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Usage of other ecological parameters in order to increase soil fertility

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Abstract
The article informs the efficient usage of other ecological parameters in order to increase soil fertility in the Nakhchivan Autonomous Republic. In the maintenance of the work the other ecological parameters (become salty, saline, erosion, height waist bands etc.) in order to increase soil are fertility in the condition of the autonomous republic had been taught and analyzed. As a result on the environmental problems that influence the soil formation process in the autonomous republic on the basis of parameters that we gain special value scales system had been compiled according to the other sign degrees of soils.

Keywords: geographic factors, eco-geography, soil, soils valuation, erosion, bonitos, ecological value soils

1. Introduction
Nakhchivan Autonomous Republic is one of basic agrarian-industry regions of the Azerbaijan Republic. Ecological problems which have happened on a world scale lately influence to the territory of the autonomous republic. Areas of fit land are undergone here to the agriculture to degradation process in the different degrees because the most part of the region had the upland and continental climate.
But ground area this figure one hectare organizes amounts many sowings in the country scale in the circumstance case, autonomous republic per capita from 0.3 hectare. And it at the same time with ecological problems in the territory, it creates conditions for socio-economic tension. Ecological balance is required to use from soil reserves in the territory efficiently with scientific bases for to guard and the dqeveloping the agriculture in the level of modern demands, first of all of the Nakhchivan Autonomous Republic. For this purpose it is very important and actual always to conducting investigation for increasing soil fertility in autonomous republic [1].
Ultimate goal of the investigation that we carried out is consist of learning using efficiently of some ecological parameters in the condition of autonomous republic for raising soil fertility. A few raise a questioned planned for the achieving this object and it has been solved. Soil used under cultural and natural plants type and half type have been taken darted out as like investigation object in autonomous republic [7].

2. Materials and Methods
Materials of literature about the theme, field gathered and methods of the work have been prepared. When the theme is working in foreign countries also Azerbaijan and in Nakhchivan Autonomous Republic conducting soil-plant investigation of scientists is used work practice.

3. Experimental Part
One of equal cardinal problems is gathering of the field materials with literature materials in the carrying out of the theme.

To this purpose expeditions to the territory on different directions have been organized for learning of the soil environment of the autonomous republic.
In 2004-2015 it has been paid attention to process of degradation which has happened in the environment factors of the territory and these areas. Soil-plant examples taken from specified objects and productivity of the cultural and natural plants spreading in surroundings have been paid attention to ecological parameter (becoming salty, saline, erosion granulometric composition, pH, water to aggregates, reserves of relief, climate, water and so on) of the territory learn, especially [4, 6, 9].

4. Analysis and Discussion
Correction coefficients is not only eco-geographical in the valuing in the territory according some property of the soil and is necessary to value ecological parameter (becoming salty, saline, erosion, granulometric composition, pH, water stable aggregates, high altitude belt) according to the fertility degree them.
In G. Sh. Mammadov investigations and when authors valued in the previous former investigations according the soil and fertility degree of ecological parameter of the, as it was marked, it has been used him from conception («high», «low», «bad», «good» and so on) the quality expressed. This scales define does the relative the quality of being valuable of the soil on special criteria.
Let us especially the valuing according quality made on the basis of investigations that we carried out in the autonomous republic according to degree of the some signs of the soil pay attention to the scale system. It is clear from the analysis of the indicators parameters being valuing under cultured plants according to quality of the elements of soil parameters and environment has increased the usage from it.
For this purpose using the G. Sh. Mammadov methods influencing ecological parameter (environment factors) to the soil process in the investigation object we compiled special value scale system according to the basis of indicators (Table).

Table 1: Especially the valuing according to degree of the some signs of the soil scales system

According to the degree of the becoming salinity	
According to the dry qradiyasiya on remainder (for V.R. Volobuyev)	**The mark**
< 0,10-unsalted	Very good
0,10-0,25-low saline	Good
0,25-0,50-slightly saline	Middle
0,50-1,00-middle saline	Down
1,00-2,00-strong saline	Unsuitable condition
2,00-3,00-sery strong saline	Unsuitable condition
> 3,00-salty	Unsuitable condition
According to the granulometric compositions	
Granulometric compositions	**The mark**
Clayey	Down
Silty clay	Middle
Light loomy	Good
Middle loomy	Very good
Sandy loam	Middle
Sandy	Down
According to the PH importance	
PH	**The mark**
<3,0	Unsuitable
3-4	Down
4-5	Middle
5-6	Good
6-7	Very good
7-8	Good
8-9	Middle
9-10	Down
>10	Unsuitable
According to the quanity of the water stable aggregates	
Quanity aggregates, according to R.H. Mammadov	**The mark**
>80	Very good
60-80	Good
40-60	Middle
20-40	Weak
<20	Unsuitable
Erosion according to its degree	
Erosion degree	**The mark**
Not eroded	Very good
Weak eroded	Good
Middle eroded	Middle
Strong eroded	Down
Very strong eroded	Unsuitable
According to the high altitude belt The waist height	
Belts, with meter	**The mark**
High upland >3500	Unsuitable
High upland 3000-3500	Very good
High upland 2500-3000	Down
Middle upland 2000-2500	Middle
Middle upland 1500-2000	Good
Low upland 1000-1500	Good
Foothills 800-1000	Very good
Plains 600-800	The best
Soil reclamation degree according to A.S.Ayyubov	
Reclamation degree (Rd)	**The mark**
>0,45	Does not require irrigation - very good
0,35-0,45	Halfhumid- the best
0,25-0,35	Halfarid- good
0,15-0,25	Arid-satisfactory

0,10-0,15		Halfdry- Unsuitable
<0,10		Dry-very unsuitable
Coefficient of humidity (according to İvanov-Vısotski)		
CH		**The mark**
>1,33		Very humid- satisfactory
1,33-1,00		Humid- very good
1,00-0,55		Halfhumid- the best
0,55-0,33		Halfdry- good
0,33-0,12		Dry- satisfactory
<0,12		Very dry- unsuitable
Continental		
CC (accorting to Shashkoy)		**The mark**
<130 weak continental		Very high
130-150 moderate continental		Very good
150-160 middle continental		Good
160-170 middle continental		Middle
170-200 middle continental		Satisfactory
>200 continental		Unsuitable
Bioclmateiqlim potential (according to A.S. Ayyubov)		
BCP	**Bonitet points**	**According to the Bonitet points mark**
<0,08	24	Very down
0,08-1,2	24-35	Down
1,2-1,6	35-47	Middle
1,6-2,2	47-65	Little good
2,2-2,8	65-82	Good
2,8-3,4	82-100	Very good
>3,4	100	High
According to rainfalls		
Rainfalls, mm		**The mark**
<100		Halfdesert-satisfactory
100-300		Dry field-good
300-500		Field- very good
500-700		Forest-the best
700-1000		Alpestrine and alps-good
>1000		Humid forests and humid subtropics- satisfactory
Effective temperature, ET> according to 10^0C		
ET> 10^0C	**Climate belt**	**The mark**
<2000	Moderate cold	satisfactory
2000-3000	cool	Middle
3000-4000	Moderate hot	Good
4000-5000	Hot	Very good
>5000	Very hot	the best
Coefficient of moisture (according to A.S. Ayyubov)		
CM		**The mark**
>0,95		Very high productivity
0,80-0,95		High productivity
0,65-0,80		Middle high productivity
0,35-0,65		Weak middle productivity
0,15-0,35		Weak productivity
<0,15		Very weak productivity
According to the classification of soil points		
Classification of soil aviability		**The mark**
>81		Very good
80-61		Good
60-41		Middle
40-21		Down
<20		Unsuitable

The soils bonitet point according to the fertilizer doze) A.N. Gulmammadov and so on.)			
Zones and plants	**Fertilizer doze**		
	N	**P**	**K**
The grain			
Plain	60	40-60	40-60
Middle mountain	70	50-70	50-70
Grape			
Plain	60-120	70-90	70-90
Middle mountain	120	90	90
Fodder crops			
Plain	30-50	60-90	30-50
Middle mountain	30-60	50-120	30-60
Vegetable plants			
Plain	90-180	90-150	60-90
Middle mountain	80-160	80-140	50-80

The separate ecological parameters of soils (becoming salty, saline, erosion, granule metric composition, pH, water stable aggregates, high altitude belt) according to building quality scales used under cultured plants of wider soil areas have been taken.

5. Results

- Valuing especially according to the degree of separate signs of ecological parameters of soils and it is very importance according to their quality comparison in the plan of the soil-reclamation work in the condition of autonomous republic.
- Using from the special valuing scales according to the degree of separate signs of ecological parameters in the soil environment and we realized them. Addition from this using also, environment elements and scales of soil parameters and sometimes are makes analysis ecological of the territory.
- Valuing according quality scales of soils ecological parameters in autonomous republic and it gives direction solving the number of problems carrying out in the soil investigations. Here also learning the environment of different soils and it simplifies defining of their types.
- Addition from these notes working classification of the soils in the territory and using quality scales of ecological parameters we get more accurate and objective scientific results.

6. References

1. Babayev SY. Geography of the Nakhchivan Autonomous Republic. Baku: Science, (In Azerbaijan). 1999, 226.
2. Hajıyev SA. Eco-geography condition of the soil of Nakhchivan Autonomous Republic. Baku: MBM, (In Azerbaijan), 2009, 108.
3. Hajıyev SA. Agro ecological of the soil in the Nakhchivan Autonomous Republic. Methodical material. Baku: Science, (In Azerbaijan), 2000, 40.
4. Mammadov G, Sh Soil. Reform in Azerbaijan. Baku: Science, (In Azerbaijan), 2002, 411.
5. Mammadov G, Sh Jafarov, Bonitirova AB. of the soil. Baku: Science, (In Azerbaijan), 1997, 210.
6. Shafibayov AB. Method's analysis of the soil and plants. Baku: Azerbaijan Publishing House, (In Azerbaijan). 1964, 204.
7. Aliyev GA, Zeynalov AK. The soils of Nakhchivan ASSR. Baku: Azerbaijan Publishing House, (In Azerbaijan), 1998, 235.