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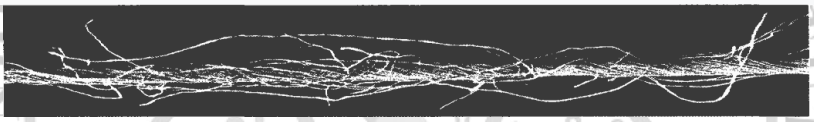
# Performance indicators of twisted yarns.

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**Annotation.** This paper examines the compactness of yarn and the coefficient of friction. Namangan - 77 cotton varieties to study the possibility of producing compact yarn in the system of snow and re-spinning. The physical and mechanical properties of the compact snow and re-spinning yarn were also compared with the Uster statistical 2018 quality indicators.

**Keywords:** ring spinning machine, compact device, snow and re-spinning system, physical and mechanical properties of yarn, fluff..

During the description of the type of yarn in weaving or knitting, only specific quality indicators, i.e. irregularities, are not enough (for example, unevenness and tufting) (Fig. 1). For this, a combination of different quality criteria (for example, unevenness and smoothness) allows for a reliable conclusion. The SPI surface index allows the user to control the quality in a simple way [1, 2, 3, 4, 5, 6, 7]



1-rasm.

The surface index SPI allows you to see a poor quality tube (e.g., randomly occurring thinness and thickness may be within acceptable limits, but may have a negative effect on the fabric structure in terms of quantity) and opportunity it is necessary to eliminate these defects in the yarn during the rewinding process.

The most important parameters used to determine yarn quality are linear density, formation properties, and fiber composition. An example of a tape configuration is shown in figure 2:

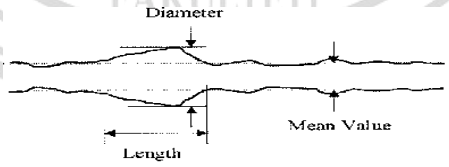



Figure 2. Thread configuration.

The number of defects and mass measurements allow to assess the quality of the product. There are three types of yarn defects (Figure 3):



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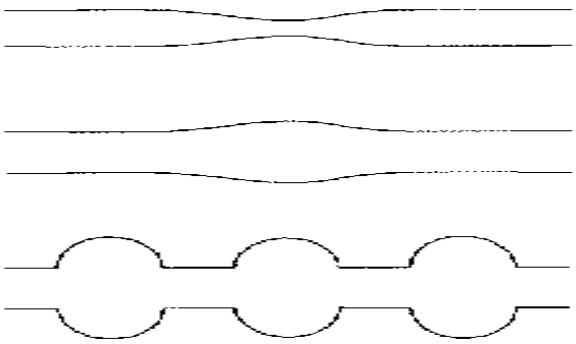


Figure 3. Thread defects

1. Thin areas
2. Thick areas
3. Neps

Thin areas - a decrease in mass of short length (4 mm).

Thick areas - an increase in mass, usually less than 100% and extending more than 4 mm [8, 9, 10, 11, 12, 13]

Neps - a large mass of yarn of short length (usually from 1 mm to 4 mm)

As mentioned above, another important feature of yarn is hair. Figure 4 depicts the hairiness of the yarn.




Figure 4. Yarn hair.

Hair is usually determined by standard deviation, similar to CV (%). However, other parameters (U, DR, IDR) can also be considered.

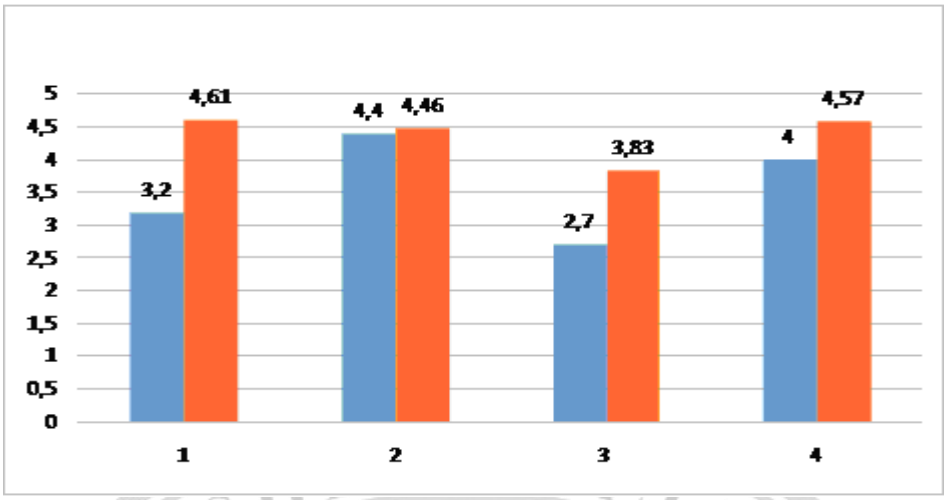



Figure 5. Yarn hair size (Neps 200 / km)

(Ne = 30) Uster Statistic 2018 Indicators for the rewind compact strip

(Ne = 30) Indorama Kokand Textile

(Ne = 30) Uster Statistic 2018 figures for a compact strip of snow

(Ne = 30) Indorama Kokand Textile, a compact yarn in the snow

(Ne = 40) Uster Statistic 2018 figures for a compact strip of snow

(Ne = 40) Indorama Kokand Textile, a compact yarn in the snow

(Ne = 40) Uster Statistic 2018 Indicators for the rewind compact strip

(Ne = 40) Indorama Kokand Textile

Indorama Kokand Tekstil compared to Uster Statistics 2018 in terms of hair yield (Ne = 30) by 1.41% on compact yarn, (Ne = 30) by 0.06% on compact yarn, (Ne = 40) in the snow compact yarn is 1.13% higher, and in the compaction yarn (Ne = 40) it is 0.57% higher. Looking at the results, we can see that the compact strip in the snow (Ne = 30) is very close to the Uster results, and the compact strip in the snow (Ne = 40) is the lowest in terms of hair density (3.83) [14, 15, 16, 17]

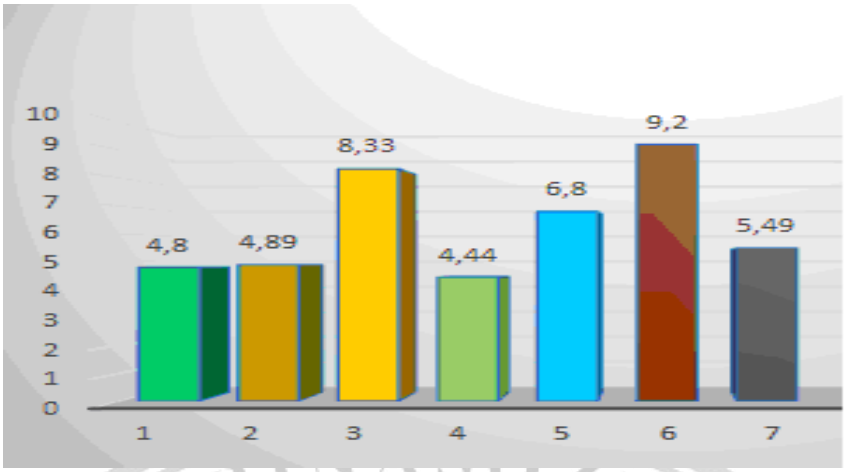



Figure 6. The fluff of the rope

(Ne = 30) re-combing compact yarn “Indorama Kokand Textile”

(Ne = 27) snow thread “Artsoft Tex Spinning”

(Ne = 32/2) Artsoft Tex Spinning

(Ne = 30) snowmobile mechanical thread “Indorama Kokand Tekstil”

(Ne = 30) snowmobile pneumatic thread "Artsoft Tex Spinning"

(Ne = 40/2) Snow-baked yarn Artsoft Tex Spinning

(Ne = 34/2) Snow-baked yarn Artsoft Tex Spinning

The diagram above shows an analysis of the fineness of yarns obtained for testing from Indorama Kokand Textile and Artsoft Tex Spinning. Analyzing the results, Indorama Kokand Tekstil (Ne = 30) has the lowest snow pneumo-mechanical yarn in hair (4.44%), while Artsoft Tex Spinning (Ne = 40/2) has the lowest snow-

baked yarn. high (9.2%) and 4.76% higher.

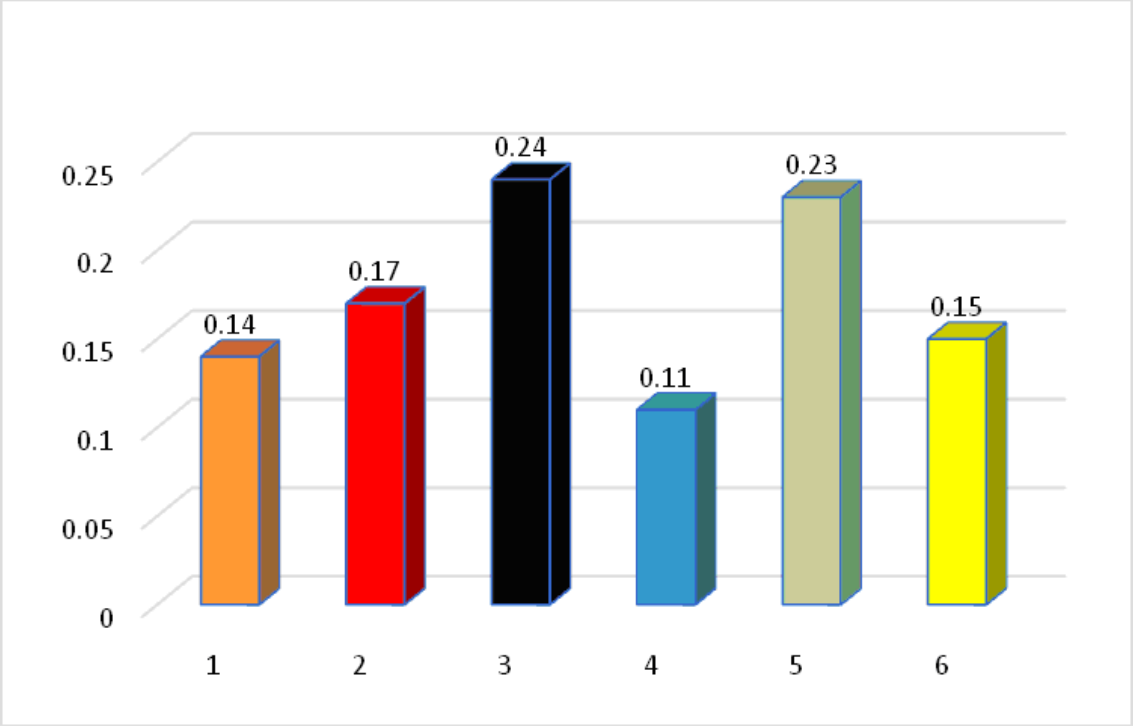



Figure 7. Friction coefficient

(Ne = 30) snowmobile mechanical thread “Indorama Kokand Tekstil”
(Ne = 30) re-combing compact yarn “Indorama Kokand Textile”
(Ne = 30) card compact yarn “Indorama Kokand Tekstil”
(Ne = 40) card pneumomechanical thread “Indorama Kokand Tekstil”
(Ne = 40) snow compact yarn “Indorama Kokand Tekstil”
(Ne = 40) re-combing compact yarn “Indorama Kokand Textile”

According to the results of the friction coefficient obtained from Indorama Kokand Tekstil, (Ne = 40) is the lowest (0.11) in the pneumatic mechanical yarn in the snow and the highest (0.24) in the compact yarn (Ne = 30). we will see. Analyzing all the above results, we can see that the yarn spun in the compact method of re-spinning is superior to the remaining yarns in all respects [4].

And the degree to which the external quality and fluff of the yarn depends on the spinning technology [18, 19, 20, 21].

It should be noted that in the past, the pneumatic compact device had the following disadvantages:

1. When the stretching pair comes out of the front roller clamp, the width of the down is maintained in the normal way.

2. The pneumatic device would not work as a result of the short fiber being sucked out of the suction device.

3. It was impossible to tell if the short fibers were stuck in the hole in the suction device.

A series of studies have now produced generations of pneumatic compacts to overcome these shortcomings, with a special indicator that illuminates a red light when short fibers are stuck in the groove of a suction device. This, in turn, will address the above shortcomings [22, 23, 24, 25, 26, 27].

As a result of our research, we also conducted experiments on this compact device at the Indorama Kokand Textile JV. And we've seen how this device works.

Conclusions:

1. The physical and mechanical properties of the yarn spun at the Indorama Kokand Textile JV were found to be in line with Uster Statistics-2018.

2. The yarn spun at the Indorama Kokand Textile JV was found to be inferior to the yarn spun from Artsoft Tex Spinning.

3. In terms of friction, Indorama Kokand Tekstil (Ne = 40) had the lowest value (0.11) in the snow pneumo-mechanical yarn and the highest (0.24) in the compact yarn (Ne = 30).

4. In the compact method of re-spinning, it was determined that the spun yarn was superior to the remaining yarns in all respects.

## References:

1. Беккулов Б. Р., Атабаев К., Рахмонкулов Т. Б. ОПРЕДЕЛЕНИЕ КОЛИЧЕСТВА ШАЛЫ В СУШИЛЬНОМ БАРАБАНЕ //Бюллетень науки и практики. – 2022. – Т. 8. – №. 7. – С. 377-381.
2. Рузиев А. А. ЦЕНТРОБЕЖНОЕ СОРТИРОВАНИЕ СЕМЯН СЕЛЬСКОХОЗЯЙСТВЕННЫХ КУЛЬТУР ПО ПЛОТНОСТИ //Universum: технические науки. – 2021. – №. 12-3 (93). – С. 82-86.
3. Атабаев К., Мусабаев Б. М. ЗАДАЧА О РАСПРОСТРАНЕНИИ ВОЛН В БЛИЗИ РАСШИРЯЮЩЕЙСЯ ПОЛОСТИ ПРИ КАМУФЛЕТНОМ ВЗРЫВЕ //Научно-практические пути повышения экологической устойчивости и социально-экономическое обеспечение сельскохозяйственного производства. – 2017. – С. 1150-1153.
4. Беккулов Б. Р., Собиров Х. А., Рахманкулов Т. Б. РАЗРАБОТКА И ОБОСНОВАНИЕ ПАРАМЕТРОВ МОБИЛЬНОГО УСТРОЙСТВО ДЛЯ СУШКИ ШАЛА //Энергоэффективные и ресурсосберегающие технологии и системы. – 2020. – С. 429-438.

5. Эрматов К. М. Обоснование параметров приспособления к хлопковой сеялке для укладки фоторазрушаемой пленки на посевах хлопчатника. Автореф. канд. дисс. Янгиюль, 1990. – 1990.
6. Рахимов А. Ю., Рахимов А. А., Қодиров З. ПИЛЛАНИ ПИШИБ ЕТИЛГАНЛИК ДАРАЖАСИНИ СИФАТ КЎРСАТКИЧЛАРИГА ТАЪСИРИ //Academic research in educational sciences. – 2021. – Т. 2. – №. 11. – С. 33-41.
7. Қодиров З. А., Парпиев С. Ф. ПИЛЛАГА ДАСТЛАБКИ ИШЛОВ БЕРИШ ТЕХНОЛОГИЯЛАРИНИНГ ПИЛЛА СИФАТИГА ТАЪСИРИ //Academicresearchineducationalsciences. – 2022. – Т. 3. – №. 2. – С. 637-645.
8. Мамажонов М., Шакиров Б. М., Шакиров Б. Б. АВАНКАМЕРА ВА СУВ КАБУЛ КИЛИШ БУЛИНМАЛАРИНИНГ ГИДРАВЛИК КАРШИЛИКЛАРИ //Irrigatsiya va Melioratsiya. – 2018. – №. 1. – С. 44-46.
9. Эрматов К. М. Вращающий момент бобины с пленкой //Высшая школа. – 2017. – №. 1. – С. 117-118.
10. Эрматов К. М. Вращающий момент бобины с пленкой //Высшая школа. – 2016. – Т. 1. – №. 24. – С. 57-58.
11. Қодиров З. А., Парпиев С. Ф. ПИЛЛАГА ДАСТЛАБКИ ИШЛОВ БЕРИШ ТЕХНОЛОГИЯЛАРИНИНГ ПИЛЛА СИФАТИГА ТАЪСИРИ.
12. Rano Y., Asadillo U., Go‘Zaloy M. HEAT-CONDUCTING PROPERTIES OF POLYMERIC MATERIALS //Universum: технические науки. – 2021. – №. 2-4 (83). – С. 29-31.
13. Каюмов У. А., Хаджиева С. С. НЕКОТОРЫЕ РЕКОМЕНДАЦИЙ ПО ПРИМЕНЕНИЮ ПОРОШКОВЫХ СПЛАВОВ ПРИ ВОССТАНОВЛЕНИИ ДЕТАЛЕЙ СЕЛЬСКОХОЗЯЙСТВЕННОЙ ТЕХНИКИ СПОСОБАМИ ПЛАЗМЕННОЙ НАПЛАВКИ И НАПЫЛЕНИЯ //The 4th International scientific and practical conference “Science and education: problems, prospects and innovations”(December 29-31, 2020) CPN Publishing Group, Kyoto, Japan. 2020. 808 p. – 2020. – С. 330.
14. Джалилов М. Л., Хаджиева С. С., Иброхимова М. М. Общий анализ уравнения поперечного колебания двухслойной однородной вязкоупругой пластинки //International Journal of Student Research. – 2019. – №. 3. – С. 111-117.
15. Қодиров З., Зулфикоров Д. ПИЛЛАНИ БУҒЛАШ ТЕХНОЛОГИК ЖАРАЁНИНИНГ ХОМ ИПАК СИФАТИГА ТАЪСИРИ //Eurasian Journal of Academic Research. – 2023. – Т. 3. – №. 1 Part 3. – С. 159-165.
16. Мамажонов З. А., ўғли Зулфикоров Д. Р. САБЗИНИНГ КЕСКИЧ ТИҒИГА ТАЪСИР КУЧИНИ АНИҚЛАШ //INTERNATIONAL CONFERENCES. – 2023. – Т. 1. – №. 2. – С. 476-481.
17. Mamajonov Z. A. et al. RESPUBLIKAMIZDA QO ‘LLANILAYOTGAN EKSKAVATORLARNING CHO ‘MICH TISHLARINI QAYTA TIKLASH USULLARINI TAKOMILLASHTIRISHNING TAHLILI //INTERNATIONAL CONFERENCES. – 2023. – Т. 1. – №. 2. – С.
18. Беккулов Б. Р., Ибрагимжанов Б. С., Рахмонкулов Т. Б. ПЕРЕДВИЖНОЕ СУЩИЛЬНОЕ УСТРОЙСТВО ДЛЯ ЗЕРНИСТЫХ

СЕЛЬСКОХОЗЯЙСТВЕННЫХ ПРОДУКТОВ //Современные тенденции развития аграрного комплекса. – 2016. – С. 1282-1284.
19. Rahmonkulovich B. B., Abdulhaevich R. A., Sadikovna H. S. The energy-efficient mobile device for grain drying //European science review. – 2017. – №. 11-12. – С. 128-132.
20. Bekkulov B. R. ABOUT VALUE DRYING OF THE DEVICE IN PROCESSING OF GRAINS //Irrigation and Melioration. – 2018. – Т. 2018. – №. 1. – С. 60-63.
21. Bekkulov, B. R. "ABOUT VALUE DRYING OF THE DEVICE IN PROCESSING OF GRAINS." Irrigation and Melioration 2018.1 (2018): 60-63.
22. Мамажонов З. А., ўғли Зулфикоров Д. Р. САБЗИНИНГ КЕСКИЧ ТИҒИГА ТАЪСИР КУЧИНИ АНИҚЛАШ //INTERNATIONAL CONFERENCES. – 2023. – Т. 1. – №. 2. – С. 476-481.
23. Mamajonov Z. A. et al. RESPUBLIKAMIZDA QO ‘LLANILAYOTGAN EKSKAVATORLARNING CHO ‘MICH TISHLARINI QAYTA TIKLASH USULLARINI TAKOMILLASHTIRISHNING TAHLILI //INTERNATIONAL CONFERENCES. – 2023. – Т. 1. – №. 2. – С. 482-487.
24. Xojimatov A. A., Mamajonov Z. A. MAVSUMIY QISHLOQ XO ‘JALIK TEXNIKALARINI ISHLATISH VA SAQLASH SHARTLARINING TEXNIKA SIFATIGA TA’SIRI //Educational Research in Universal Sciences. – 2023. – Т. 2. – №. 1. – С. 40-45.
25. Рахмонкулов, Т. Б. у., & Бобоев , Н. Қ. (2023). ШОЛИ ҚУРИТИШ ҚУРИЛМАСИНИНГ ИШЛАШ ПРИНЦИПИ ВА КИНЕМАТИКАСИ. INTERNATIONAL CONFERENCES, 1(2), 488–495. Retrieved from http://erus.uz/index.php/cf/article/view/1577
26. Ибрагимжонов Б. Х., Иминов Б. И., ўғли Зулфикоров Д. Р. УЗУМБОҒЛАР УЧУН КЎЧМА МЕХАНИК НАРВОНИГА ТАЪСИР ЭТУВЧИ КУЧЛАР ТАХЛИЛИ //Educational Research in Universal Sciences. – 2023. – Т. 2. – №. 2. – С. 473-480.
27. Хожиматов А. А., Иминов Б. И. ИЗНАШИВАНИЯ ФИЗИКО-МЕХАНИЧЕСКИЕ ПРОЦЕССА СЕЛЬСКОХОЗЯЙСТВЕННЫХ МАШИН В КОРРОЗИОННО-АКТИВНЫХ СРЕД //Научный Фокус. – 2023. – Т. 1. – №. 1. – С. 1558-1564.

## Боғдорчилик ва деҳқончилик фаолиятини рақамли бошқариш

**Мирзаева М., Тажибаев Г., Мамажанов А.**

«Рақамли Ўзбекистон — 2030» стратегиясини тасдиқлаш ва уни самарали амалга ошириш чора-тадбирлари тўғрисидаги Ўзбекистон Республикаси Президентининг 2020 йил 5 октябрдаги ПФ-6079-сон Фармони мамлакатимизни ҳар томонлама ривожлантириш, иқтисодий ва ижтимоий жараёнларни юқори даражада мукаммал олиб бориш учун сифатли ислоҳотларни амалга оширишда муҳим аҳамият касб этмоқда.

«Рақамли Ўзбекистон — 2030» стратегияси иқтисодиёт тармоқлари, ижтимоий соҳа ва давлат бошқаруви тизимининг жадал рақамли ривожланишини таъминлаш, шу жумладан электрон давлат хизматларини кўрсатиш механизмларини янада такомиллаштириш мақсадида ишлаб чиқилган.

Электрон ҳукуматни ривожлантириш мақсадида бир қатор тадбирларни амалга оширилиши кўрсатилган. Жумладан, замонавий ахборот-коммуникация технологияларини жорий этиш орқали қишлоқ хўжалигида ердан фойдаланиш унумдорлигини ошириш, маҳсулотлар таннархини камайтириш ва экспорт салоҳиятини ошириш тизимини ташкил этиш тадбири белгиланган. Иқтисодиётнинг реал секторида рақамли технологияларни ривожлантириш мақсадида амалга ошириладиган тадбирлар қаторида замонавий ахборот тизимлари ва дастурий маҳсулотларни жорий этиш ҳисобига маҳсулотлар ва хизматлар сифатини яхшилаш, уларнинг таннархини, ишлаб чиқаришдаги тўхталишларни камайтириш, молиявий-иқтисодий фаолиятнинг шаффофлигини ошириш кўрсатилган. Қишлоқ хўжалигида ташкил этилаётган Агрохизматлар марказлари фаолиятига рақамли технологияларни кенг жорий этиш борасида ходимларини ахборот тизимлари, дастурий маҳсулотлар ва маълумотлар базаларидан фойдаланиш бўйича ўқитишни ташкил этиш ҳам белгиланган.

Рақамли иқтисодиёт бу ишлаб чиқариш комплекси инсонлар учун қулайликларни таъминлайдиган маҳсулот ва хизматларни яратадиган виртуал муҳитдир. Рақамли технологиялардан фойдаланган ҳолда иқтисодий ишлаб чиқариш тизими бу тезкор ва аниқ қарор қабул қилган ҳолда иш олиб бориш демакдир. Биргина, энг сўнгги ахборот билан таъминланган ҳолда фаолият юритишнинг ўзи ҳам муваффақиятга элтади.

2017 дан agro-olam.uz сайтида Қишлоқ хўжалигида содир бўлаётган энг сўнгги ва ишончли хабарлар шунингдек барча фойдали маълумот, видео лавҳа ва китоблар тақдим этилмоқда.