

potato grown under drip irrigation. // *Agricultural Water Management*. – 2017. – № 180. – P. 160-171.

2. Yang, K., Wang, F., Shock, C. C., Kang, S., Huo, Z., Song, N., & Ma, D. Potato performance as influenced by the proportion of wetted soil volume and nitrogen under drip irrigation with plastic mulch. // *Agricultural Water Management*. – 2017. – № 179. – P. 260-270.

3. Yavuz, D., Yavuz, N., & Suheri, S. Design and Management of a Drip Irrigation System for an Optimum Potato Yield. – 2018.

4. Jha, G., Choudhary, O. P., & Sharda, R. (2017). Comparative effects of saline water on yield and quality of potato under drip and furrow irrigation. // *Cogent Food & Agriculture*. – 2017. – № 3(1).

5. Ghazouani, H., Rallo, G., Mguidiche, A., Latrech, B., Douh, B., Boujelben, A., & Provenzano, G. Assessing Hydrus-2D model to investigate the effects of different on-farm irrigation strategies on potato crop under subsurface drip irrigation. // *Water*. – 2019. – 11(3). – P. 540.

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## **AN ANALYTICAL STUDY OF THE REALITY OF PLANTING AND HARVESTING POTATOES IN THE SYRIAN ARAB REPUBLIC**

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**Abstract:** *Land division in Syria, statistics on the number of tractors and combines, characteristics of agricultural holdings, types of soil spread, statistics on the number of labor, the reality of growing potatoes and the method of harvesting.*

**Keywords:** *tractor, soil, possessions, technical specifications, harvesting.*

The Syrian Arab Republic is located in the Middle East, on the east coast of the Mediterranean Sea. It borders on Turkey, Iraq, Palestine, Jordan and Lebanon. The climate in the SYR is subtropical Mediterranean on the coast and dry continental in the interior.

The total area of Syrian Arab lands is more than 18 million hectares. Plains (80%) of plateaus and valleys (15%), mountains and highlands (5%).

Potato cultivation is mainly limited to mountain ranges and is grown along the Mediterranean coast in the western part of the country in three main areas: in the highlands around Damascus (700–1400 meters above sea level), which produces about 30 percent of the annual production. Inland areas include (Hama, Homs and Algab) at an altitude of 200-500 meters above sea level, which account for more than 60 percent of national production, and the rest is located in the Coast region near Latakia and Tartus. Potatoes are usually grown in Syria on an area of about 30,000 hectares for three alternating periods: spring, summer and autumn. (It can get 35 tons / ha under good conditions).

Where potatoes are sown by a group of workers when the furrow is opened by a plow, and behind it is a group of workers, where you place seed potatoes in approximate sizes within (30–35 cm) within one line and the distance (70–75 cm) between the lines .

Optimization of the operation of an agricultural tractor lies in the basis of the optimal ratio of power to the working width of the implement and the speed of the unit as efficiency criteria use labor costs operational and reduced costs the problem is probabilistic in nature, evaluating soil properties, climatic characteristics and production conditions directly affecting performance indicators.

*Table 1*

**The number of tractors and combines on agricultural land and the rural population in 2006**

Number of tractors PC.	Number of combine harvesters PC.	Area, thousand. ha	The number of rural population , thousand people.	Tractor / thousand. ha	Harvester / thousand .ha	Tractor / thousand people	Harvester / thousand people
107946	5724	5950	4808	18.1	1	22.5	1.2

Table 1 shows that the number of tractors per 1000 inhabitants reached 22.5 in 2006, while in developed countries it exceeds 130 tractors per 1000 agricultural residents . The same picture is observed for combines and other types of agricultural machinery and equipment. This inevitably hinders the growth of agricultural production and, therefore, hinders development plans in the country.

*Table 2*

**Syria's agricultural equipment dynamics agricultural machinery**

Year	Tractors		Modern plows	Seeders	Combine harvesters	Stationary threshers
	Less than 50 h.p.	50 h.p. and more				
2002	34545	69091	95555	15260	4786	4842
2003	34742	68884	110900	17209	5249	4829
2004	34982	69601	111943	17828	5335	4816
2005	36224	69907	113624	18669	5651	4831
2006	37189	70757	113779	19933	5724	4717

Table 2. shows the following:

1. The number of tractors has increased significantly.

2. A significant, but uneven increase in the number of agricultural harvesters.

Table 3

### Characteristics of agricultural holdings

Number of agricultural owners				Average holdings (in ha)								
				Arable land			Land not suitable for agricultural			Total area		
1970	1981	1994	2004	1981	1994	2004	1981	1994	2004	1981	1994	2004
52789.9	48550.1	61365.7	66037.1	11.15	7.59	8.32	0.62	0.55	0.09	11.77	8.49	8.47

From this table it can be seen that the average size of agricultural land holdings decreases due to an increase in the number of agricultural owners, so small and medium property is the most common form of agricultural production. Thus, agricultural property has become less concentrated than before the implementation of laws on agrarian reform.

The main groups in the Syrian Arab Republic are about ten groups, the most important of which are the following:

- Red Mediterranean soil.
- Taupe and tan.
- Tan soils.
- Gray soil.
- Gypsum-bearing soils.
- Modern granular soil.
- Saline soils.
- Stony-gravelly soil.
- Calcareous soil.
- Forest soil.

Potato harvesting methods still depend on primitive methods due to the high prices of potato harvesting machines, and also due to the small size of agricultural land and the inability of the farmer to purchase these machines because of the high price and because of the small size of the land, which he is cultivated.

Potatoes are harvested using a tool, such as a fork, manually by workers, if the cultivated area is small, but this method is expensive, but on large areas, extraction is carried out using a potato extraction machine (connected to the tractor), which is one of the best methods and can be uprooted by a local plow. The animals are pulled after the plow is wrapped in burlap to increase the width of the rail and prevent damage to the tubers. A group of workers goes after the plow to harvest, and production should be transferred as quickly as possible to a large tent or warehouse to protect the tubers from heat stroke and hot wind blows that damage the crop.

But there is an urgent need for the introduction of potato harvesting machines that receive power from the tractor in proportion to different types of soil, which helps to accelerate the production process in order to optimize the use of tractor energy.

It is noticeable that due to the small size of agricultural holdings, huge harvesting machines cannot be introduced, but rather these machines must be commensurate with the size of these holdings.

### References

1. Alhalil, F. Characteristics of capital, the Syrian agricultural sector (characteristics, reality and prospects) // Tishrin University Journal of Research and Scientific Research. – 2009. – No. 1 (31). – P. 4-11.
2. Alhaled, I. Areas of Agricultural Stability in Syria // Map of Agricultural Investments in the Syrian Arab Republic. – Ministry of Agriculture and Agrarian Reform. – 2015. – No. 2. – P. 5-9.
3. Mazid, A., and Alhmad, H. Influence of modern agricultural technologies on wheat crops in the Syrian Arab country // Agricultural Research Department. Damascus, Syria. – 2015. – No. 4. – P. 3-5.
4. Mubarak, Abdullah. Department of Global Agri-Food Marketing, Regional Office, World of Food and Agriculture, Cairo, 2004. – P. 659.
5. Barot, Mohammed. First Basic National Project Report (Syria, 2025) Al-Majali Axis of Population – Damascus: United Nations Development Program and State Planning Commission, 2007. – P. 20-22.

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## ASSESSMENT OF THE INFLUENCE OF SYRIAN BREEDING STALLIONS ON THE DEVELOPMENT OF THOROUGHBRED ARAB HORSES IN RUSSIA USING DNA MARKERS

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**Abstract:** *In the formation of the Russian population has been widely used stallions from different Arab countries, including Syria. Therefore, to analyze the influence of stallions of Syrian origin on the formation of lines and families in thoroughbred horse breeds in Russia, as well as to evaluate the genetic structure of the breed using DNA markers is a very urgent problem.*

**Keywords:** thoroughbred, horse, breed, genetic structure, DNA markers.

The intensive development of the racing industry in Russia in recent years has led to a number of positive trends, such as the development of racing infrastructure, the reconstruction of racetracks, the creation of private stud farms. It is known that in Russia there is only a small part of the total population of thoroughbred horse breeds (according to the state studbook more than 1500 factory mares) and it is possible to conduct effective breeding only with timely assessment of the level of expression of