank followed by India, Indonesia, Bangladesh, Vietnam, Myanmar and Thailand (Fig. 5).

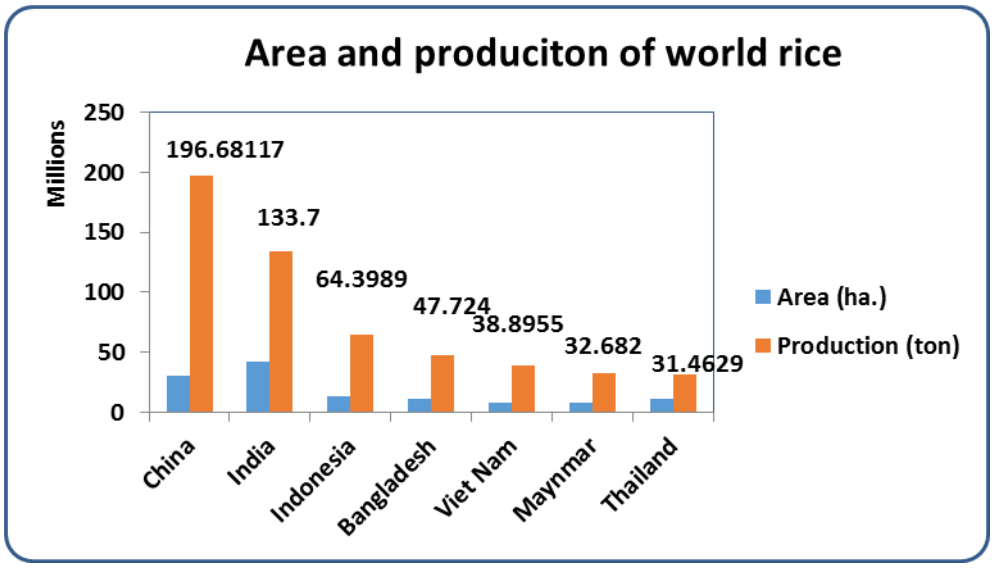

Fig. 5: World area and production of rice.

4- Maize:

United States of America occupied the first rank of the world production of maize followed by China, Brazil, Indonesia, India, Argentina and South Africa (Fig. 6).

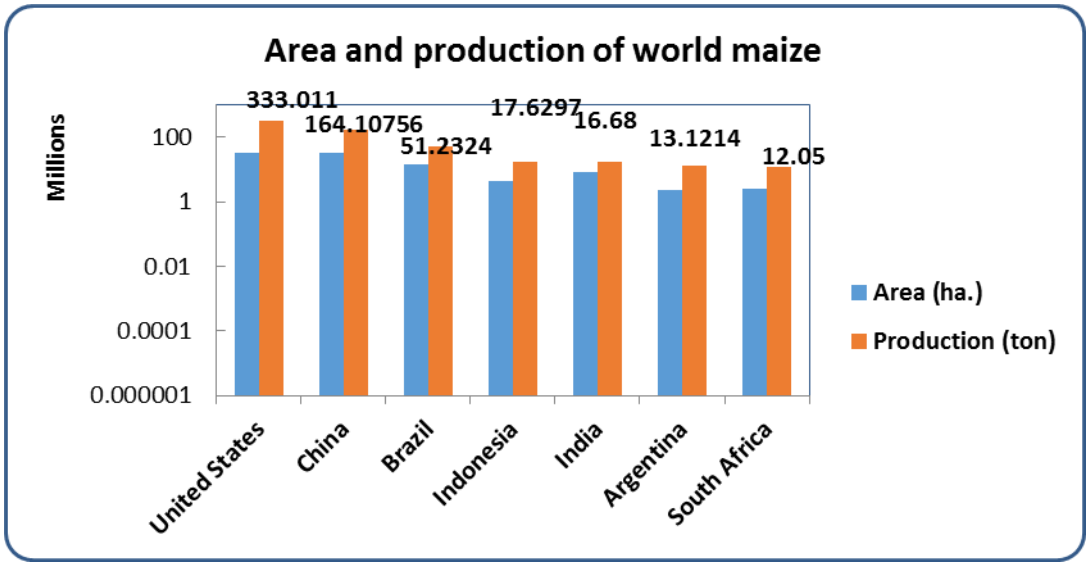

Fig. 6: World area and production of maize.

5- Cotton:

China occupied the first rank for world cotton area followed by India, Pakistan, Uzbekistan, Brazil, Turkey and Australia (Fig. 7).

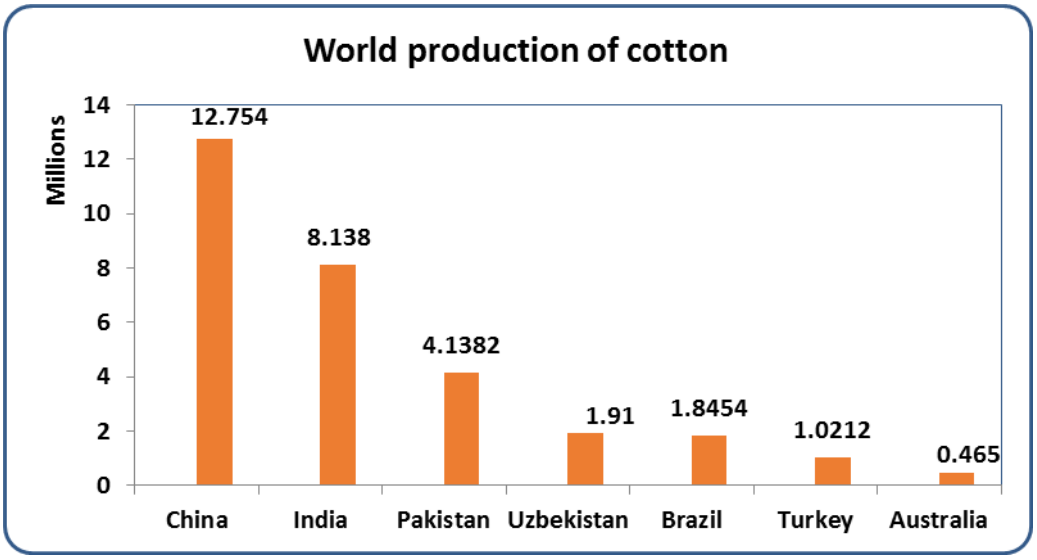

Fig. 7: World area of cotton crop.

6- **Sugar cane**:

The highest world production of sugar cane was recorded for Brazil followed by India, china, Thailand, Pakistan, Mexico and Colombia (Fig. 8).

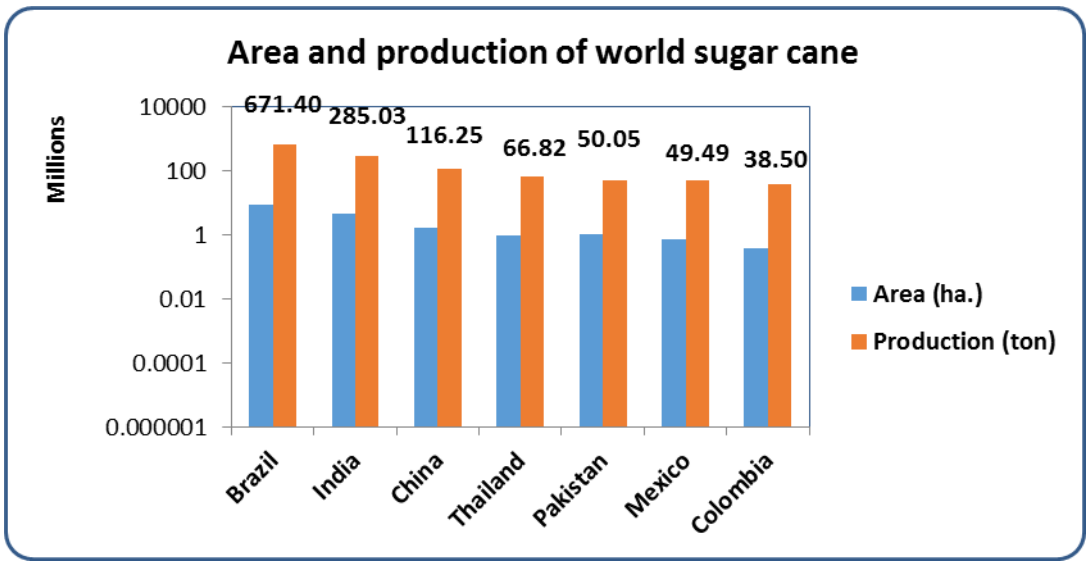

Fig. 7: World area and production of sugar cane crop.

7- **Soybean:**

The Unites States occupied the first rank for world soybean production followed by Brazil, Argentina, China, India, Paraguay and Canada (Fig. 8).

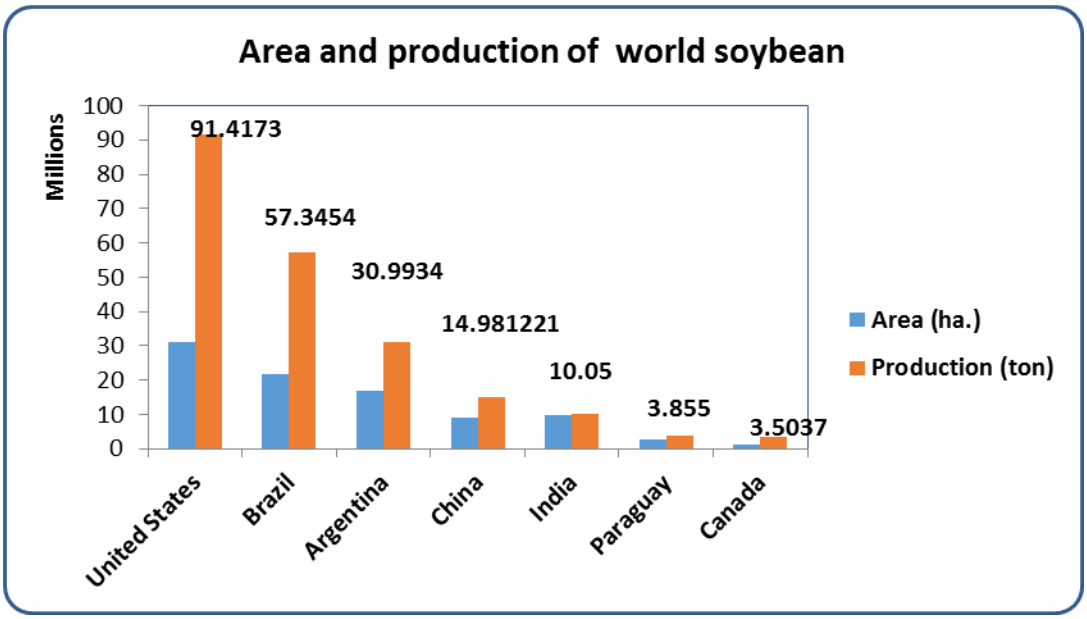

Fig. 7: World area and production of soybean crop.

Crop Distribution in Egypt

The fluctuations in environmental conditions in Egypt play an important role in the distribution of field crops grown in different regions. The slight increase in temperature from north of Delta to Upper Egypt along with the variation in soil types led to the cultivation of certain crops in specific regions. Therefore, the distribution of different field crops in Egypt will be presented as follows:

1- **Wheat**:

This crop can be cultivated all over Egyptian regions as a result of the appropriate environmental conditions prevailing in Egypt. However, it is not recommended to grow wheat varieties susceptible to rusts in North Delta. This is because the climate in this area has a high relative humidity and low temperature which encourage the development of fungus spores and cause severe damage to the crop.

2- **Barley**:

Barley can be grown all over Egypt. Moreover, it can be cultivated in desert lands and new reclaimed areas because this crop has some botanical and physiological features which enable it to tolerate drought and high temperature. Also, early heading date for this crop ensures a good avoidance of terminal drought stress. Barley can be grown in the Northern Coast of Egypt as an alternative crop to wheat in winter season.

3- **Rice**:

Most area cultivated with this crop (about 98%) is located in Delta because this crop needs a large quantities of water. However, it can be cultivated in new reclaimed areas in North Delta.

4- **Maize**:

Maize can be grown all over Egypt. However, it is not recommended to grow this crop in the desert and new reclaimed areas because of high temperature and drought stress prevailing in such regions. Moreover, maize can not grow successfully in poor sandy soils because it needs a fertile soil with good structure.

5- Grain sorghum

Sorghum can be grown all over Egypt. Moreover, it can be cultivated in desert lands and new reclaimed areas because this crop has some botanical and physiological features, which enable it to tolerate drought and high temperature. Sorghum goes into dormancy under severe drought and has several mechanisms to conserve moisture. Sorghum also generates more roots in dry conditions, to enhance the plant's ability to search for water. It has wax on its leaves and stems to reduce moisture loss, as well as narrow leaves and the ability to fold the leaves in on themselves .

6- **Faba bean**:

Faba bean can be planted in the Nile Valley but its area decreased as a result of the expansion of wheat cultivation area.

7- **Lentil**:

Most area of this crop is located in Upper Egypt in Assuit governorate (85% of total area). The cultivated area of this crop in Sharkia governorate is about 12 % of the total area. However, the cultivated area of this crop tended to decrease in Egypt in the present time.

8- **Chickpea**:

More than 84% of the cultivated area of this crop is found in Assuit Governorate followed by small areas in El- Mynia, Sharkia and Giza governorates.

9- **Terms**:

Most area of this crop is found in Ismailia, Sharkia and El Mynia governorates.

10- **Peanut**:

This crop grows best in light, sandy loam soil and the peanut plant flowers are above the ground, but fruits are below ground. Therefore, 50% of its cultivated area is found in Ismailia, El- Mynia and Sharlia governorates because of suitable soils to grow this crop. Peanut crop does not grow well in heavy clay soils .

11- **Cotton**:

Most cultivated area of this crop (80%) is found in Delta, whereas 15 % of the total area is found in Middle Egypt. Extra long staple of cotton varieties are located in North Delta where temperature, light and moisture are suitable for growing these varieties.

12- **Flax**:

This crop can be cultivated in Delta region.

13- **Egyptian clover**:

This fodder crop can be planted in most regions in Egypt but it does not tolerate high temperature. Therefore, it is not recommended to grow this crop in Aswan governorate.

14- **Alfalfa**:

This crop can be grown in the new reclaimed areas in Egypt. Moreover, it is not recommend to plant this crop in Delta because it is a competitor

for main crops such as cotton, rice and maize. Besides, it represents a host of cotton worm in Delta region.

15- **Sugar cane**:

Most area of this crop (85%) is located in Upper Egypt, followed by El-Mynia governorate (12%).

16- **Sugar beet**:

Most area of this crop is found in Kafr El Sheikh, Dakahlyia and El Garbyia governorates where there are many sugar factories in these regions.