

Evaluations of the Economical Literature of Azerbaijan on Development of Non-Traditional Agricultural Branches in the 20s-30s of the 20th Century

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Abstract: The article reviews the Evaluations of the Economical Literature of Azerbaijan on development of non-traditional agricultural branches in the 20s-30s of the 20th century. It should be mentioned that the mentioned years are characterized as the period when serious researches started on finding more rational and productive ways of using natural and raw material resources of the Republic and implementing productive forces more efficiently. In this direction, researches conducted for usage of vegetation cover for economical purposes draw special attention. Because the mentioned natural resources exist in the country in the present and still are not used sufficiently.

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INTRODUCTION

Today, when national economies integrate to the global economy system more closely, there still are some resources, which have not found their usage spheres in production and consumption in the local level yet. However, nobody can deny the importance of evaluation of such opportunities in the global market. Namely from this point of view, Azerbaijan is a rich country, though it is mainly known with its rich oil resources. Unfortunately, today these opportunities are not evaluated and used properly, though researches on existence and usage opportunities of these resources were conducted in the last century. If to pay attention to historical processes of the 20s-30s years of the last century, we can observe that being isolated from international community and suffering severe shortage of resources, the Soviet administration paid special attention to researches on rational usage of resources of national outlying regions. At that time these researches and measures served All-Union interests. But nowadays, after achieving independence of our republic, these resources can be used by means of involvement of foreign investors and advanced technologies, thus increasing economical potential of the republic and developing international cooperation with different institutions.

Evaluations on Opportunities of Usage of Wild Plants for Agricultural Purposes in Azerbaijan Republic: Among researches of the 20s works of P.V.Shvan-Guriysky deserve to be mentioned specially. In his evaluations on economical future of Azerbaijan steppes, Guriysky claimed that vast areas in the Republic were not irrigated yet and perhaps, would never be irrigated due to insufficient quantity of water resources in comparison to these areas. So, he recommended thinking about planting drought-resistant plants. He specially paid attention to the possibility of planting Qalfa-Esperto (or “Alpha”) in the steppes. He mentioned that the plant was wide-spread in the west of North Africa in wild and its fibre was used for producing carpets, bags, ship ropes, high-quality paper and etc. Italian engineer Pomillo was the first person who conducted experiments on usage opportunities of Alpha as a technical plant [1].

Evaluations on development of agricultural branches for producing synthetic rubber deserve special attention, too.

After the All-Union Communist Party Central Committee adopted a decision on cultivation of synthetic rubber, similar decisions were made in Azerbaijan and Turkmenistan, where works carried out in this sphere were elucidated in the periodical press. On April 10, 1929 it was written in a material published in the “Bakinsky Rabochi”

newspaper that natural synthetic rubber had been discovered in Azerbaijan. According to the news, observations had been made by Rezintrest and the Land Committee had to assist for development of the work. Later it informed that in autumn of 1927 synthetic rubber had been produced from cocoon of a caterpillar (10% of the cocoon) in narrow forest strips on the banks of the Kura River in Lankaran province, after which experiments had continued in chemical laboratories of AzerSharab (Azerbaijan Wine). As a result, 2 kilos of synthetic rubber had been produced (20% of the cocoon) and had been sent to Rezintrest for researches. The published material also gave information about numerous wild plants in Azerbaijan which included synthetic rubber. One of the initiators of synthetic rubber issue – Karis continued its works and 100 kilos of cocoon with synthetic rubber composition were sent to Moscow. All the activities had been granted a patent by the Department of Discoveries and Inventions of the People's Economic Council of Azerbaijan SSR [2].

Another material published in the press informed that a special plant useful for synthetic rubber production had been discovered in Mughan. It was cultivated in a village school in Khilli district and experiments were held on its roots. The Village Council had adopted a decision on providing 2 hectares of land for cultivation of the plant. [3].

The material was gum plant – a perennial plant named Chondrilla, found by Karis in 1927 in narrow forest strips on the banks of Kura River. At the same time, cultivation opportunities of a Mexican wild forest Guayule plant in Azerbaijan were researched [2].

In an article published in the “Bakinsky Rabochy” newspaper on January 7, 1931 with the title of “Hidden Wealth of Azerbaijan”, A.Laktionov called wild plants of Azerbaijan unexplored resource of wealth. Astragalus was an example for it. He wrote that yearly the USSR received 600 tons of gummy dragons (an adhesive material) and yearly 300.000 \$ were paid for the milk-coloured liquid layer. The material (ketira in Persian) was obtained from Astragalus, which grew in Fars and Kerman Provinces of Iran. Iran received annual income in the amount of 1.5 million dollars from this plant. It grew in wild in Lankaran-Astara and Karabakh regions, too. This material could be used for thickening colours, patterning print cotton, for pharmacology and perfumery.

Another plant that gave profit to Iran was Ferula (Ferula foetida), which was exported to India as food and medicine, but was not used in Azerbaijan. Special

emphasis was put on that research and study of wild plants can help to meet the need for synthetic rubber, vegetable oil and forage crops [2].

On April 20, 1931 an article named “Synthetic rubber in the USSR” was published by A.Laktionov in the Bakinsky Rabochi newspaper. He wrote in the article that researches for production of synthetic rubber had begun in the USSR in 1925 and presented characteristics of plants which included synthetic rubber. First he noted Guayule from Mexico, 18% of which consisted of synthetic rubber. The second was Eucommia from China with 12% of synthetic rubber composition. The article paid special attention to research of cultivation opportunities of the mentioned plants in the USSR. Besides, the article noted that in 1927 gum had been produced from Chondrilla – a plant with extract that contains synthetic rubber. Observations conducted on Chondrilla in Moscow and Kazakhstan had given positive results. At the same time, Laktionov gave additional information on other synthetic rubber containing plants in the USSR. For example, he wrote about observations of a Ukrainian engineer (Voinovsky) regarding Vatochnik (with 2.5% of synthetic rubber) and production of 200 tons of synthetic rubber from a plant called “tau-sakkýz” that grew in mountainous regions of Kazakhstan. Another important plant was a plant used in production of ropes (which contained 7.5% of synthetic rubber). Laktionov's conclusion in the article was that synthetic rubber containing plants had been discovered not by specialists, but by railwaymen, workers, teachers and etc. So, a more professional approach should be realized in this sphere. At the same time, he substantiated importance of the idea of planting foreign synthetic rubber containing plants in Azerbaijan. The first initiatives in this field – plantation of Eucommia in Zagatala and in southern regions by I.D.Yudin and A.Rejebli, protection of plants from fungi by professor Shembel, stimulation of Guayule seeds by botanist Kislyakov were elucidated, too. [2].

Synthetic on April 27, 1931 conclusion of the meeting held by synthetic rubber producing organizations, the Bakinsky Rabochy, the Communist and the Industrialization newspapers was published in the Bakinsky Rabochy newspaper with the title of “Let's achieve synthetic rubber independence”. Speaking in the meeting, Zinat Zakirov reported on “a Scientific-research work regarding synthetic rubber containing plants in the Azerbaijan SSR”. Besides, botanist Karyagin, senior lecturer Fedenko, assistant Tahirova, Asgarov, Safiyev, Gavensky, Timokhin, Trofimov and others were

commissioned in 1931 with research of synthetic rubber containing plants in Azerbaijan. At the same time, special working personnel was organized for works related to synthetic rubber containing plants in Azerbaijan. Zvenigordsky, Fidman (from the Industrialization newspaper), senior lecturer Fedenko, professor Mikheyev, assistant Tahirova (from Azerbaijan Agriculture University), Knize (People's Land Commissar), Asgarov, Timokhin, Trofimov (from the Central Agricultural Education Council of Azerbaijan Leninist Communist Youth Union), Safiyev, Datiyev (Azerbaijan Agricultural University), Laktionov (Azerbaijan State Scientific-Research Institute) were included in the Personnel [2].

In April, 1931 some noteworthy ideas were published in D.Bunyadzade's article named "Scientific workers towards synthetic rubber". The article presented materials of the conference held in regard to the issue of development of plant-growing in the Azerbaijan SSR. The article noted that scientific workers of Azerbaijan should be involved in growing important plants and cultivation opportunities of Guayule Chondrilla should be defined. D.Bunyadzade considered that if this sphere of plant-growing developed, tens of million manats are saved and production of synthetic rubber in the country would eliminate the dependence on import [3].

Meanwhile, as a result of synthetic rubber expeditions of Azerbaijan State Scientific Research University, 12 new synthetic rubber containing plants were discovered in the Republic. [2].

As mentioned above, special staff was organized for development of synthetic rubber production in Azerbaijan and head of the Azerbaijan SSR People's Council of Commissars D.Bunyadzade, professor Grossgaim, Zinat Zakirov, professor Spassky and Timokhin were included in it. The staff delivered special instructions for country people, where it was mentioned that without leaving their main work, every peasant or cattle-breeder could find a new synthetic rubber plant while weeding, pasturing or irrigating plantations. They were informed to be attentive while picking such plants and to rub the plant extract between fingers. If the plant extract was sticky, it meant that the plant could have an importance for synthetic rubber production. Further, they were asked to collect the plant together with its flowers, leaves and roots and to send them to synthetic rubber sector of Azerbaijan State Scientific Research Institute. It was specially emphasized that dried plants did not fit for researches and that researches in this sphere are very important for Soviet rubber raw material industry [3].

In early 30s experimental works on Chondrilla started in Azerbaijan Section of the All-Union Plant-Growing Institute and the Azerbaijan SSR People's Land Commissariat. In January 1931 Azerbaijan Section of the All-Union Plant-Growing Institute created a base station for Chondrilla in Bina, where 45 hectares of land was delivered for this purpose. However, only 5% of all seedlings planted between autumn of 1930 – July 1931 survived (4200 manats were spent for cultivation of 1.400.000 seedlings in the area). According to agriculturist Sapriko, the main reason of the failure was untimely planting of the seedlings. But Yakov Gavensky and G.Timokhin accused Sapriko in the failure [2].

As observed, synthetic rubber euphoria in Azerbaijan in the second part of the 20s ended with failure and after the unsuccessful attempt all works stopped.

Evaluations on Issues of Development of Subtropical Plant-growing in Azerbaijan:

In the 30s development of subtropical plant-growing in Azerbaijan gained importance. In this regard, A.S.Amirshah's article named "the Problem of Adaptation of Dry Subtropical Regions of Azerbaijan" was especially noteworthy. The author mentioned in the article that plants as olive, pistachio, almond, fig and pomegranate had no been evaluated properly in the whole Union until formation of Subtropical Plants Head Office. He mentioned that 36 administrative regions of Azerbaijan (from 56) are in subtropical regions. As the previous agriculture had been based on nomadic lifestyle, fruit-growing and vine-growing had not been developed. There were no trees in many villages of Mughan. However, some Russian and Azerbaijani villages had trees. Absheron, foothills of Karabakh, Tartar and partially Aghdam corresponded for cultivating olive trees. Pistachio grew in Absheron, almond was suitable for Ordubad, Absheron, Zagatala, Nukha and Nakhchivan and pomegranate grew well in Kurdamir, Aghdash, Aghjabadi, Salyan, Bilasuvar, Gutgashen and Shamakhi. The article mentioned that gardening could be developed in 20-25 thousand hectares (in regions close to the Araz and the Kura Rivers) within 5-10 years, without investing significant amount of money. In case of solution of the Mingachevir problem, amount of irrigated lands would increase up to 1.5 million hectares. It was offered in the article that for development of gardening, a seedling area of 50-75 hectares should be created for development of gardening in the next three five-year plan periods [3].

In September 1936, a plenary session of Subtropical Plants Department of the All-Union Agricultural Scientific Academy named after V.I.Lenin was held in Baku. 24 participants of the session travelled to Ganja on September 22 and were greeted by the Party representatives of Ganja city and Azerbaijan Scientific Research Cotton Growing Institute. They had an excursion to experimental fields of Azerbaijan Scientific Research Cotton Growing Institute. Specialist of the All-Union Plant-Growing Institute Kovalyov had a speech on opportunities of cultivation of subtropical plants in sunny Azerbaijan fields. Academician N.I.Vavilov evaluated the creation of the Botanical Garden in windy Baku as a courageous step and expressed his assuredness regarding further steps in the sphere of subtropical plants in Azerbaijan. Rector of the Botany Institute of the Azerbaijan Branch of the USSA Academy of Sciences professor Grossgeim noted that there were opportunities for cultivation of subtropical plants in 30 thousand hectares in Ganja, Aghdam and Goychay. According to information given by H.Mammadbayov in the newspaper, excursions to Nukha, Gakh and Zagatala were organized for the guests [3].

Further we can pay attention to the material published on September 29 in the periodical press by name “the Second Subtropical Base of the Soviet Union”, which expresses ideas of H.Vazirov. The article mentioned that there were 463 thousand hectares of total plant zones in Azerbaijan, of which 375.000 thousand hectares were dry subtropical, 68.000 thousand hectares were humid subtropical and 20.000 hectares were humid. 337.000 thousand hectares were forests and bushes. Bushes could be cleaned and improved properly for cultivating subtropical plants. According to the article, in the third five-year plan period, subtropical plantations would be created in 10 thousand hectares. There were 264 hectares of tea plantations in the Republic at that time, which was planned to increase up to 1000 hectares in 1937. There were scientific enterprises in Azerbaijan, which conducted researches on subtropical plants. Azerbaijan Scientific-Research Cotton-Growing Institute had developed some productive cotton sorts in last 3-4 years and the mentioned enterprises also could realize corresponding works for development of new subtropical plant sorts [3].

Additionally, we can pay attention to ideas expressed in the plenary session of Subtropical Plants Department of the All-Union Agricultural Scientific Academy named after V.I.Lenin held Baku. Deputy President of the

Agricultural Scientific Academy had a speech in the session and noted that the session was dedicated to Stalin’s intention to turn Azerbaijan to the second subtropical plant base of the Union. Later, Azerbaijan People’s Land Commissar H.Vazirov spoke on situation of the subtropical plantations and their development perspectives in the Republic [3]. Amirshah’s speech in the session was about “the issue of cultivation of drought resistant and non-resistant subtropical plants in Azerbaijan”. Professor Grossgeim spoke on cultivation of drought resistant and humidity-resistant subtropical plants in subtropical regions of Azerbaijan. Expedient character of development of decorative plant-growing in Baku was also emphasized. Professor Polinov reported on researches related to soil structure and vegetation cover of Lankaran and Astara regions. Later, scientific worker Zavotnichiy reported on scientific observations conducted in Lankara in 9.000 hectares and Khapava had a report about coordination of development of tea planting and climate conditions in Azerbaijan.

6 commissions were formed in the session for development of subtropical plant-growing in the Republic. The commissions included Vazirov, Vavilov, Shmukh and other specialists. Planned to end on October 2, the plenary session included the report of Vinogradov-Nikitin on planting of greenery in Azerbaijan [3].

Towards the end of the 30s, development of tea planting and subtropical plant growing in Lankaran, Zagatala, Balakan and Gakh was in the spotlight. 36.084 hectares of swamps in Lankara-Astara region were drained and turned to plantations. On August 15, Azerbaijan Communist Party Central Committee and the People’s Council of Commissars adopted a decision named “on Measures of Development of citrus plants in Azerbaijan”. On August 16, a decision was adopted “on Development of Eucalyptus plants in Azerbaijan”. In 1939, 4 state farms and 110 collective farms harvested 123 tons of green tea. Consumption of tea products in the Republic in 1940 doubled in comparison to 1937. Together with cattle breeding, corresponding structures and scientific-research centres paid special attention to development of other spheres of plant-growing, particularly, technical and subtropical plant-growing. In this regard, mentioning of some facts would be noteworthy.

The article published in the Communist newspaper on February 27, 1938 (“Attention to Agriculture”) focused on cannabis sativa, its agricultural importance as a fibrous plant and corresponding climate of Jabrayil region for cultivation of the plant [3].

From March 25 to March 29 1940, the People's Land Commissariat of the Azerbaijan SSR and workers of Azerbaijan Branch of the USSR Academy of Sciences conducted a conference on development of tea growing in subtropical regions of Azerbaijan, in the seaside and foothills, in Lankaran, Balakan, Gakh and Zagatala regions [4].

As observed above, evaluations on economical efficiency of growing citrus plants in Azerbaijan were always in the spotlight in the 30s. In this regard, A.Strebkova's (candidate of agricultural sciences) article named "the Untouched Wealth" published in the Bakinsky Rabochy on September 5 is noteworthy. The author wrote that 75-80% of territory of Azerbaijan fitted for cultivation of subtropical plants. Nut plants in wild grew in 4.000 hectares. 8 million of various subtropical plant sorts grew in the regions along the Kura River. Lankaran and Astara had 327 hectares of wild pomegranate growing area and 14% of structure of extract in this plant was citric acid, which meant production of 600 tons of citric acid. Pear-shape fig grew only in Absheron region of Azerbaijan – Shaghan and Buzovna. In the plenary session of the All-Union Agriculture Academy held in 1936, preparation of the third five-year plan period included cultivation of subtropical plants in the Republic in 25.000 hectares. A.Strebkova wrote that cultivation methodology of such plants should be changed and their cultivation should be included in the state plan, thus defining responsible bodies for cultivation of dry subtropical plants [2].

Further, we can pay attention to the conference dedicated to the 20th anniversary of Azerbaijan Agricultural Institute, held from March 17 to March 20, 1941. Professor N.I.Malov had a speech in the conference. The conference had 7 reports from the section of field husbandry, 7 reports from the section of fruit-growing, 9 reports from the section of zoo-technics, 10 reports from the section of veterinary and 10 reports from the section of mechanization of agriculture and hydro-land-reclamation. Some noteworthy reports were senior lecturer

N.Vilnikov's (candidate of agricultural sciences) report on "the Commodity Quality of Pomegranate in Dry Regions of the Azerbaijan SSR", senior lecturer A.S.Narimanov's (candidate of agricultural sciences) report on "the Commodity Quality of Various Apple Sorts and Law Quality of this plant in Guba region" and I.Akhundzade's (candidate of biology sciences) report on "Some results of Researches conducted on citrus plants in West Azerbaijan" [5].

CONCLUSION

Among researches in regard to efficient usage of wild and cultural vegetation cover conducted beginning from 20s, only attention to cultivation of citrus plants saved its importance for coming years. It was closely connected, first of all, with that materials produced from oil met all demands for rubber. From the other hand, development of cotton growing "oppressed" not only non-traditional spheres of agriculture, but also traditional agricultural spheres in the Republic. However, nowadays, existence of new agricultural opportunities in regard to wild and cultural plant resources should be in the spotlight of researchers.

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