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THE AGRICULTURAL CHARACTERISTICS OF LAND AREAS IN DIFFERENT CLIMATIC AND SOIL CONDITIONS OF ASKERAN REGION

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The agricultural characteristics and zoning of land is of vital significance for its bonneting, economic assessment and, which is more important, for the development and implementation of certain activities of fight against soil desertification in current ecological conditions.

The aim of our research was to study the area of 132 and 173 hectares of brown, clay sand medium capacity soil of Askeran region conditioned by the geographical variety of Artsakh relief for the purpose of zoning and giving the agricultural characteristics of the studied area and suggesting a plan against desertification. As a result it has been found that the relief of the land area is roughly wavy which gradually turns mountainous especially in the territory of Akhnaghbyur –Sarushen.

The soil is very poor with both humus and nutrients necessary for plants (NP), it is infected with different types of weeds, plant diseases and pests, farming is maintained mainly under dry conditions, rotation is not applied with its corresponding stages, animal breeding is going on extensively as a result of which crop yield and livestock productivity in rural farms continue to stay low and there is a threat of soil desertification.

Key words: humus, humic, nutrients, relief, plant and animal diseases, weediness, agrochemical characteristics, land zoning.

Introduction

As it is generally common to the mountainous areas, the relief of the studied territories is rough. The great variations in the relief and the slopes determine the diversity of climate, water, soil cover, wildlife, natural landscape and land zoning.

Due to the contradictions of the relief the climate is various. Meteorological elements characterizing the area are mainly dependent on the geographical location of the area, the total circulation of the atmosphere, the penetrating air masses, the nearby Caspian Sea, the altitude of the sea, the support of the mountain range and other factors.

Taking into account the change in air temperature, moisture, relief and other elements in Astghashen (132 ha) we have distinguished temperate warm and dry climatic zone and in Aknaghbyur-Sarushen (173 ha) area we have noted temperate warm and humid climate. The first zone has warm summers and the winters have no severe cold. In January the average temperature is $+1^0$ C - -1^0C and in July the average is $+21\text{-}25^0$ C.

Absolute minimum can reach to -20^0 C and the absolute maximum can be $+30\text{-}40^0$ C. The annual long term average precipitation is 400-500 mm.

The second zone has temperate warm and humid climate, the summer is temperate warm, the average temperature in July is not more than $+24^0$ C and winters are not frosty. The average temperature in January is not less than -3,5°C. The annual precipitation is 500-600 mm, the maximum is in spring (May – the first half of June) and the minimum is in winter [1, 2] (Table 1).

As you see in the first diagram, in the first climatic zone the average temperature in January is +1°C and the average in July is +23,8°C.

In the second climatic zone we have -0-2 and +22,4°C.

The average perennial of precipitation in Astghashen is 497 mm, the maximum is in May as 94mm, the minimum is in December-January as 15mm.

The average annual in Aknaghbyur - Sarushen is 643 mm, the maximum is in May as 122 mm and the minimum in December – January is 27 mm.

Polar days are 2200-2300 hours. This zone is noted by less clouds (34-37 days). Clear days are more in summer. The winter is mild. We have stable snow cover n the northern and east-northern slopes of Aknaghbyur-Sarushen region.

The wind direction is mainly towards the mountain valleys. The average speed of wind is small in the studied area and doesn't exceed 1,5-3,0 m/sec. In winter it blows 3,4 - 4 m/sec and in summer it is 1,5 – 2 m/sec.

Among the risk factors of climatic conditions there is frostbite, hailstorm and drought which occur periodically. Dry tropical dusty wind blows into the region in spring and summer months from Middle Asia causing significant fluctuations in the weather especially drought. Often these hot winds have a negative impact on vegetation. The northern air masses bring spring and autumn frosts that also negatively affect the agriculture [1,2].

In the mentioned climatic conditions of Astghashen zone where the temperature is higher and the precipitation is lower, dry resistant crops are dominant and also bush frigid plants are growing. The lands being formed under such vegetation are classified as forest brown, mountain light brown, brown and dark brown soils on the map of the Republic of Artsakh based on the results of the studies conducted by the Armenian "State Soil Construction Project" Institute. In the zone of Aknaghbyur – Sarushen with lower temperature and more humid climatic conditions there are bushes and grass among other crops which gradually turn into small forest along the increasing height. Under such conditions the composition of the soil varies from the clay medium to the clay rocks according to the same soil map [3].

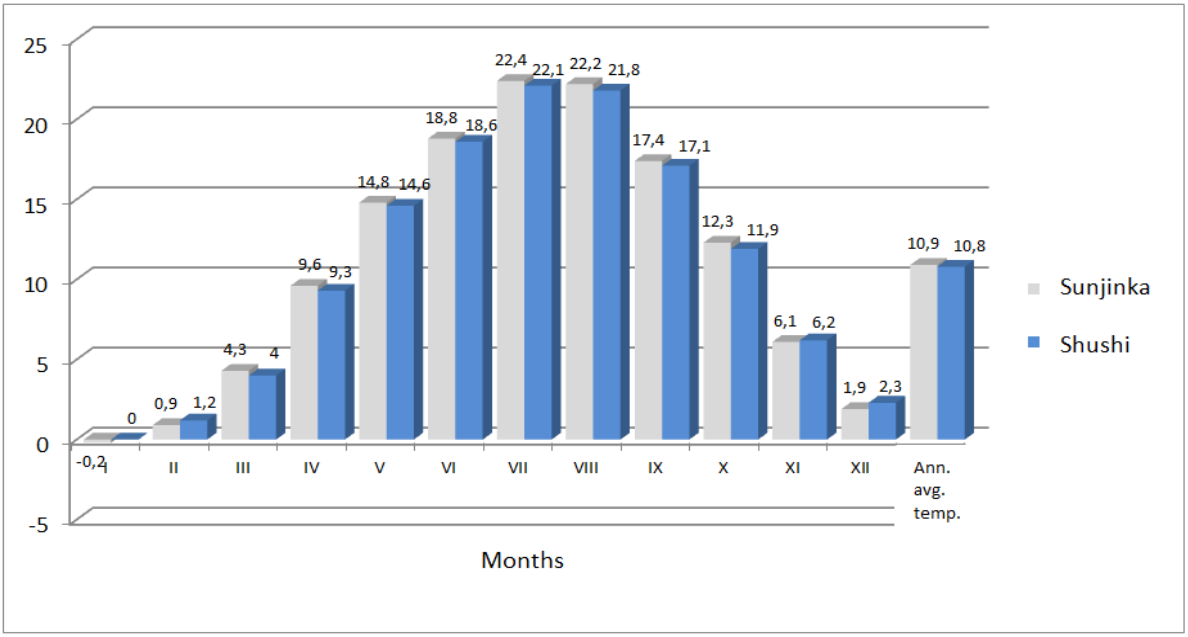

Fig. 1 Annual average and monthly average temperatures of the air (^{0}C) according to the data of Sunjinka and Shushi hydrometeorology station

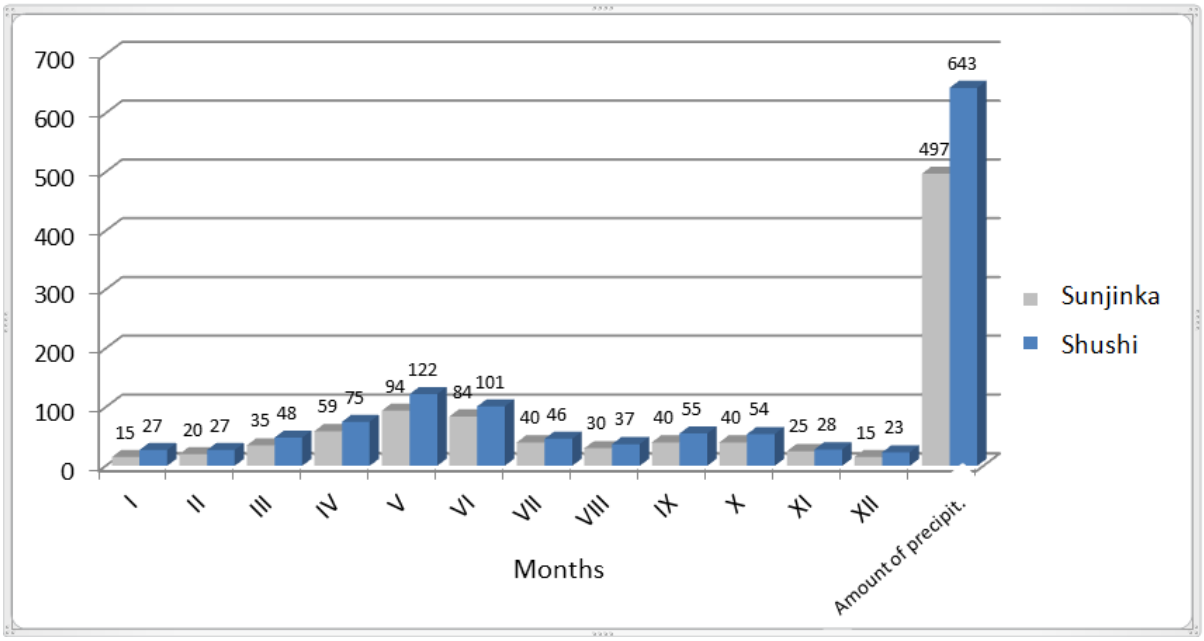

Fig. 2 Monthly and annual average rates of atmospheric precipitations (mm) according to the data of Sunjinka and Shushi hydrometeorology station

Conflict setting

In this zone the first of the most important factors in the life of the plants are the water and nutrients. In the case of balanced use of organic and raw fertilizers under irrigation high yields of field, crop and perennial plants are expected. However, both the moisture and the nutrients in the condition of drought are in direct dependence not only on climatic conditions but also on land relief which is one of the key factors of the land formation process and has great impact on the formation of its fertility.

The development of plant species, animals and micro-organisms and their impact on the processes of land cultivation are due to different climatic conditions. However, in the mountainous areas, including the studied areas, there is another not less important factor - the relief which is characterized by the outer form of the surface, size, altitude, slope and degree of slope etc.

In case of hard relief quite different land and climatic conditions are created compared to flat areas. If the precipitation is almost completely absorbed into the soil in flat areas, much of the precipitation on the mountain slopes is in the form of surface waters flow to the lower parts of the site. On different slopes (sunny and shady) no similar soil and climatic conditions are created, as the light and heat regimes are quite different. Evaporation on the sunny slopes is more intensive than on the shady ones. This phenomenon has its impact on the intensity of creation of vegetation biomass, the intensity of decomposition of its dead residues and hence the direction and depth of soil formation. In the same amount of rainfall the shady slopes are more humid, vegetation is more lush, more fertile soils are formed and soil erosion processes are relatively weaker than those on sunny slopes.

Relief is important not only for the clarification of the processes of soil formation but also for the agricultural characterization of the area. The productivity of agricultural vehicles and transport, the system of used machinery, the nature of the anti-erosion measures during agricultural work etc. are directly dependent on the relief [4].

Besides the vital factors of life, weeds, pests and diseases which are spread in the fields and gardens have significant impact on crop yields and quality indicators of the products.

The purpose of our research is to implement the geodesic surveys which reflect the relief elements of forest brown carbonate gravel soil and forest brown clay soil in different climatic zones of Askeran region conditioned by the diversity of geographic relief of the Republic of Artsakh (132 and 137 ha), to give the agrochemical characteristics of those regions through laboratory research which will be the basis for developing and implementing a scientifically justified fertilizing system.

The geodesic survey of 131 hectare land was done by 1:1000 scale the coordinates of the point in the middle of the land in Arm WGS system Y=8648497,118, X=4423654,597, H=731,330, the decline of axis 0,5 m, height system Baltic 1977. To give the agrochemical description of the soil the area was divided into 10 and 8 hectare sections from south to north from each of which 20 samples were taken. These 20 samples were mixed with each other and as a result 20 and 13 average samples were obtained which were subjected to chemical study.

The weediness of the fields was determined by eyesight and 4 grade column of A. I. Maltsev. The degree of infected plants and pests was determined by 5 and 6 grade column respectively [5].

Taking into account the fact that the second important branch of agriculture in this zone is considered livestock breeding, we have identified the causes of low livestock production, the varieties of illnesses preventing the development of livestock based on surveys, statistical rates and scientific literature and we have also found out that it is impossible to imagine the further development of livestock without preventive struggle against them and scientific treatment of these diseases.

Research results

The research showed that the primary study of the survey in one area was 131 hectares and in the second it was 171 ha. 132 ha and 171 ha soil area hectares were factually surveyed. The first area of the investigation is at an altitude of 705,81 meters above sea level and the second is at 842 m (the lowest point is 671,38 meters, the maximum is 751,51 meters). Relief in the first area is a wavy area that turns into mountainous in the northern part in the second.

The total length of the boundaries of the territory is 9270 m, from which 2500 m stretches along Stepanakert - Drmbon highway. The maximum length of the area is 2700 m to the south from the east, the largest from the east to the west is 670 m and the narrowest place is 440 m.

In the second area the total length is 6639,7 m from which 480,6 m stretches along Stepanakert – Hadrut highway.

The maximum length of the area is 2660m from north to south, from east to west it is 918 m in the widest and the narrowest is 600m. 16, 8 ha forest is involved into this area. From 173 ha of land under study 86 is located in Aknaghbyur and 87 ha in Sarushen soil balances.

The results of the agrochemical analysis of 132 and 173 hectares of land, according to the samples given in Table 1 and 2, show that the mechanical composition of the first soil changes from clay sandy heavy into medium clay sandy, PH is weak alkaline (7,03-7,3), CaCO3 is absent, the content of water solvent salts varies between 0,025 and 0,043% and the second soil area which was formed in more humid and in lower temperature has mechanical composition of mainly medium sandy, PH- is from weak acid to weak alkaline (6,7-8,5), $CaCo_3$ is 0,95-19,1 %, salt solvents is between 0,031-0,059%. The diagrams in Fig. 3, 4 and 5 show that the plot formed in the conditions of different relief conditions and climatic zones has various chemical composition.

The data on humus content in the soil samples shown in Fig. 3 show that in relatively hot and dry climatic conditions humus content in wavy lowland is between 2,51-5,09%. In 38,4% of soil samples humus content was 3,76-3,82% in 30,8% 5,04-5,09% in 30,8% and in 30,8% it comprised 2,51-2,56%.

In the second plot (173 ha) which was formed in more humid and mild temperature conditions of the mountainous rough relief, the following data were recorded in these same indices: in 55% of soil samples humus content was 1,81-2,91%, in 30% - from 3,41 to 3,97% in 15% from 4,01 to 4,21%. This is the result of wavy and rough mountain relief in which soil erosion processes have different speed and directions.

According to the diagram of Fig. 4, the nitrogen available to plants varies from 1,26 to 2,56 mg in 100 g soil, P_2O_5 from 0,87-1,44mg, K_2O from 38,83 -42,86 or 132 hectare in average contains 1,91 mg nitrogen in 100 g soil, 1,15 mg P_2O_5 and 38,34 mg of 1 K_2O in 100 g soil.

Meanwhile, the samples containing 1,26-1,92 mg in this area comprised 69,2% and in 2,53-2,56 -30,8%. In 53,8% of samples containing phosphorus its amount was about 1,11-1,44 mg and in

46,2 % it is 0,78-1,10 mg P_2O_5 was in 100 g of soil. The content of calcium in 100 g of soil was high between 33,83-34,97 mg and in 37,60-42,86 mg sample containing calcium it was 46,2%.

In the second (173 ha) soil which was more proper with nitrogen in 100 g soil containing 4,8-7,15 mg nitrogen, the samples comprised 65% and 2,78-3,5 % containers 35%. In 55 % of samples of P_2O_5 it fluctuated between 0,65-1,0 and in 45% it reached 1,01-3,2 mg, in 50% of samples containing K_2O it fluctuated between 26,60-32,68 and in 50% -in 36,75-59,75 mg.

Meanwhile, according to the limiting numbers adopted in the RA, the soil is considered weak in nitrogen when the nitrogen in the 100 g soil is 8 mg, medium soils 8-12 mg and in strong soils 12 mg or more. According to Mashingin, the soils are considered weak in phosphorus when phosphorus is available in 100 grams of soil up to 3 mg in medium, 3-6 mg and 6 mg or more in strong soils. According to the classification adopted in Armenia soils are considered to be weak in calcium when available calcium comprises 18 mg in 100 g, if 18-36 mg, then the soil is considered to be medium supported and in case of 36 and more it is considered to be well supported.

Based on the above mentioned measures, we can say that both lands under study are considered to be poor in nitrogen, very poor in phosphorus dynamic compounds and rich in potassium. Therefore, a special place should be given to the application of nitro-phosphorous and organic fertilizers for any crop in any crop rotation for any fertilization system and to the use of potassium fertilizers only under certain crops (potatoes, flax, rootstocks) which are fertilized by potassium.

The data on the contents of Ca^{2+} and MG $^{2+}$ ions are brought in diagram in Fig. 5 and show that in 132 hectare area the content of Ca^{2+} ion fluctuates between 0,29 – 0,70 mg/ equiv. in 100g soil %, and Mg^{+2} ion is 0,15-0,83 mg/ equiv. For 173 hectare soil the rates of the same index are the following: Ca2+ ion content is 0,29-0,90, Mg2+ -is 0,01-0,67 mg/equiv. in 100 g of soil.

Thus, in the first soil land 0,29-0,49 mg/equiv. in 100g soil % making the number of samples containing Ca2+ ions was 69,2%, and 0,5-0,7 mg/equiv. in 100 g soil % making is 30.8%. In the second area the rates of the same index comprised 0,29-0,50 mg/equiv. in 100 g soil % was 55 %, 0,51-0,90 mg/equiv. in 100 g. soil is 45%.

In the case of Mg2+ ion the 53.8 % of the samples the content of the ions fluctuated from 0,15 - 0,17 mg/equiv. in 100 g, in 46,2% it is 0,32-0,38 g/equiv. in 100 g soil.

In the second area in 55% it is 0,01-0,30, in 45% it is 0,32-0,67 g/equiv. in 100 g soil.
Both cases record the content of Ca2+ ions is higher which is positive from the point of view of preserving the stability and formation of soil aggregates [6].

Research on the species composition and prevalence of weed in vegetable crop diseases and pests has revealed that many weed species, which are root parasites, are highly harmful to tobacco, sunflower and cabbage. Stem parasites are spread from various types of weed mint which are parasitic on alfalfa, potato, cigarettes, currants, raspberries, beetroots, fruit trees and shrubs. Non-parasitic weeds are subdivided into the annuals and perennials. Among annuals wild oats, goosefoot, joint weed, false carrot, amaranth, palm grass, purslane, bitter thorn, garbage plant, boomrape etc. and from perennials we have banewort, plantain, dock, dandelion, sage-brush, field gem, lesser bindweed, couch grass, weed sorghum etc. are common here [7].

Table 1

The results of agrochemical analyses of 132 hectare land area according to soil samples

Name of soil sample	Mechanical composition	Humus %	PH	$CaCO_3$	Water solvent salts content %	Water survey, mg/eq in 100 soil %		The available nutrients in plants, mg 100 g soils		
						Ca^{2+}	Mg^{2+}	N	P_2O_5	K_2O
1	2	3	4	5	6	7	8	9	10	11
132-1	Clay sand heavy	5,06	7,03	no	0,034	0,5	0,16	2,54	1,33	37,6

1	2	3	4	5	6	7	8	9	10	11
132-2	Clay sand medium	3,78	7,7	no	0,038	0,4	0,33	1,9	1,10	40,61
132-3	Clay sand heavy	2,53	7,4	no	0,033	0,51	0,17	1,27	1,00	33,84
132-4	Clay sand medium	5,07	7,4	no	0,03	0,3	0,15	2,55	1,44	34,96
132-5	Clay sand medium	3,80	7,2	no	0,025	0,29	0,16	1,91	1,11	33,83
132-6	Clay sand medium	2,54	7,2	no	0,029	0,49	0,32	1,28	0,78	41,36
132-7	Clay sand light	2,51	7,5	no	0,043	0,41	0,33	1,26	1,43	38,35
132-8	Clay sand medium	3,76	7,7	no	0,042	0,39	0,17	1,89	1,22	42,86
132-9	Clay sand medium	5,04	7,4	no	0,028	0,31	0,17	2,53	1,09	34,22
132-10	Clay sand heavy	5,09	7,2	no	0,022	0,4	0,50	2,56	1,08	34,21
132-11	Clay sand heavy	3,82	7,3	no	0,031	0,5	0,15	1,92	1,12	34,59
132-12	Clay sand heavy	3,78	7,0	no	0,032	0,41	0,83	1,9	1,01	40,6
132-13	Clay sand medium	2,56	7,3	no	0,038	0,7	0,32	1,29	1,23	34,97

Table 2

The results of agrochemical analyses of 173 hectare land area according to soil samples

Name of soil sample	**Mechanical composition**	**Humus %**	**PH**	**$CaCO_3$**	**Water solvent salts content %**	**Water survey, mg/eq in 100 soil %**		**The available nutrients in plants, mg 100 g soils**		
						Ca^{2+}	Mg^{2+}	N	$P_2 0_5$	K_2O
1	2	3	4	5	6	7	8	9	10	11
173-1	Clay sand heavy	7,3	2,71	15,3	0,048	0,31	0,3	4,83	1,01	30,8
173-2	Clay sand medium	7,3	2,91	16,4	0,035	0,52	0,01	7,15	1,83	38,16
173-3	Clay sand heavy	8,5	2,03	18,8	0,046	0,29	0,65	5,3	0,79	26,6
173-4	Clay sand medium	6,8	3,41	6,5	0,059	0,5	0,04	5,5	1,51	38,74
173-5	Clay sand medium	7,2	2,52	17,7	0,039	0,47	0,34	5,31	0,84	28,28
173-6	Clay sand medium	6,7	4,01	9,85	0,046	0,89	0,08	6,83	1,17	39,02
173-7	Clay sand light	6,8	2,8	13,2	0,041	0,6	0,05	5,29	0,85	26,88
173-8	Clay sand medium	8,1	2,65	17	0,045	0,39	0,48	2,83	0,67	30,81
173-9	Clay sand medium	7	3,78	1,5	0,031	0,53	0,06	2,8	0,65	31,24

1	2	3	4	5	6	7	8	9	10	11
173-10	Clay sand heavy	7,2	3,97	10,7	0,034	0,55	0,02	3,5	1,07	44,15
173-11	Clay sand heavy	7,6	2,88	17,2	0,045	0,5	0,5	5,28	3,2	56,18
173-12	Clay sand heavy	6,7	2,47	18,6	0,035	0,4	0,51	5,52	2,16	34,71
173-13	Clay sand medium	8,3	1,81	19,1	0,039	0,51	0,66	3,48	1,5	59,75

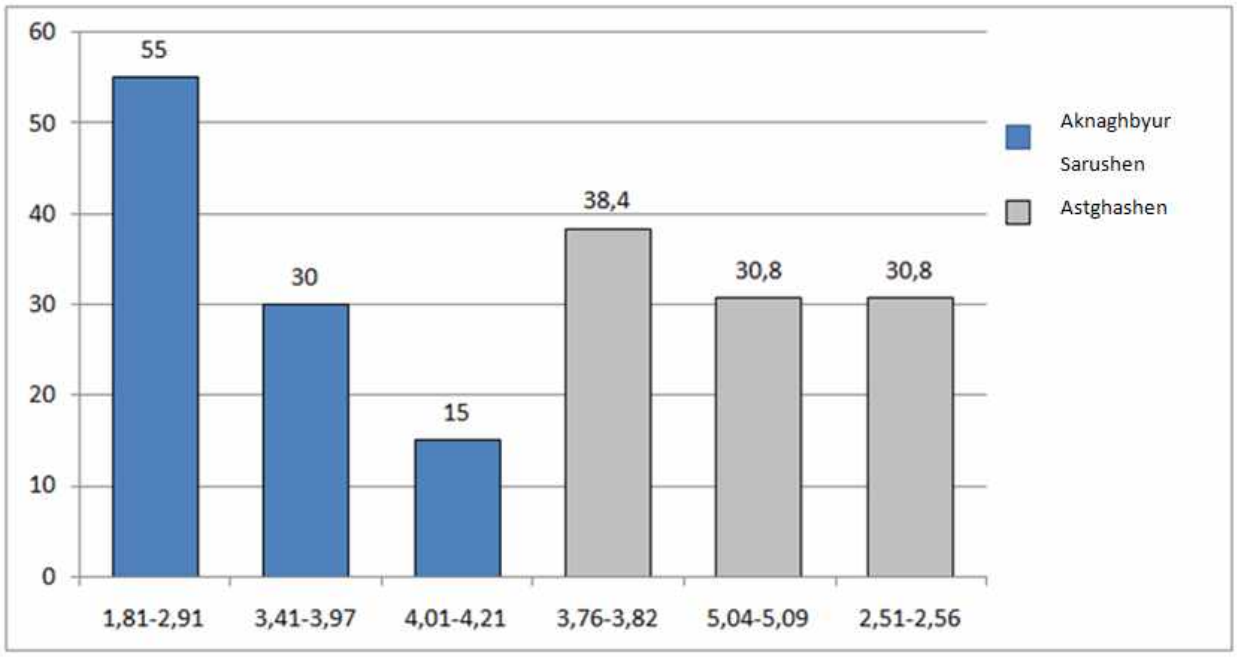

Fig. 3 Humus content in the soil samples (%)

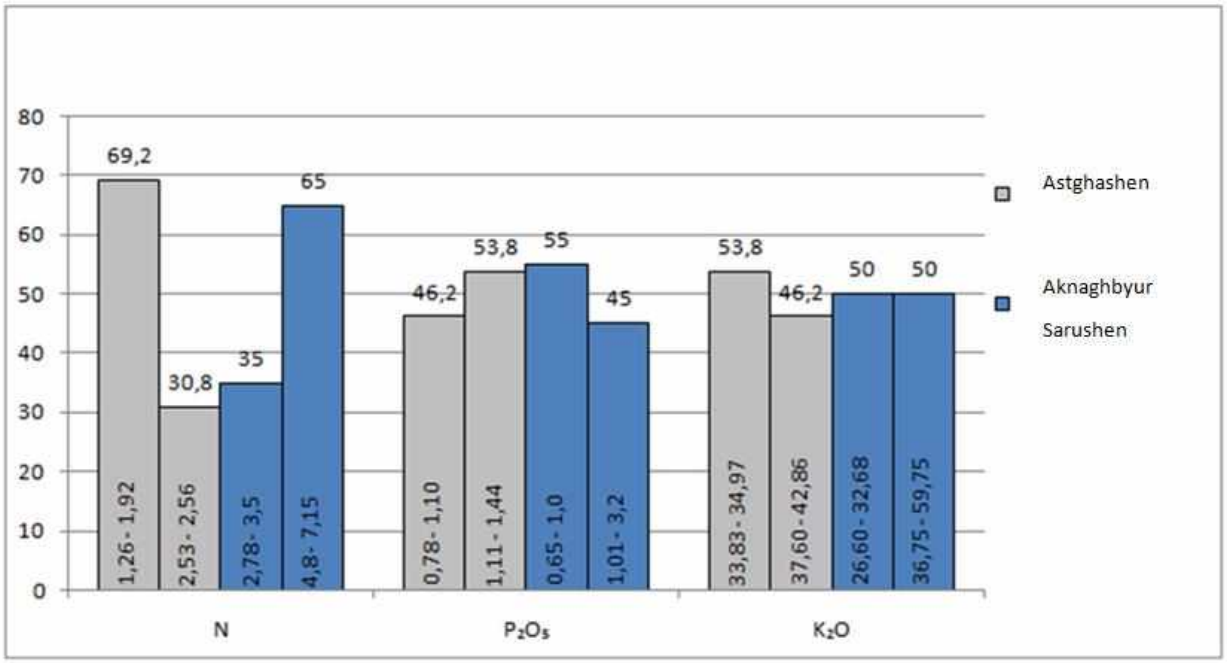

Fig. 4 The nutrients available to plants (mg) in 100g soil

Among the common diseases threatening the cereals in the region are cereal smut, stone smut, rusts, flour powder, mycosphaerella, corn smut and corn rust.

Phyto furosis is one of the common diseases of potato which is expressed on the leaves and blisters. In the region cereals are damaging by the beetle, grain turtle, cereal aphids, Hensen flies, Swedish flies, corn butterflies, corn moths, beetle worms, locusts, grigs, field mice etc.

Potatoes are damaged by colorado beetle, worms, ordinary mole cricket and so on. The most common vegetable diseases are black legs, fruit peak rotting, cereal smut, stone smut, rusts, flour powder, mycosphaerella, corn smut, corn rust and among viral and phytoplasmic diseases mosaics, stolburs etc. are common.

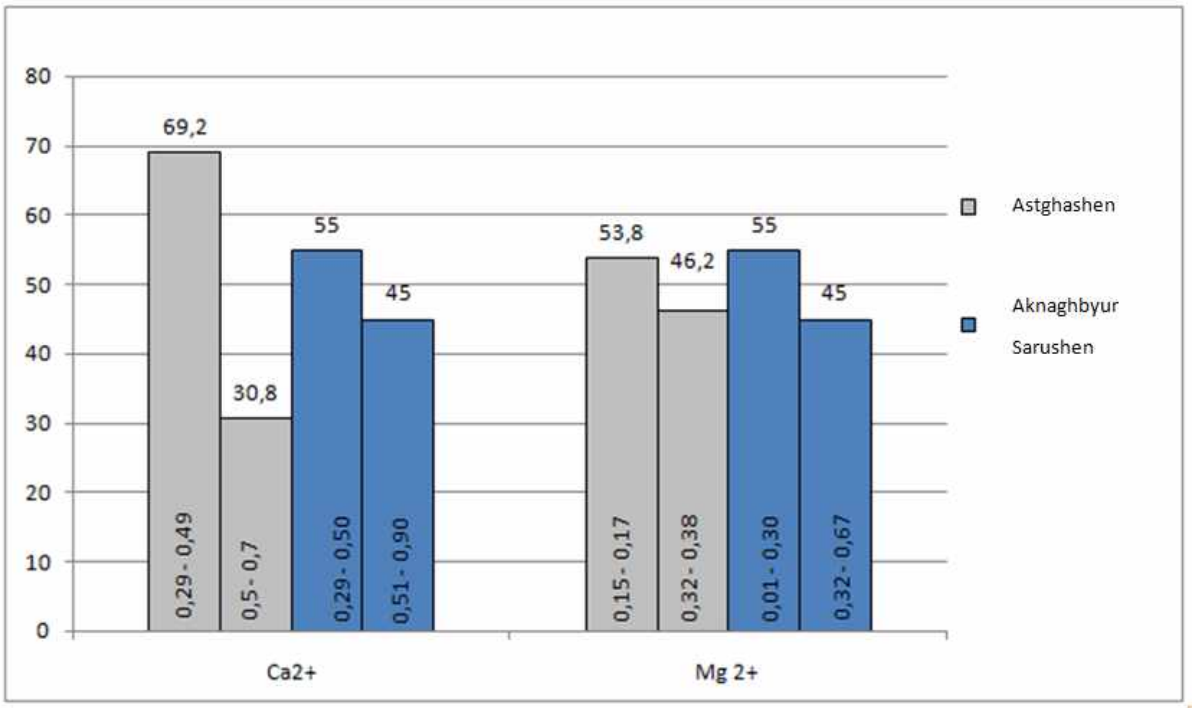

Fig. 5 In water survey, mg/equiv. in 100 g soil (%)

The vegetable crops in the region are largely damaged by the ordinary mole cricket, Colorado Beetle, soil moths, cabbage white butterfly and aphids.

The study showed that mange of pomes, moniliose, erysiphaceae, black cancer, drupe moniliose, gummosis, porosity, leaf curliness etc. are among the common diseases that threaten fertility in the region.

Among the fruit pests are totrix moths, flower moths, aphids, moths, billbags etc.

In the region surveyed grapes are infected with mildium and oidium and pests are mainly grape moths [8, 9].

Organization of feedstock base in creating conditions for the proper breeding of the livestock is one of the most urgent issues. The creation of a warehouse for natural herbs is particularly important which, besides being the most important resource for the organization of fodder is also of utmost importance for the overall biodiversity. Despite the fact that the total number of animals has declined considerably over the last 25-30 years in new economic conditions, however, in case of irregular and improper use and the lack of necessary care and improvement measures this resource has been endangered leading to a sharp rise of degradation, decrease of the rate of spatial growth of the plants and level of fertility, leveling of stony and foliage [10]. The yield in the pastures is only 35-40 c/ha of green mass and in the grasslands which are at the foot of northern slopes, the yield fluctuates within the limits of dry grass 10-15 c/ha. The number of livestock in pastures varies between 150-200 conditional headings. One conventional head gets 2,5-3 hectares of pastures, which, even under such

low reproduction, are sufficient to provide high levels of productivity. However, livestock productivity indicators in the region remain low, due to inefficient use of natural habitat and lack of adequate quantities and quality of nutrition for the feeding rack.

The breed of cattle here is the Caucasian gray which has lost its tough tribal qualities as a result of many years of irregular and mixed crossing and gives low yielding (800-900 l) of milk. The main breed of sheep is the Karabakh breed, which, under conditions of inadequate feeding and poor behavior often does not express its breed potential. Although pig breed is openly forbidden by law, the region continues this unacceptable process.

Parasitic, infectious and non infectious diseases also hinder the development of livestock breeding.

The diseases registered in the region by 2018 are common to both Artsakh and the Republic of Armenia.

The region registered heamitosis diseases like fascioliasis, dichrocyeliosis, birds prosthogonimus, Monieziosis, pigs finoze, echinococcus, sheep gid, sheep dictycaulosis, ascariasis of pigs, birds heterocigosis, among protozoan diseases piroplasmosis and theileriosis of cattle.

Infectious diseases registered in the region include brucellosis, gastric tuberculosis, pasteurosis, anthrax, diarrhea, bradzot, tuberculosis, bird plague, pig bladder, African pig plaque, rabies etc.

Among the non infectious diseases registered are sharp edema of the cutter, cramps, dyspepsia and clogging [11].

Conclusions and suggestions

Consequently, studying the relief conditions of 132 and 173 hectare land areas in different climatic zones and giving their agricultural characteristics, we came to the following conclusion:

1) Implementation of the efforts of minimum development will fail if it is not secured or insufficiently provided by any of these links (crop rotation, fertilization, struggle against weed pests and diseases, machines, seeding).

2) Replacement of the traditional land-based desertification system with a new system of minimal cultivation as the depth of soil cultivation, the intensification of the bedrock and the increase in the number of operations in the conditions of traditional farming contribute to the occurrence of such negative phenomena such as destruction of soil aggregates, acceleration of decomposition rates, dust removal of the treated layer, loss of moisture, acceleration of erosion, increase in labor and material costs etc.

3) Development of the proposed minimal processing system whose main and decisive linkage is the development of the soil without the need to rely on the principle of reducing the depth of processing and decreasing the number of operations which is free from the above mentioned negative phenomena.

4) For many years in the case of not systematized fertilizing conditions the humus supplies of the organic part of the soil decreased and one of the main laws of agriculture as return law was violated.

Taking into account the above mentioned we suggest:

1. To replace the system of traditional soil cultivation with the minimal cultivation which is widespread in many countries of the world.

2. The use of perennial papilionaceous herbs is a powerful and irreplaceable agro technical measure especially in this area which simultaneously solves a number of problems, improves the agro-physical characteristics of the bedrock, reduces costs for fertilization and plant protection chemicals and prevention of the erosion process. Including the perennial herbs in the sowing process will also be a stimulus for the development of intensive livestock breeding.

It will also solve a very important ecological issue which is the prevention of soil erosion and abolition of the threat of desertification.

3. When developing a scientifically-based fertilization system and determining the amount of mineral fertilizers under the crop will be guided by the best method of determining the quantities that contribute to maintaining and increasing soil fertility during crop rotation and providing superior crop yield and maximum benefit [12].

We suggest the following in the field of animal breeding:

a) Long term mixed cross breeding and bad feeding led to the lost of best breeding peculiarities of the cattle and low productivity.

b) Due to ineffective use of pastures and cultivation of feed plants the cattle is not fed properly during pasture and nursery period.

c) Though pig breeding had been continuously considered one of the profitable branches of animal breeding during the mentioned period, however, for the risk of infection of African pig plaque the number of pigs decreased significantly.

Based on the created situation we suggest:

1. In order to provide complete livestock feeding in the pastureland to perform cultural-technical improvement of natural pastures, to water the pastures and to feed the cattle in lawns. To establish a sustainable feeding base for the nursery period including feeding crops into the planting. To provide condensed feeds for all kinds of animals at a rate of 20-30%.
2. To gradually replace the existing hybrid cattle of low productivity with well bred cattle of high productivity which are bred in Askeran breeding station.
3. To breed pigs exceptionally in close and yard conditions.
4. To develop and apply corresponding preventive and curing activities against infectious risky diseases which had recently been observed.

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ՈՒԴԴ - 635:631.51

ԱՍԿԵՐԱՆԻ ՇՐՋԱՆԻ ՏԱՐԲԵՐ ՀՈՂԱԿԼԻՄԱՅԱԿԱՆ ԳՈՏԻՆԵՐՈՒՄ ԳՏՆՎՈՂ ՏԱՐԱԾՔՆԵՐԻ ԳՅՈՒՂԱՏՆՏԵՍԱԿԱՆ ԲՆՈՒԹԱԳԻՐԸ

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Հողերի գյուղատնտեսական բնութագիրն ու գոտիավորումը կարևոր նշանակություն ունեն դրանց բոնիտման, տնտեսական գնահատման և, որ չափազանց կարևոր է, էկոլոգիական ներկայիս պայմաններում հողերի անապատացման դեմ պայքարի միջոցառումների մշակման և իրացման գործում:

Հետազոտության նպատակն է Արցախի Հանրապետության աշխարհագրական ռելիեֆի բազմազանությամբ պայմանավորված՝ Ասկերանի շրջանի տարբեր հողակլիմայական գոտիներում գտնվող անտառային դարչնագույն կարբոնատային խճաքարային և անտառային դարչնագույն կրազերծված կավայնացված հողամասերում (համապատասխանաբար 135 և 173 հա) գոտիավորման նպատակով տալ այդ տարածքների գյուղատնտեսական բնութագիրը, առաջարկել անապատացման դեմ տարվող միջոցառումների պլան: Արդյունքում պարզվել է, որ ուսումնասիրվող հողատարածքների ռելիեֆը բարդ ալիքավոր է, որը հատկապես Ակնաղբյուր-Սարուշեն տեղամասում դառնում է լեռնային:

Հողերը, ինչպես հումոսի, այնպես էլ բույսերին անհրաժեշտ սննդատարրերի (N;P) պարունկությամբ աղքատ են, ցանքատարածությունները վարակված են մակաբույծ և ոչ մակաբույծ սակավամյա և բազմամյա մոլախոտերով, բույսերի հիվանդություններով և վնասատուներով, երկրագործությունը վարվում է հիմնականում անջրդի պայմաններում, չեն կիրառվում ցանքաշրջանառություններ իրենց համապատասխան օղակներով, անասնաբուծությունը վարվում է էքստենսիվ եղանակով, որի պատճառով մշակաբույսերի բերքատվությունը և անասունների մթերատվությունը շարունակում է մնալ ցածր, կանխատեսվում է անապատացման վտանգ:

Բանալի բառեր. հումոսայնություն, սննդատարրեր, ռելիեֆ, բույսերի և կենդանիների հիվանդություններ, մոլախոտվածություն, գյուղատնտեսական բնութագիր, գոտիավորում:

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СЕЛЬСКОХОЗЯЙСТВЕННАЯ ХАРАКТЕРИСТИКА ТЕРРИТОРИЙ, НАХОДЯЩИХСЯ В РАЗНЫХ ЗЕМЕЛЬНО-КЛИМАТИЧЕСКИХ ЗОНАХ АСКЕРАНСКОГО РАЙОНА

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Сельскохозяйственная характеристика и зонирование земель имеют важное значение в деле их бонитации, экономической оценки и, что крайне важно, разработки и реализации мер по борьбе с опустыниванием земель в нынешних экологических условиях.

Цель исследования - дать сельскохозяйственную характеристику лесных коричневых карбонатных щебнистых и лесных коричневых глинистых участков (соответственно 135 и 173 га) в разных земледельческих зонах Аскеранского района с целью зонирования этих территорий, предложить план мероприятий против опустынивания. В результате исследования выяснилось, что рельеф изучаемых земельных участков -сложный волнистый, который особенно на участке Акнахбюр-Сарушен становится горным.

Изучаемые участки бедны как гумусом, так и необходимыми для растений питательными веществами (N;P), посевные территории заражены паразитными и непаразитными малолетними и многолетними сорняками, болезнями растений и вредителями, земледелие ведется в основном в неорошаемых условиях, не применяются севообороты в соответствующих звеньях, животноводство ведется экстенсивным способом. В результате этого урожайность культур и продуктивность скота продолжают оставаться низкими, прогнозируется опасность опустынивания.

Ключевые слова: гумус, питательные вещества, рельеф, болезни растений и животных, сорняки, сельскохозяйственная характеристика, зонирование.

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