



Methods of Using Sederate Crops to Improve Soil Composition

Boriyeva Dilorom Israilovna

Teacher of the Department of Biotechnology and Food Safety of BuxDU

Islamova Rayhona

Student of the Department of Biotechnology and Food Safety of BuxDU

Abstract

Methods of using sederate crops to improve soil composition were studied. As a siderate, the highest biomass yield was achieved when sorghum, peas, rapeseed and barley were planted in fields free from grain in summer. The use of siderate crops in summer and autumn as siderate creates a basis for obtaining a high and high-quality harvest of cotton.

Keywords: soil, planting dates, sideration, siderate crops.

One of the main considerations that often play a dominant role in the construction of a garden and the destruction of a garden is the type of soil. The ability to grow certain crops, the need for certain fertilizers, watering and grazing periods will depend on the soil on your site. Yeah yeah! All of these can have significant differences and can be beneficial or harmful if you don't know what kind of soil you are working with.

Clay soil is very easy to identify: after digging, it has a large crumbly dense structure, it sticks greasy to the feet in the rain, absorbs water poorly and sticks together easily. If a long sausage is wrapped from several pieces of soil (wet), it can be hung on a ring, while it does not crumble and crack.

Due to its high density, such soil is considered heavy. It warms up slowly, is poorly ventilated, has a high water absorption coefficient. Therefore, it is very problematic to grow crops for it. However, clay soil can be fertile if properly cultivated.

All the qualities characteristic of sandy soils are their pluses and minuses. Such soils heat up quickly, aerate well, are easy to process, but at the same time they cool down quickly, dry out quickly, and they hold mineral zones weakly in the root zone (nutrients are washed into the deep layers of the soil with water). As a result, they are poor in the presence of beneficial microflora and are unsuitable for growing any crops.

To increase the productivity of such soils, it is necessary to constantly improve their sealing and binding properties. Regular application of peat, compost, humus, clay or drilling flour (up to two buckets per 1 m²), use of green manure (buried in the soil), high-quality mulching after 3-4 years gives a good result.

In terms of mechanical composition, sandy loam soil is another option for light soils. In terms of its qualities, it is similar to sandy soils, but it contains a slightly higher percentage of clay mixtures, that is, it has the ability to hold mineral and organic substances well, it not only heats up quickly, but also retains heat for a long time. it is less moisture permeable and dries more slowly, ventilates well and is easy to recycle. You can determine this by squeezing a handful of wet soil into a sausage or a piece: if it forms, but does not hold its shape well, then you have sandy soil.



Moist loam soil is the most suitable soil type for growing horticultural crops. It is easy to process, contains a large percentage of nutrients, has high air and water permeability, is not only able to retain moisture, but also distributes it evenly across the horizon and retains heat well. If you take a handful of such earth in the palm of your hand, you can form a sausage, but it cannot be rolled into a ring, because it will fall apart when it is deformed.

Limestone soil is classified as poor soil. It is usually light brown in color, has a large amount of stony inclusions, is characterized by an alkaline environment, heats up and dries quickly at high temperatures, poorly provides iron and manganese to plants, and can have a heavy or light content. In cultivated crops, leaves turn yellow and unsatisfactory growth is observed in this soil.

To improve the composition and increase the productivity of calcareous soils, it is necessary to regularly apply organic fertilizers, and not only for the main treatment, but also in the form of mulch, planting green manure, and applying potash fertilizers.

All can be grown in this type of soil, but with frequent loosening of the rows, timely watering and rational use of mineral and organic fertilizers. Mild acidity affects: potatoes, tomatoes, sorrel, carrots, pumpkins, radishes, cucumbers and salads, so you should feed them with fertilizers that do not rub the soil (for example, ammonium sulfate, urea) that are prone to acid.

High and peaty soils also find application for breaking up garden areas. However, it is difficult to say that they are good for growing crops: the nutrients in them are not widely available for plants, they absorb water quickly, but they give quickly, do not warm up well, often have a high acidity index. But such soils retain mineral fertilizers well and are easy to cultivate.

Under the garden, carefully cultivate the earth or, as in sandy soils, lay a layer of clay and pour a layer of clay mixed with peat, organic fertilizers and lime. But if you grow only gooseberries, currants, black fennel and garden strawberries, then you can not do anything - just water and eliminate weeds, because these crops will be successful without cultivation in such soils.

Chernozems are highly fertile soils. Their granular structure, high content of humus, high percentage of calcium, good water absorption and water retention capabilities allow us to recommend them as the best option for cultivation. But, like any other soil, they remain without constant use, so after 2-3 years of development, it is recommended to add organic fertilizers to the beds, plant green manure.

In addition, chernozems can hardly be called light soils, on the basis of which they are often loosened by applying sand or peat. They can also be acidic, neutral and alkaline, which also requires adjustment.

Use of intermediate crops as organic fertilizers for the purpose of sideration to fill their missing part

besides, they do not differ from manure, compost and other organic fertilizers. Today, obtaining a high-quality and high yield from crops based on the use of organic fertilizers, maintaining, restoring and increasing soil fertility remains one of the most urgent problems in world agricultural practice.

Solving this problem can be achieved by planting and caring for siderate crops in summer and autumn at different times, and spreading the resulting green mass on the ground as green manure. July 10 is the optimal time for planting siderat crops in summer. One of the main reasons for this is that when planted on July 10th, compared to other dates, the plants will grow better and develop better, barley and sorghum, peas and canola will be able to use more light and temperatures that are beneficial for the plant.

good branching of plants, height, plant root



as a result of vigorous growth, high green biomass is obtained and timely plowing of the land is achieved without waiting for autumn rains. As a result, when the green biomass is completely rotted and replaced by cotton, whole and intact cotton seedlings are recovered and the ground is created for high yields.

The green biomass yield of these siderate crops was crushed and plowed into the ground in early spring, i.e., during the earing phase of barley, and during the flowering and fruiting phases of sorghum, pea and rape plants. Such organic mass quickly decomposes and mineralizes when driven into the ground. As a result, favorable conditions are created for the good growth of the cotton crop planted in its place, which ensures a high yield.

Summary. Thus, when siderate crops are planted on areas freed from grain and cotton, the soil is enriched with a large amount of organic matter, and as a result of their decomposition, the agrophysical and agrochemical properties and properties of the soil are improved. This ensures good growth of crops planted after them, resulting in high and high-quality yields.

Literature

1. Орипов Р. Зеленые промежуточные культуры в земледелии Узбекистана, их влияние на плодородие почвы, урожайность хлопчатника и других культур: Автореферат док. -с.х. наук: -Омск. 1983. -34 с.
2. Кенжаев Ю., Орипов Р. Ғалладан кейин экилган такрорий экинларнинг ўсиш ва ривожланиш хусусиятлари // Ўзбекистон қишлоқ хўжалигини ривожлантиришда ёш олимларнинг роли. Самарқанд шаҳрининг 2750 йиллигига бағишланган илмий-амалий конф. материаллари тўплами. - Самарқанд, 2007. –Б. 33-35.
3. Artikova Kh. Narzieva S. Salimova X. Kholov Y. // Innovative technologies in water management complex, Collected articles of young scientists. - Rivne, 2012. -P. 7-9.
4. Artikova Kh. // The Way of Science. International scientific journal. (36), - Volgograd, 2017. - №2. - P.22-24
5. Artikova Kh. // The Way of Science. International scientific journal. (36), - Volgograd, 2017. - №2. - P.25
6. Artikova Kh. Sattorova M. Jumaev J. //The American Journal of Agriculture and Biomedical Engineering. – 2021. – Т. 3. – №. 03. – С. 1-6.
7. Artikova Kh //Evropean Journal of Molekular Clinical Medicine volume 08, Issue 03, 2021
8. Artikova Kh . Salimova X. Jundishapur Journal of Microbiology Research Article Published online 2022 January Vol. 15, No.1 (2022)
9. Artikova Kh. Salimova X. International Journal of Aquatic Science ISSN: 2008-8019 Vol 12, Issue 03, 2021
10. Sadulloyevna, Shadiyeva Sayyora, Rahimova Mahliyo Akramovna, and Buriyeva Dilorom Isroilovna. *EUROPEAN JOURNAL OF BUSINESS STARTUPS AND OPEN SOCIETY 2.4* (2022): 68-70.
11. Yunusov, R., Yuldoshov, L. T., Shadiyeva, S. S., & Juraboyev, R. R. (2022). Dependence of Pruning Methods and Trees on the Formation, Productivity and Quality of Apple Trees in the Conditions of the Bukhara Oasis. *INTERNATIONAL JOURNAL OF BIOLOGICAL ENGINEERING AND AGRICULTURE*, 1(4), 40-45.
12. Rakhimova M. A., Shadiyeva S. S., Boriyeva D. I. THE INFLUENCE OF THE DIRECTION AND ACTIVITY OF MICROBIOLOGICAL PROCESSES ON THE FORMATION OF



- AGROCHEMICAL PROPERTIES OF SOILS OF VOBKENT DISTRICT //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2022. – С. 320-323.
13. Yunusov R., Shadiyeva S. S. INTENSIV MEVA OLMAZORLARIDAN OLINGAN IQTISODIY SAMARADORLIK KO'RSATKICHLARINI KESISH USULI VA DARAJALARIGA BOG'LIQLIGI //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2022. – Т. 2. – №. 5. – С. 21-27.
 14. Shadiyeva S. S., Borieva D. I., Rakhimova M. A. The Importance of Agricultural Mapping in Soil Science //EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION. – 2022. – Т. 2. – №. 3. – С. 5-8.
 15. Yunusov, R., Yuldoshov, L. T., Shadiyeva, S. S., & Juraboyev, R. R. (2022). Dependence of Pruning Methods and Trees on the Formation, Productivity and Quality of Apple Trees in the Conditions of the Bukhara Oasis. *INTERNATIONAL JOURNAL OF BIOLOGICAL ENGINEERING AND AGRICULTURE*, 1(4), 40-45.
 16. Юнусов Р., Юлдошов Л.Т., Шадиева С.С. и Джурабоев Р.Р. (2022). Зависимость способов обрезки и деревьев от формирования, продуктивности и качества яблонь в условиях Бухарского оазиса. *МЕЖДУНАРОДНЫЙ ЖУРНАЛ БИОЛОГИЧЕСКОЙ ТЕХНИКИ И СЕЛЬСКОГО ХОЗЯЙСТВА*, 1 (4), 40-45.
 17. Ganieva F. РОСТ И ПЛОДОНОШЕНИЕ ДЕРЕВЬЕВ ПЕРСИКА В ОРОШАЕМЫХ САДАХ В ЗАВИСИМОСТИ ОТ КОНСТРУКЦИИ КРОНЫ //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 6. – №. 6.
 18. Ganieva F. Рост и развития вегетативно-размножаемых подвоев яблони в зависимости от плотности посадки //Центр научных публикаций (buxdu. uz). – 2021. – Т. 6. – №. 6.
 19. Yunusov, R., Ganieva, F. A., Artikova, M. I., & Atayeva, Z. A. (2022). The Dependence Of The Growth, Development And Productivity Of Apple Trees On The Factors Of Care On Low-Saline Soils Of The Bukhara Region. *Web of Scientist: International Scientific Research Journal*, 3(02), 773-781.