Xo`sh, uglerod neytralligiga qanday yo`llar bilan erishish mumkin. Amalda uglerod izi qoldirmaydigan texnika va texnologiyalardan foydalanadigan jamiyatga o`tish qiyin, yoki amalda erishish mumkin bo`lmagan vazifadir, lekin uglerod neytralligiga erishish mumkin bo`lgan masaladir. Bu maqsadda ko'pgina davlatlar qazib olingan energiya manbalari toshko'mir, tabiiy gaz va neftdan qisman yoki to'liq voz kechish imkonini beruvchi texnologiyalardan foydalanishni, ularning o'rnini qayta tiklanadigan manbalar - quyosh, shamol energiyasi, daryo oqimi kabilarga imkon qadar tezroq o`tishni masalaning asosiy yechimi sifatida ko`rmoqdalar. Yirik ishlab chiquvchilar tomonidan zamonaviy uylarni istish tizimlarida sarflanadigan tabiiy resurslar o`rnini energotejamkor, quyosh nurlaridan quvvat oladigan akkumulyator panellari bilan jihozlash orqali aholining elektr energiyasiga bo`lgan talabining bir qismini yoki barchasini ta'minlashga yordam beradi, bu esa atrof-muhitga yukni sezilarli darajada kamaytiradi.

Ekologik jihatdan toza inson hayoti tamoyillari uglerod izini kamaytirishga yordam beradi: chiqindilarni alohida yig'ish, biologik parchalanadigan komponentlar va maishiy kimyo mahsulotlarini alohida utilizatsiya qilish, atrof-muhitni, xususan CO_2 ning iste`molchisi bo`lgan okeanlar va daraxtlarni himoya qilish, ularga insonning faoliyati natijasida yetkaziladigan zararni kamaytirish kabilar shular jumlasidandir. Ishlab chiqarish jarayonida karbonat angidrid gazi to'g'ridan-to'g'ri asosan transport, turli xildagi yoqilg`i sarfi bilan bo`g`liq bo`lgan ishlab chiqarish ob'ektlaridan kelib chiqadi. To'g'ridan-to'g'ri emissiyalarni kamaytirish havodagi CO_2 miqdorini kamaytirishning eng samarali usuli hisoblanadi. Tarkibidagi uglerodni to`liq neytrallamay turib neft-kimyo mahsulotlarini ishlab chiqarish, qayta ishlash imkonini beruvchi texnologiyalar bugungi kunda mavjud emas. Lekin yuqorida sanab o`tilgan sohalarda ishlab chiqarish hajmlari yil sayin ortib borayotgani bu fakt. Ishlab chiqarish korxonalari oldida turgan muhim vazifalardan biri bu tozalash texnologiyalarini rivojlantirishga qaratilgan tadqiqotlar uchun sarmoya kiritish va atrofga chiqarib yuboriladigan CO_2 miqdorini kamaytirishga erishishdir. Ushlab qolingan CO_2 gazi keyinchalik tabiiy gaz va neftdan bo`shagan yer osti bo`shliqlariga yuborish kabilarda foydalanish maqsadga muvofiq bo`ladi. Bu masalani hal qilishda asosiy rol konchilik, ekologik islohotlar va atrof-muhit masalalari bo'yicha xalq ta'limi darajasida ta'sir ko'rsata oladigan mamlakatlar rahbarlari qo`lidadir. Uglerod neytralligiga erishish yo`lida ular tomonidan chiqarilgan har bir qaror va uning ijrosiga bog'liq bo'ladi. Shu bilan birga bu borada har bir fuqaroning shaxsiy javobgarlikni his etish kerakligini ham hech qachon unutmasligimiz kerak. Har qanday ongli fuqaro sayyorani qutqarish, saqlab qolish uchun o`ziga bog`liq bo`lgan barcha amallarga tayyor bo`lishi, ekologik toza texnologiyalarni tanlash, biologik parchalanadigan va parchalanmaydigan chiqindilarni farqlay olishi, muqobil energiya manbalariga investitsiyalar, o'rmonlarni tiklash dasturlarida ishtirok etish kabilar shular jumlasidandir. Ba`zilar uglerod neytralligiga erishishni shunchaki xayoliy orzu deb qabul qilsa, boshqalari esa bunga katta umid bog`lamoqda. Har holda, ekologik ong va mas'uliyat sayyoramizda yashab turgan har bir insonning zimmasiga tushadi va yaxshi tomonga o'zgarishlar bizdan boshlanadi.

WAYS OF ORGANIC PRODUCT PRODUCTION AND EFFICIENT USE OF BIOMASS IN AGROCLUSTERS OF BUKHARA REGION

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In the 2017-2021 action strategy for the development of the Republic of Uzbekistan, adopted at the initiative of the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, special attention is paid to the aspects of introducing new forms of production in the 5 priority areas established in order to improve the economy of the country and increase the tolerance of competition. "BUKHORA AGRO CLUSTER" LLC was established by the decision of the Cabinet of Ministers dated June 14, 2019 No. 500 on measures to establish a modern agrocluster in the Bukhara region to implement the issues for this purpose. The priority plans of the agro cluster include the effective use of arable land with the introduction of advanced scientific achievements,

modern agrotechnologies, increasing the productivity of cotton and other types of agricultural crops, deepening the processing of raw materials, and developing the production of competitive products.

Agrocluster includes: 9 cotton ginning enterprises; Bukhara regional cotton terminal; Bukhara cotton seed industry; Provincial mechanical repair workshop; "Cotton Industry Trans" transport enterprise; Bukhara new textile factory; Bukhara agrocluster livestock complex; "Garden Bukhara" agrocluster horticulture; "Bukhara Agrocluster Lands" LLC is operating.

In 2019, more than 150,000 tons of cotton raw materials were grown in the agrocluster enterprises, and 52,700 tons of cotton yarn and 77,800 tons of seeds were produced from it. The yield of cotton fiber reached 35.8% and 95.5% of it was delivered in high grades. Last year, products worth 682 billion soums were produced and annual profit of 157.5 billion soums was achieved. Today, cotton is grown on 50,960 hectares of agroclusters, grain on 650 hectares, fodder on 200 hectares, and a number of other agricultural crops.

A plan is being implemented to take care of 1,000 head of cattle and increase the number of chickens to 100,000 in the poultry complex. The work of creating a modern intensive orchard on 22 hectares of Vobkent district has been started.

As part of the implementation of investment projects, the agrocluster established a textile complex based on spinning, weaving, dyeing and tailoring with a project cost of 200 US dollars from Vobkent district. The launch of production was carried out in the 2nd quarter of 2021. About 2,000 jobs have been created in this complex, 30,000 tons of cotton yarn are processed per year, and 22,600 tons of yarn, 7,000 tons of ready-made knitted fabric, 7 million tons of ready-made clothes and other products have been created.

The implementation of the water-saving drip irrigation system on the land areas allocated to agroclusters will be carried out initially on an area of 1,000 hectares, and then from the following years on an area of 5,000 hectares per year. This will save up to 60% of water, reduce labor costs by up to 50%, increase productivity by up to 30%, and significantly reduce other material resources. 183 pieces of modern machinery, including 34 tractors, 19 seeders, 31 cultivators, will be invested in the renewal of the park of agricultural machinery, and it is planned to introduce 200 new machinery into production per year.

As part of the introduction of advanced scientific achievements in the agrarian sector in Agrocluster, an innovative project on remote monitoring and control of agricultural land is being developed and implemented together with the Russian "AGROMIR" and a number of other partners. This project allows for rapid monitoring of the condition of the cultivated fields, planning of agrotechnical activities, control of the equipment working in the field, keeping a journal of field work by automating the processes of crop cultivation monitoring. The obtained information allows for the establishment of a digital system for monitoring the condition of arable land in terms of compliance with the rules of crop rotation in agriculture and targeted land use.

Based on the data received from the satellite, the following works are carried out through the software complex:

-planning of work in the field and control of execution of technical operations;

- analysis of the correspondence of the fields in the cadastre to their actual status;

- the movement of the machines working in the fields and the performance of the work are observed.

With the introduction of digitalization and innovative technologies in the development of the agro-industrial complex of Bukhara region by the Agrocluster in the production of products with high added value, the profitability of agricultural enterprises and the welfare of the population will be increased.

Today, the problem of food safety in the world has become one of the global problems. The countries of the Central Asian region, as well as the Republic of Uzbekistan, are doing a number of positive things in the field of mitigating this problem. In particular, the establishment of agroclusters in agriculture is a vivid example of this. It is known that Bukhara region is one of

the leading regions of our country producing agricultural products. On average, 10-15% of the country's cotton, grain, fruits and vegetables are produced in this region.

The establishment of agroclusters in the Bukhara region envisages increasing the production of cotton, grain, fruits and vegetables. But in the next 10 years, the process of desertification intensified in oases of the region under the influence of climate change. Desertification is a set of natural-geographic and anthropogenic processes that lead to the destruction of ecological systems in arid climate regions, the deterioration of all forms of organic life in them, and as a result, the reduction of natural and economic opportunities. These processes include the reduction of the types and quantity of natural vegetation, soil erosion, soil salinization, and the reduction of fertility. According to the data, the yield of cotton is reduced by 20-30% in low salinity lands, 40-60% in medium salinity lands, up to 80% and even more in high salinity lands. As a result of this, the gross cotton harvest in the region (about 40-50 thousand tons, and 17 thousand tons of cotton fiber per year) is less. First of all, the above considerations encourage deep analysis, study and development of measures to improve the land fund of the region.

The specific characteristics of the land fund of the Bukhara region are as follows:

1. Almost 97.0% of agricultural production is accounted for by arable land. But they are unevenly distributed in the districts of the region;
2. The most productive part of arable land is irrigated land. Their weight per capita is decreasing;
3. The most important factor of soil fertility - the level of provision of humus has decreased dramatically (0.4-1.0%) over the last quarter of a century, and such soils occupy about 40% of irrigated lands;

It is a matter of concern that the process of salinization is increasing in the irrigated lands of the province. According to the data, almost 52% of the irrigated land, which is considered our priceless wealth, is saline. About 40% of it consists of moderately and strongly saline lands.

Soil fertility is also adversely affected by water and wind erosion. The percentage of irrigated land affected by wind erosion is high in Bukhara region (78%). Wind erosion causes a 10-15% reduction in the yield of the main agricultural crops. In order to prevent and improve this, agroclusters are being organized and improved based on innovative technologies.

The term "cluster" is a French word translated into Uzbek and means "claw", "head", "bundle", "group", "gathering", "settlement". Also, "cluster" is represented as a method of sample research.

The basis of the "cluster" theory is Alfred Marshall's opinion on the integration of specialized industries in separate regions in his book "Principles of Economics" (1890), written at the end of the 19th century. Territorial integration of specialized entities based on his scientific conclusions:

- availability of qualified labor resources;
- growth of supplier and additional industries;
- it is based on the existence of specialization of different companies in different stages of the production process.

The study of the "cluster" theory is growing rapidly in the world community, and its practical application is becoming the main direction of national and regional economic development.

The multifaceted nature of the "cluster" theory has led to the formation of various theoretical approaches to it.

After the 1980s, we can see the achievements of 3 important (American, British and Scandinavian and other) scientific schools in the development of "Cluster Theory".

The cluster theory entered the scientific process in the form of a marketing strategy, as an idea that ensures that the enterprises of the state, regions and regions win in the competitive environment of the market.

The food industry, which is considered the most important direction of agricultural processing enterprises, is considered one of the largest and traditional sectors of the national economy of Uzbekistan, and this sector contributes to the development of the national economy, to the improvement of inter-sectoral ratios in the agro-industrial complex, in the republic's agriculture. It affects the solution of the problems of full supply to consumers, as well as the

employment of the population, without wasting the produced raw materials, that is, processing them.

At the same time, special attention should be paid to the formation of a modern system of storage, processing and delivery of fruits and vegetables grown in our country.

Today, clusters of various specialties have been established in Bukhara region. All of them are operating on the basis of waste-free innovation using biomass efficiently. For the production of organic products and efficient use of biomass in the agroclusters of the Bukhara region, the main task is to take into account the factors affecting it in the territorial organization of the agroclusters in the region, to ensure the harmony of the agroclusters in the desert and the oasis.

We all know that every farm has its own buyers and consumers of products grown. We know that agricultural products have a certain amount of harmful effects on the human body, depending on their cultivation technologies. In recent years, humanity's need for organic products has been increasing. The reason is that organic products do not contain various chemical elements, all kinds of hormones, antibiotics and harmful food additives. This keeps the useful properties of the product at a high level without harming human health.Organic agriculture appeared in the first half of the 20th century. This is production focused on soil health, ecology and people care. In the process of organic agriculture, agroclusters are tasked with maintaining a balance between land use and environmental protection. This is a new stage of a responsible approach to the interaction between man and nature.

Organic products are certified products grown using production technologies that meet the requirements of legal documents on organic products and regulations in the field of technical regulation at all stages of their production, processing, storage, transportation and introduction.

Growing organic products free from chemical pesticides is increasingly strengthening the competitive environment in the world market. In order to grow organic products, first of all, it is necessary to carry out high-quality autumn-winter agrotechnical activities in a timely manner, to systematically work with bioproducts, and to saturate plants with organic nutrients and grow high-quality, harmless food products.

The following basic requirements are defined for the production of organic products:

• use of healthy animals and plants, safe products and animal and vegetable raw materials;
• use of technologies that meet the requirements of legal documents on organic products and regulatory documents in the field of technical regulation;
• preservation, restoration and improvement of soil fertility;
• preservation of ecological systems by choosing a certain type of organic products for production;
• use of renewable natural resources, including plant and animal products and waste;
• reduce the use of non-renewable natural resources;
• use of technologies that do not harm human health, plants and animals, prevent or eliminate the consequences of environmental pollution, etc.

The following are prohibited in the production of organic products:

• use of synthetic substances, pesticides, hormones, antibiotics and chemical food additives;
• use methods of growing plant products without using soil;
• use of ionizing radiation and chemical methods of cleaning plants;
• use of waste water, waste and other human waste materials as fertilizers;
• use of land plots, water bodies and their parts contaminated with waste, chemical and radioactive substances;
• use of embryo transplantation, cloning and genetic engineering methods, genetically modified and transgenic organisms, as well as products produced using genetically modified and transgenic organisms.

Effective use of above-ground and underground biomass of organic product waste produced in agroclusters, other industrial waste in the cluster (animal manure, residual mass of plants) will be very effective in establishing biogas production technology. The biogas produced in the agrocluster provides the farm with heat and energy, and high-quality fertilizer participates in the re-production process and helps in the production of organic products.

In order to use biomass as an energy source, biological waste is processed in large reactors (hermetically closed vessels). Modern biogas production is based on processes that occur in nature, that is, the formation of methane from the waste that occurs as a result of digestion in the stomach of animals.

Conclusion: The use of raw materials and energy throughout the world remains a global problem. One of the alternative ways to solve this problem is to introduce biogas production technology among the population and at the industrial level. Currently, the technology of obtaining biogas is well studied and is successfully used in a number of foreign countries and in our country. In our republic, the installation of small power equipment in the production of energy using biogas in farms and households gives effective results. Internal investments or bank loans are used to develop work in this direction.

When obtaining biogas, a water-soluble nitrogenous compound is formed, which replaces mineral fertilizer, which is useful for the economy, and this also leads to some financial savings.

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QIZAMIQ KASALLIGINING KELIB CHIQISHI VA DAVOLASH USULLARI

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Qizamiq-bu o’tkir yuqumli virusli kasallik bo’lib, u tana haroratining ko’tarilishi, ko’p miqdorda toshma va shamollash alomatlari bilan namoyon bo’ladi. Qizamiq Morbillivirus turiga RNK-virusni keltirib chiqaradi. Tashqi muhitda u beqaror-to’g’ridan-to’g’ri quyosh nuri ta’sirida, 50°C gacha qizdirilganda, quritilganda yo’q bo’ladi. Xona haroratida virus 1-2 kun davomida yashaydi.Qizamiq virusining manbai kasallangan odamdir. U inkubatsiya davrining 1-2 kunida (toshmalarning 4 kunigacha) atrofdagi odamlarga yuqtirishni boshlaydi. Ba’zi hollarda yuqumli kasallik ekzantema paydo bo’lgan paytdan boshlab 10 kunga cho’ziladi.Qizamiq havo tomchilari orqali yuqadi (aerozol mexanizmi). Infektsiyalangan odam aksirish, yo’talish, suhbat paytida atrof-muhitga o’tkir infektsiyaning qo’zg’atuvchisini tarqatadi. Havo oqimi bilan xona bo’ylab nozik dispers suspenziya tarqaladi. Agar homilador ayol kasallikka chalingan bo’lsa, uni homilaga yuqtirishi mumkin (transplasentar yuqish yo’li).Hamma odamlar qizamiqqa moyil. Uni boshdan o’tkazgandan so’ng, umrbod immunitet rivojlanadi. Ko’pincha patologiya bolalikda paydo bo’ladi. Kattalar kamdan-kam hollarda qizamiq bilan og’riydilar va bolalarga qaraganda yengilroq o’tkazadilar.Qizamiqning inkubatsiya davri 1-2 haftagacha. Agar bemorga immunoglobulin yuborilgan bo’lsa, u 3-4 haftagacha cho’zilishi mumkin.

Qizamiqning tipik shakli uchta ketma-ket bosqichni chetlab otadi:

Kataral. Bu tana haroratining keskin ko’tarilishi, aniq umumiy intoksikatsiya belgilari bilan boshlanadi. Bemor kuchli bosh og’rig’ini boshdan kechiradi, uyqusizlik va zaiflikdan aziyat chekadi. Intoksikatsiya alomatlariga quruq yo’tal qo’shiladi. Konyunktivit kuzatilishi mumkin (ko’z qovoqlari juda shishib ketadi).

Toshmalar. Qizamiq toshmasi-yorqin qizil-jigarrang rangning dog’li-papulez ekzantemasi. Gemorragik xarakterga ega bo’lishi mumkin. U avval quloqlarning orqasida va boshida hosil bo’ladi, so’ngra bo’yin va yuzga o’tadi. Birinchi dog’lar paydo bo’lganidan bir kun o’tgach, u allaqachon butun tanani, elkalarni qamrab oladi. Keyin u oyoq-qo’llarga tarqaladi va shu bilan