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Qishloq xojalik texnikalaridan

tamirlash va foydalanish  kafedrasi

Qishloq xo'jaligini mexanizatsiyalash

Fakulteti 4-bosqich 1-gurux talabasi

## Sofiyev Saidvoisxonning MTPF fanidan

# Kurs loyixa

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# Kirish

Qishloq xo'jalik ishlab chiqarishining asosiy vazifasi mamlakatimiz sanoatini xom ashyo bilan, axolini esa oziq-ovqat maxsulotlariga bo'lgan extiyojini qondirishdan iboratdir. Shuning uchun qishloq xo'jaligini oqishmay yuksaltirish respublikamiz rag'bariyati tamonidan aloxida e'tibor  beradigan asosiy masalalardan biri bo'lib kelmoqda. Ayniqsa 1990 yillardan boshlab respublikamizda mustaqillik qoyalari ilgari surilishi natijasida faqat paxtachilikka ixtisoslashtirilgan qishloq xo'jalik ishlab chiqarishi keng kamrovli ko'p tarmoqli  ishlab chiqarishga aylantirilib, unda qalla, kartoshka, sabzavot, poliz va boqdorchilik, shuningdek aqoli extiyojiga zarur bo'lgan boshqa barcha turdagi maxsulotlarni etishtirish yo'lga qo'yildi.

Respublikamizda qishloq xo'jalik ishlab chiqarishini yanada  yuksaltirish uchun unda amalga oshirilayotgan isloxatlarni yanada  chuqurlashtirish, jumladan ishlab chiqarishni tashkiliy forma va shakllarini doimiy takomillashtirib  borish, ilqor-serunum texnologiyalarni joriy etish, qishloq xo'jalik texnikalaridan samarali foydalanish, ularga bo'lgan munosabatlarni tubdan yaxshilash, mexanizatsiyalashtirilgan jarayonlarni sifatli amalga oshirilishiga, ular bilan ishlovchi mexanizator va muxandis-mutaxasislarning  malakalarini muntazam oshirib borilishiga e'tiborni yanada kuchaytirilishi talab etiladi. Ushbu o'ta dolzarb masalani qal etish moddiy texnik negizining muqim qismi mashina-traktor agregatlari (MTA), murakab texnologiya jarayonlarni bajarishda qo'llaniladigan aloqida texnologik komplekslar, xo'jaliklarni va tashkilotlarni mashina-traktor parkilariga boqliqdir. Ishlab chiqariladigan maqsulot miqdori va  sifati, turli resurslar sarfi va pirovard natijada xo'jaliklarning iqtisodiy gullab yashnashi mashina-traktor parkidan samarali foydalanishga bevosita boqliqdir.

Shunga monand ravishda mashina-traktor parkidan foydalanish (MTPF) injenerlik fanining bosh vazifasi - aloqida MTA, barcha turdagi xo'jaliklarni (deqqon, fermer xo'jaliklari va qissadorlik jamiyatlarining turli ko'rinishlari) mashina-traktor parklari texnologik komplekslaridan xo'jalik, tuman, viloyat va mintaqa sharoitida yuqori samarali foydalanish uslublarini ishlab chiqarishdan iborat.

Samarali deganda bajarilayotgan ishlarning yuqori sifati, tugal maxsulotning qar bir-birligiga to'qri keladigan erishish mumkin bo'lgan eng kam resurslar sarf etgan qolda, konkret tabiiy ishlab chiqarish sharoitida, agregatlarni yuksak ish unumi tushiniladi.

MTPF kursini o'rganishning maqsadi - qishloq xo'jalik texnikalaridan yuqori samarali foydalanishni ilmiy uslublari va amaliy malakalarini  o'zlashtirishdir.

Aytib o'tilgan uslublar bir-biri bilan chambarchas boqlik bo'lgan quyidagi masalalar echimini o'z ichiga oladi, resurslarni tejaydigan qishloq xo'jalik ekinlarini parvarish etish texnologiyalarini tanlash. MTAlarning maqbul (eng yaxshi) tarkibini va ish rejimlarini asoslash: mexanizatsiyalashtirilgan ishlarni bajarishni ilmiy asoslangan qoidalarini ishlab chiqish. MTP texnik xizmat ko'rsatish resurslarini tejaydigan usullari va vositalarini asoslash.

**Varyant**  N-8

**Umumiy maydon F=1500**

**Maydonning xosildorligi h=31**

**Burulish  maydoni $F_1$=34**

**Maydonning uzunligi L=1500**

# Ish hajmi quyidagicha topiladi

## 4-ustun quyidagicha topiladi.

U1. $F*2m=1500*2=3000$  t

U2. $U1*5=3000*5=45000$  t/km

U3. $F*15=1500*15=22500$  m

U4. $F*0.05=1500*0.05=75$  km

U5. $F=1500$ ga

U6. $F*0.5=750$ tonna

U7. $U6*5=750*5=3750$  m/km

U8. $F=1500$  ga

U9. $F=1500$  ga

U10. $F*0.2=300$  ga

U11. $F=1500$  ga

U12. $F*0.3=1500*0.3=450$  ga

U13. $F*0.3=1500*0.3=450$  ga

U14. $F=1500$  ga

U15. $F*0.55=1500*0.55=825$ kg/ga

U16. $U_{15}*5=825*5=4125$  m/km

U17. $F=1500$  ga

U18. $F*0.05=1500*0.05=75$  km

U19. $F*0.3=1500*0.3=450$  ga

U20. $F=1500$  ga

U21. $F*2=1500*2=3000$   t/m

U22. $F*0.3=1500*03=450$  ga

U28. $F=1500$  ga

U29. $F=1500$  ga

U30. $F=1500$  ga

U31. $F=1500$  ga

U32. $F=1500$  ga

U33. $F=1500$  ga

U34. $F=1500$  ga

U35. $F=1500$  ga

U36. $F*0.5=1500*0.5=750$  ga

U37.1. $F_{bm}=9.9$

U 37.2. $F_{bm}=9.9$

U 37.3. $F_{bm}=9.9$

U37.4. $F_{bm}*3*3=9.9*3*3=89$

U37.5 $F_{bm}=9.9$

U38. $F*0.5*h*0.6=1500*0.5*31*0.6=13950$

U39. $U_{38}*5=13950*5=69750$   t/km

U40 $F*0.5- F_{bm}=1500*0.5-9.9=740.1$  ga

U41. $U_{40}*h*0.9*5=740.1*31*0.9*5=1274616.6$

U42. $F*0.5*h*0.20=1500*0.5*31*0.20=9300$

U43. $U_{42}*5=9300*5=46500$  t/km

U44. $=U_{40}=740.1$   ga

U45. $U_{40}*h*0.1*5=740.1*31*5=11471.5$   km

U23. $U_{21}*5=450*5=2250$  t/km          U46. $F*0.5*h*0.1*5=1500*0.5*31*0.1*5=11625$

U24. $F*1.025=1500*1.025=1537.5$     U47. $U_{46}*5=11625*5=58125$   t/km

to

U25. $U_{24}*5=1537.5*5=7687.5$          U48. $F-F_{bm}=1500-9.9=1490.1$

t/km

U26. $F=1500$  ga                              U49. $U_{48}*3=1490.1*3=4470.3$

U27. $F*0.1=1500*0.1=150$  km        U50. $U_{49}*3=4470.3*3=13410.9$   t/km
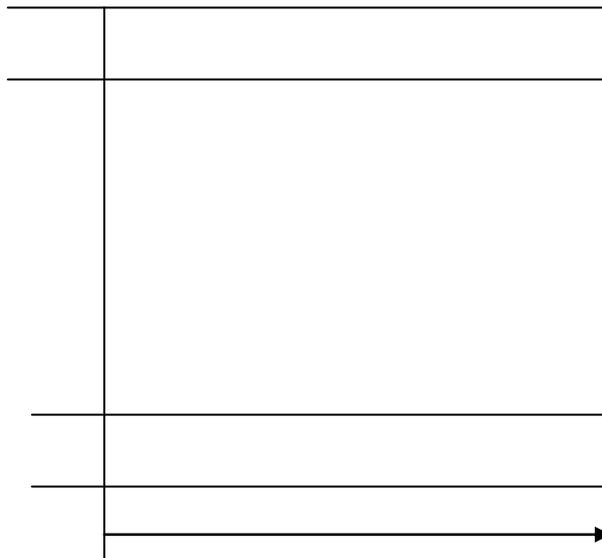


   **1)Kartaning enini aniqlash**

$$B=\frac{F_1}{L}=\frac{34}{1500}=\frac{10000 \bullet 34}{1500}=227$$

   **2)Bitta kartani burilish maydoni**

$$F_{bm}=2E \bullet B=2 \bullet 10 \bullet 227=4540$$

   **3)Mashina terimga ajratilgan maydondagi kartalar sonini aniqlash**

$$n=\frac{0,5 \bullet 1500}{F_1}=\frac{750}{34}=22$$

   **4)Umumiy burilish maydonini aniqlash**

$$F_{bm} \bullet n=4540 \bullet 22=99880$$

# Shartli etalon gektarlardagi ish xajmi quyidagicha topiladi

## 6-ustunni to'ldirish uchun 4-ustunni 5-ustunga ko'paytiramiz

$$Ush = U*Kn$$

1. **Ush** = 3000*0.03=90 sh,et,ga

2. **Ush** = 45000*0.05=2250 sh,et,ga

3. **Ush** = 22500*0,28=6300 sh,et,ga

4. **Ush** =75*0,30=22,5 sh,et,ga

5. **Ush** =1500*0,22=330 sh,et,ga

6. **Ush** =750*0,03=22,5 sh,et,ga

7. **Ush** =3750*0,05=187,5 sh,et,ga

8. **Ush** =1500*0,29=435 sh,et,ga

9. **Ush** =1500*2,44=3660 sh,et,ga

10. **Ush** =300*0,44=132 sh,et,ga

11. **Ush** =1500*0,20=300 sh,et,ga

12. **Ush** =450*0,54=243 sh,et,ga

13. **Ush** =450*0,70=315 sh,et,ga

14. **Ush** =1500*0,46=690 sh,et,ga

15. **Ush** =825*0,05=41,2 sh,et,ga

16. **Ush** =4125*0,06=247,5 sh,et,ga

17. **Ush** =1500*0,43=64 sh,et,ga

18. **Ush** =75*0,30=22,5 sh,et,ga

19. **Ush** =450*0,41=184,5 sh,et,ga

20. **Ush** =1500*0,50=750 sh,et,ga

21. **Ush** =3000*0,03=90 sh,et,ga

28. **Ush** =1500*0,42=630 sh,et,ga

29. **Ush** =1500*0,42=630 sh,et,ga

30. **Ush** =1500*0,42=630 sh,et,ga

31. **Ush** =1500*0,40=600 sh,et,ga

32. **Ush** =1500*0,53=795 sh,et,ga

33. **Ush** =1500*0,40=600 sh,et,ga

34. **Ush** =1500*0,59=885 sh,et,ga

35. **Ush** =1500*0,40=600 sh,et,ga

36. **Ush** =750*0,30=225 sh,et,ga

37.1. **Ush** =9,9*0,70=6,9 sh,et,ga

37.2. **Ush** =9,9*1,01=9,9 sh,et,ga

37.3. **Ush** =9,9*0,85=8,4 sh,et,ga

37.4. **Ush** =89*0,06=5,3 sh,et,ga

37.5 .**Ush** = 9,9*1,02=10 sh,et,ga

38. **Ush** =13950*0,05=697,5 sh,et,ga

39. **Ush** =69750*0,06=4185 sh,et,ga

40. **Ush** =740,1*1,01=747,5 sh,et,ga

41. **Ush** =1274616,6*0,06=76476,9 sh,et

42. **Ush** =9300*0,05=465 sh,et,ga

43. **Ush** =46500*0,06=2790 sh,et,ga

44. **Ush** =740,1*0,96=710,4 sh,et,ga

22. **Ush** =450*0,45=202,5 sh,et,ga

23. **Ush** =2250*0,05=112,5 sh,et,ga

24. **Ush** =1537,5*0,05=76,8 sh,et,ga

25. **Ush** =7687,5*0,06=461,2 sh,et,ga

26. **Ush** =1500*0,40=600 sh,et,ga

27. **Ush** =150*0,30=45 sh,et,ga

45. **Ush** =11471,5*0,06=688,2 sh,et,ga

46. **Ush** =11625*0,05=581,2 sh,et,ga

47. **Ush** =58125*0,06=3487,5 sh,et,ga

48. **Ush** =1490,1*0,43=640,7 sh,et,ga

49. **Ush** =4470,3*0,06=268,2 sh,et,ga

50. **Ush** =13410,9*0,06=840,6 sh,et,ga

**Bir smenilik ish umumi quyidagi fo'rmuladan foydalanamiz**

**14-ustun  topish  uchun 7soat     13  ustunga ko'paytiramiz**

$$W_{sm}=T_{sm}*W_{sm} \qquad T_{sm}=7soat \qquad W_S\text{-}13 \text{ ustun}$$

1. $W_{sm}=7* 3.7=25.9$ ga/sm

2. $W_{sm}=7*25=175$ ga/sm

3. $W_{sm}=7*30=210$ ga/sm

4. $W_{sm}=7*2=14$ ga/sm

5. $W_{sm}=7*1.5=10.5$ga/sm

6. $W_{sm}=7*8=56$ ga/sm

7 $W_{sm}=7*2.5=17.5$ ga/sm

8. $W_{sm}=7*1.5=10.5$ g ga/sm a/sm

9. $W_{sm}=7*0.55=3.8$ ga/sm

10. $W_{sm}=7*1.5=10.5$ ga/sm

11. $W_{sm}=7*6.6=46.2$ ga/sm

12. $W_{sm}=7*1.6=11.2$ ga/sm

13. $W_{sm}=7*1=7$ ga/sm

14. $W_{sm}=7*2.8=19.6$ ga/sm

15. $W_{sm}=7*5=35$ ga/sm

16. $W_{sm}=7*20=140$ ga/sm

17. $W_{sm}=7*0.84=5.8$ ga/sm

18. $W_{sm}=7*1.5=10.$ ga/sm

19. $W_{sm}=7*2.14=14.9$ ga/sm

20. $W_{sm}=7*0.72=5.04$ ga/sm

28. $W_{sm}=7*0.95=6.6$ ga/sm

29. $W_{sm}=7*0.95=6.6$ ga/sm

30. $W_{sm}=7*1.05=10.5$ ga/sm

31. $W_{sm}=7*1.1=7.7$ ga/sm

32. $W_{sm}=7*1.15=8.05$ ga/sm

33. $W_{sm}=7*1.1=7.7$ ga/sm

34. $W_{sm}=7*0.99=6.9$ ga/sm

35. $W_{sm}=7*0.99=6.9$ ga/sm

36. $W_{sm}=7*4.5=31.5$ ga/sm

37.1. $W_{sm}=7*2.2=15.9$ ga/sm

37.2. $W_{sm}=7*1.2=8.4$ ga/sm

37.3. $W_{sm}=7*1=7$ ga/sm

37.4. $W_{sm}=7*25=175$ ga/sm

37.5 $W_{sm}=7*1=7$ ga/sm

38. $W_{sm}=7*5=35$ ga/sm

39. $W_{sm}=7*20=140$ ga/sm

40. $W_{sm}=7*0.47=3.2$ ga/sm

41. $W_{sm}=7*20=140$ ga/sm

42. $W_{sm}=7*5=35$ ga/sm

43. $W_{sm}=7*20=140$ ga/sm

21. $W_{sm}=7*8=56$ ga/sm

22. $W_{sm}=7*1.4=10.8$ ga/sm

23. $W_{sm}=7*25=175$ ga/sm

24. $W_{sm}=7*8=56$ ga/sm

25. $W_{sm}=7*25=17$ ga/sm 5

26. $W_{sm}=7*0.24=1.6$ ga/sm

27. $W_{sm}=7*1.5=10.5$ ga/sm

44. $W_{sm}=7*1.21=8.47$ ga/sm

45. $W_{sm}=7*20=140$ ga/sm

46. $W_{sm}=7*5=35$ ga/sm

47. $W_{sm}=7*20=140$ ga/sm

48. $W_{sm}=7*1=7$ ga/sm

49. $W_{sm}=7*15=105$ ga/sm

50. $W_{sm}=7*25=175$ ga/sm

## Traktorni agrotexnik muddatda bajargan ishi quyidagicha topiladi

15-ustun  topish  uchun quyidagi fo'rmuladan foydalanamiz

$W_{im}=W_{sm}*n_{sm}*D_{ish}$  Wsm=14-ustun.   $n_{sm}$=12-ustun.  $D_{ish}$=8-ustun

1. $W_{im} = 25.9*2*27.7=1434.8$   ga/t

2. $W_{im}= 175 * 2*27.7 = 9695$    ga/t

3. $W_{im}= 210 *1* 19.5 = 4095$   ga/t

4. $W_{im}=  14* 1* 27.7  =  387.8$ ga/t

5. $W_{im}=10.5*1*22.5=236.2$ ga/t

6. $W_{im}=56*1.5*27.7=1890$ ga/t

7 $W_{im}=175*1.5*21.55=5656.8$ ga/t

8. $W_{im}=10.5*1*22.5=236.2$ ga/t

9. $W_{im}=3.8*1*22.5=85.5$ ga/t

10. $W_{im}=10.5*1*13.5=141.7$ ga/t

11. $W_{im}=46.2*1*9.75=448.1$ ga/t

12. $W_{im}=11.2*3*12=403.2$ ga/t

13. $W_{im}=7*3*12=252$ ga/t

14. $W_{im}=19.6*3*9.3=546.8$ ga/t

15. $W_{im}=35*1*9.3=325.5$ ga/t

16. $W_{im}=140*19.3=1302$ ga/t

28. $W_{im}=6.6*1.5*13.95=138.1$ ga/t

29. $W_{im}=6.6*1.5*13.95=138.1$ ga/t

30. $W_{im}=10.5*1.5*13.95=219.7$ ga/t

31. $W_{im}=7.7*1.5*13.95=161.1$ ga/t

32. $W_{im}=8.05*1.5*14.25=172.06$ ga/t

33. $W_{im}=7.7*1.5*14.25=164.5$ ga/t

34. $W_{im}=6.9*1.5*14.25=147.4$ ga/t

35. $W_{im}=6.9*1.5*14.25=147.4$ ga/t

36. $W_{im}=31.5*1*14.25=448.8$ ga/t

37.1. $W_{im}=15.9*1*9.5=151.05$ ga/t

37.2. $W_{im}=8.4*1*32.95=276.7$ ga/t

37.3. $W_{im}=7*1*4.75=33.2$ ga/t

37.4. $W_{im}=175*1*465=813.7$ ga/t

37.5 $W_{im}=7*1*7.6=53.2$ ga/t

38. $W_{im}=35*1*14.25=498.7$ ga/t

39. $W_{im}=140*1*14.25=1995$ ga/t

*17. $W_{im}=5.8*1.5*9.3=80.9$ ga/t*

*18. $W_{im}=10.5*1*4.65=48.8$ ga/t*

*19. $W_{im}=10.5*1*4.65=48.8$ ga/t*

*20. $W_{im}=5.04*1.5*13.95=623.5$ ga/t*

*21. $W_{im}=56*2*9.3=105.4$ ga/t*

*22. $W_{im}=10.8*1*12.25=1041.6$ ga/t*

*23. $W_{im}=175*2*9.3=132.3$ ga/t*

*24. $W_{im}=56*2*9.3=3255$ ga/t*

*25. $W_{im}=175*2*9.3=1041.6$ ga/t*

*26. $W_{im}=1.6*1.5*13.95=3255$ ga/t*

*27. $W_{im}=10.5*1*3.43=33.48$ ga/t*

*40. $W_{im}=3.2*1.5*16=76.8$ ga/t*

*41. $W_{im}=140*1.5*16=3360$ ga/t*

*42. $W_{im}=35*1*9.8=343$ ga/t*

*43. $W_{im}=140*1*9.8=1372$ ga/t*

*44. $W_{im}=8.47*1.5*9.7=123.2$ ga/t*

*45. $W_{im}=140*1.5*9.7=2037$ ga/t*

*46. $W_{im}=35*1*4.85=169.7$ ga/t*

*47. $W_{im}=140*1*14.55=2037$ ga/t*

*48. $W_{im}=7*1*19.94=139.5$ ga/t*

*49. $W_{im}=105*1*19.94=2093.7$ ga/t*

*50. $W_{im}=175*1*19.94=3489.5$ ga/t*

## Trakto'r va QXM ning kerak bo'lgan soni (trakto'r)uchun

**16-ustun  topish  uchun quyidagi fo'rmuladan foydalanamiz**

$$M_{tp}=U/W_{im} \qquad U\text{-4 ustun} \quad W_{im}\text{-15 ustun}$$

1. $M_{tp}=3000/1450,4=2,06$ dona

2. $M_{tp}=45000/9800=4,59$ dona

3. $M_{tp}=22500/6300=3,57$ dona

4. $M_{tp}=75/280=0,26$ dona

5. $M_{tp}=1500/262,5=5,71$ dona

6. $M_{tp}=750/1680=0,44$ dona

7 $M_{tp}=3750/5250=0,71$ dona

8. $M_{tp}=1500/262,5=5,71$ dona

9. $M_{tp}=1500/95=15,7$ dona

10. $M_{tp}=300/262,5=1,14$ dona

11. $M_{tp}=1500/693=2,16$ dona

12. $M_{tp}=4125/4032=1,01.$ dona

13. $M_{tp}=450/168=2,67$ dona

14. $M_{tp}=450/105=4,28$ dona

28. $M_{tp}=1500/99=15,15$ dona

29. $M_{tp}=1500/99=15,15$ dona

30. $M_{tp}=1500/157,5=9,52$ dona

31. $M_{tp}=1500/115,5=12,9$ dona

32. $M_{tp}=1500/120,7=12,42$ dona

33. $M_{tp}=1500/115,5=12,98$ dona

34. $M_{tp}=1500/103,5=14,49$ dona

35. $M_{tp}=1500/103,5=14,49$ dona

36. $M_{tp}=750/472,5=1,58$ dona

37.1. $M_{tp}=9.9/159=0,06$ dona

37.2. $M_{tp}=9.9/42=0,23$ dona

37.3. $M_{tp}=9.9/35=0,28$ dona

37.4. $M_{tp}=89/875=0,10$ dona

37.5 $M_{tp}=9,9/98=0,1$ dona

15. $M_{tp}$=1500/196=7,65 dona

16. $M_{tp}$=825/350=2,35 dona

17. $M_{tp}$=4125/1400=2,94 dona

18. $M_{tp}$=1500/58=25,86 dona

19. $M_{tp}$=450/447=1,006 dona

20. $M_{tp}$=1500/447=1,006 dona

21. $M_{tp}$=3000/75,6=19,84 dona

22. $M_{tp}$=450/560=0,69 dona

23. $M_{tp}$=2250/648=1,28 dona

24. $M_{tp}$=1537.5/1750=1,28 dona

25. $M_{tp}$=7687,5/560=4,34 dona

26. $M_{tp}$=7687,5/560=4,34 dona

27. $M_{tp}$=150/787,5=1,9 dona

38. $M_{tp}$=13950/525=26,5 dona

39. $M_{tp}$=69750/2100=33,21 dona

40. $M_{tp}$=740.1/72=10,27 dona

41. $M_{tp}$=1274614/3150=404,6 dona

42. $M_{tp}$=9300/525=17,71 dona

43. $M_{tp}$=46500/2100=22,14 dona

44. $M_{tp}$=740.1/169,4=4,36 dona

45. $M_{tp}$=11471.5/2100=5,46 dona

46. $M_{tp}$=11625/175=67,5 dona

47. $M_{tp}$=58125/700=83,03 dona

48. $M_{tp}$=1490.1/140=10,06 dona

49. $M_{tp}$ =4470.3/2100=2,12 dona

50. $M_{tp}$=13410.9/3500=3,83 dona

## Trakto'r va QXM ning kerak bo'lgan soni (QXM)uchun

### 17-ustun  topish  uchun quyidagi fo'rmuladan foydalanamiz

$M_{kxm}=M_{tp}*n_{kxm}$       $M_{tp}$-16ustun          $n_{kxm}$-11ustun

1.$M_{kxm}$=2,06*1=2,06 dona

2.$M_{kxm}$=4,59*2=10,8 dona

3.$M_{kxm}$=3,57*1=3,57 dona

4.$M_{kxm}$=0,26*1=0,26 dona

5.$M_{kxm}$=5,71*1=5,71 dona

6.$M_{kxm}$=0,44*1=0,44 dona

7.$M_{kxm}$=0,71*1=0,71 dona

8.$M_{kxm}$=5,57*1=5,57 dona

9.$M_{kxm}$=15,7*1=15,1 dona

10.$M_{kxm}$=1,14*1=1,14 dona

11.$M_{kxm}$=2,16*1=2,16 dona

12.$M_{kxm}$=2,57*1=2,57 dona

13.$M_{kxm}$=4,28*1=4,28 dona

14.$M_{kxm}$=7,65*1=7,65 dona

15.$M_{kxm}$=2,35*1=2,36 dona

16.$M_{kxm}$=2,94*2=5,88 dona

17.$M_{kxm}$=25,86*1=25,86 dona

28$M_{kxm}$=15,15*1=15,15 dona

29.$M_{kxm}$=15,15*1=15,15 dona

30.$M_{kxm}$=9,59*1=9,59 dona

31.$M_{kxm}$=12,98*1=12,98 dona

32.$M_{kxm}$=12,42*1=12,42 dona

33.$M_{kxm}$=12,98*1=12,98 dona

34.$M_{kxm}$=14,49*1=14,49 dona

35.$M_{kxm}$=14,42*1=14,42 dona

36.$M_{kxm}$=1,58*1=1,58 dona

37,1.$M_{kxm}$=0,06*1=0,06 dona

37,2.$M_{kxm}$=0,23*1=0,23 dona

37,3.$M_{kxm}$=0,28*1=0,28 dona

37,4.$M_{kxm}$=0,10*1=0,10 dona

37,5.$M_{kxm}$=0,10*1=0,10 dona

38.$M_{kxm}$=26,5*1=26,5 dona

39.$M_{kxm}$=33,21*1=33,21 dona

40.$M_{kxm}$=10,27*1=1027 dona

18.$M_{kxm}$=1,42*1=1,42 dona
19.$M_{kxm}$=1,006*1=1,006 dona
20.$M_{kxm}$=19,84*1=19,84 dona
21.$M_{kxm}$=5,35*1=5,35 dona
22.$M_{kxm}$=0,69*1=0,69 dona
23.$M_{kxm}$=1,28*1=1,28 dona
24.$M_{kxm}$=2,74*1=2,74 dona
25.$M_{kxm}$=4,39*1=4,39 dona
26.$M_{kxm}$=93,7*1=93,7 dona
27.$M_{kxm}$=1,9*1=1,9 dona

41.$M_{kxm}$=404,6*1=404,1 dona
42.$M_{kxm}$=17,71*1=17,71 dona
43.$M_{kxm}$=22,14*1=22,14 dona
44.$M_{kxm}$=4,36*1=4,36 dona
45.$M_{kxm}$=5,46*1=5,46 dona
46.$M_{kxm}$=67,5*1=67,5 dona
47.$M_{kxm}$=83,03*1=83,03 dona
48.$M_{kxm}$=10,6*1=10,6 dona
49.$M_{kxm}$=2,12*1=2,12 dona
50.$M_{kxm}$=3,83*1=3,83 dona

# Aperatsiya bajarishga kerak bo'lgan yonilg'i miqdori

### 19-ustunni  topish  uchun quyidagi fo'rmuladan foydalanamiz

$Q_i$=U*Q                    U-4ustun                    Q-18ustun

1. $Q_i$ =3000*0,80=240kg
2. $Q_i$ =45000*0,2=9000 kg
3. $Q_i$ =22500*0,6=13500 kg
4. $Q_i$ =75*2,43=3225 kg
5 $Q_i$.=1500*3,9=5850 kg
6. $Q_i$ =750*0,20=150 kg
7. $Q_i$ =3750*0,2=750 kg
8. $Q_i$ =1500*3,9=5850 kg
9. $Q_i$ =1500*27,6=41,400 kg
10. $Q_i$ =300*13,2=3960 kg
11. $Q_i$ =1500*1,9=2850 kg
12. $Q_i$ =450*6,5=2925 kg
13. $Q_i$ =450*8,9=4005 kg
14. $Q_i$ =1500*8,5=12750 kg
15. $Q_i$ =825*0,25=206,2 kg
16. $Q_i$ =4125*0,25=1031,2 kg
17. $Q_i$ =1500*4=6000 kg
18. $Q_i$ =75*11,3=847,5 kg
19. $Q_i$ =450*5,1=2295 kg
20. $Q_i$ =1500*5,1=7650 kg
21. $Q_i$ =3000*0,20=600 kg
22. $Q_i$ =450*3,3=1485 kg
23. $Q_i$ =2250*0,2=450 kg
24. $Q_i$ =1537,5*0,20=307,5 kg
25. $Q_i$ =7687,5*0,2=1537,5 kg
26. $Q_i$ =1500*3,9=5850 kg

28. $Q_i$ =1500*5,1=7650 kg
29. $Q_i$ =1500*4,7=7050 kg
30. $Q_i$ =1500*4,8=7200 kg
31. $Q_i$ =1500*4,9=7350 kg
32. $Q_i$ =1500*4,8=7200 kg
33. $Q_i$ =1500*4,9=7350 kg
34. $Q_i$ =1500*4,4=6600 kg
35. $Q_i$ =1500*4,4=6600 kg
36. $Q_i$ =750*5,3=3975 kg
37,1. $Q_i$ =9,9*4,4=43,5 kg
37,2. $Q_i$ =9,9*4,6=45,5 kg
37,3. $Q_i$ =9,9*4,6=45,5 kg
37,4. $Q_i$ =89*0,2=17,8 kg
37,5. $Q_i$ =99*1,3=128,7 kg
38. $Q_i$ =13950*0,20=2790 kg
39. $Q_i$ =69750*0,25=17437,5 kg
40. $Q_i$ =704,1*6,4=4506,2 kg
41. $Q_i$ =1274616,6*0,25=318654,2 kg
42. $Q_i$ =9300*0,50=4650 kg
43. $Q_i$ =46500*0,25=11625 kg
44. $Q_i$ =704,1*5,5=4070,5 kg
45. $Q_i$ =11471,5*0,25=2867,8 kg
46. $Q_i$ =11625*0,20=2325 kg
47. $Q_i$ =58125*0,25=14531,2 kg
48. $Q_i$ =1490,1*3,5=5215,3 kg
49. $Q_i$ =4470,3*0,2=894,06 kg

27. $Q_i$ =150*4,3=645 kg                    50. $Q_i$ =13410,9*0,2=2682,1 kg

# Moylash materiallarini va yurgazib yuborishga ishlatiladigan moyni miqdori
## (Mato'r moyi) uchun

**20-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz**

$$Q_{мм}=q_{мм}*Q_i*4,8 \qquad q_{мм}=18\text{-ustun} \qquad Q_i=19\text{ustun}$$

1. $Q_{мм}$=0,80*240*4,8=921,6kg
2. $Q_{мм}$=0,2*9000*4,8=864 kg
3. $Q_{мм}$=0,6*13500*4,8=3888 kg
4. $Q_{мм}$=2,43*3225*4,8=37616,16 kg
5. $Q_{мм}$=3,9*5850*4,8=109512 kg
6. $Q_{мм}$=0,20*150*4,8=144 kg
7. $Q_{мм}$=0,2*750*4,8=720 kg
8. $Q_{мм}$=3,9*5850*4,8=10952 kg
9. $Q_{мм}$=27,6*41,400*4,8=54846,72 kg
10. $Q_{мм}$=13,2*3960*4,8=250905 kg
11. $Q_{мм}$=1,9*2850*4,8=25992 kg
12. $Q_{мм}$=6,5*2925*4,8=91260 kg
13. $Q_{мм}$=8,9*4005*4,8=19224 kg
14. $Q_{мм}$=8,5*12750*4,8=61200 kg
15. $Q_{мм}$=0,25*206,2*4,8=989,76 kg
16. $Q_{мм}$=0,25*1031,2*4,8=4949,76 kg
17. $Q_{мм}$=4*6000*4,8=28800 kg
18. $Q_{мм}$=11,3*847,5*4,8=4068 kg
19. $Q_{мм}$=5,1*2295*4,8=11016 kg
20. $Q_{мм}$=5,1*7650*4,8=36790 kg
21. $Q_{мм}$=0,20*600*4,8=2880 kg
22. $Q_{мм}$=3,3*1485*4,8=7128 kg
23. $Q_{мм}$=0,2*450*4,8=2160 kg
24. $Q_{мм}$=0,20*307,5*4,8=1476 kg
25. $Q_{мм}$=0,2*1537,5*4,8=7380 kg
26. $Q_{мм}$=3,9*5850*4,8=28080 kg
27. $Q_{мм}$=4,3*645*4,8=3096 kg

28. $Q_{мм}$=5,1*7650*4,8=36720 kg
29. $Q_{мм}$=4,7*7050*4,8=33840 kg
30. $Q_{мм}$=4,8*7200*4,8=34560 kg
31. $Q_{мм}$=4,9*7350*4,8=35280 kg
32. $Q_{мм}$=4,8*7200*4,8=34560 kg
33. $Q_{мм}$=4,9*7350*4,8=35280 kg
34. $Q_{мм}$=4,4*6600*4,8=31680 kg
35. $Q_{мм}$=4,4*6600*4,8=31680 kg
36. $Q_{мм}$=5,3*3975*4,8=19080 kg
37,1. $Q_{мм}$=4,4*43,5*4,8=208,8 kg
37,2. $Q_{мм}$=4,6*45,5*4,8=218,4 kg
37,3. $Q_{мм}$=4,6*45,5*4,8=218,4 kg
37,4. $Q_{мм}$=0,2*17,8*4,8=85,44 kg
37,5. $Q_{мм}$=1,3*128,7*4,8=617,76 kg
38. $Q_{мм}$=0,20*2790*4,8=2790 kg
39. $Q_{мм}$=0,25*17437,5*4,8=17437,5 kg
40. $Q_{мм}$=6,4*4506,2*4,8=4506,2 kg
41. $Q_{мм}$=0,25*318654,2*4,8=318654,2 kg
42. $Q_{мм}$=0,50*4650*4,8=4650 kg
43. $Q_{мм}$=0,25*11625*4,8=11625 kg
44. $Q_{мм}$=5,5*4070,5*4,8=4070,5 kg
45. $Q_{мм}$=0,25*2867,8*4,8=2867,8 kg
46. $Q_{мм}$=0,20*2325*4,8=2325 kg
47. $Q_{мм}$=0,25*14531,2*4,8=14531,2 kg
48. $Q_{мм}$=3,5*5215,3*4,8=5215,3 kg
49. $Q_{мм}$=0,2*894,06*4,8=894,06 kg
50. $Q_{мм}$=0,2*2682,1*4,8=2682,1 kg

# Moylash materiallarini va yurgazib yuborishga ishlatiladigan moyni miqdori
### (Trasmissiya moyi) uchun

**21-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz**

$Q_{мм}=q_{мм}*Q_i*1$      $q_{мм}=$18-ustun      $Q_i=$19ustun

1. $Q_{мм}$=0,80*240*1=192kg
2. $Q_{мм}$=0,2*9000*1=180 kg
3. $Q_{мм}$=0,6*13500*1=8100 kg
4. $Q_{мм}$=2,43*3225*1=7836,7 kg
5. $Q_{мм}$=3,9*5850*1=22815 kg
6. $Q_{мм}$=0,20*150*1=30 kg
7. $Q_{мм}$=0,2*750*1150=172500 kg
8. $Q_{мм}$=3,9*5850*1=22815 kg
9. $Q_{мм}$=27,6*41,400*1=1142640 kg
10. $Q_{мм}$=13,2*3960*1==52272 kg
11. $Q_{мм}$=1,9*2850*1=5415 kg
12. $Q_{мм}$=6,5*2925*1=19012,5 kg
13. $Q_{мм}$=8,9*4005*1=35644,5 kg
14. $Q_{мм}$=8,5*12750*1=108375 kg
15. $Q_{мм}$=0,25*206,2*1=51,5 kg
16. $Q_{мм}$=0,25*1031,2*1=257,8 kg
17. $Q_{мм}$=4*6000*1=24000 kg
18. $Q_{мм}$=11,3*847,5*1=9576,7 kg
19. $Q_{мм}$=5,1*2295*1=11704,5
20. $Q_{мм}$=5,1*7650*1=59692,9
21. $Q_{мм}$=0,20*600*1=120 kg
22. $Q_{мм}$=3,3*1485*1=4900,5 kg
23. $Q_{мм}$=0,2*450*1=90 kg
24. $Q_{мм}$=0,20*307,5*161,5=9932,2 kg
25. $Q_{мм}$=0,2*1537,5*1=307,5 kg
26. $Q_{мм}$=3,9*5850*1=22815 kg
27. $Q_{мм}$=4,3*645*1=2773,5 kg

28. $Q_{мм}$=5,1*7650*1=39015 kg
29. $Q_{мм}$=4,7*7050*1=33135 kg
30. $Q_{мм}$=4,8*7200*1=34560 kg
31. $Q_{мм}$=4,9*7350*1=36015 kg
32. $Q_{мм}$=4,8*7200*1=34560 kg
33. $Q_{мм}$=4,9*7350*1=36015 kg
34. $Q_{мм}$=4,4*6600*1=29040 kg
35. $Q_{мм}$=4,4*6600*1=29040 kg
36. $Q_{мм}$=5,3*3975*1=21067,5 kg
37,1. $Q_{мм}$=4,4*43,5*1=191,4 kg
37,2. $Q_{мм}$=4,6*45,5*1=209,3 kg
37,3. $Q_{мм}$=4,6*45,5*1=209,3 kg
37,4. $Q_{мм}$=0,2*17,8*1=3,56 kg
37,5. $Q_{мм}$=1,3*128,7*1=167,3 kg
38. $Q_{мм}$=0,20*2790*1=558 kg
39. $Q_{мм}$=0,25*17437,5*1=4359,3 kg
40. $Q_{мм}$=6,4*4506,2*1=28839,6 kg
41. $Q_{мм}$=0,25*318654,2*1=79663,5 kg
42. $Q_{мм}$=0,50*4650*1=2325 kg
43. $Q_{мм}$=0,25*11625*1=2906,25 kg
44. $Q_{мм}$=5,5*4070,5*1=22387,7 kg
45. $Q_{мм}$=0,25*2867,8*1=716,9 kg
46. $Q_{мм}$=0,20*2325*1=465 kg
47. $Q_{мм}$=0,25*14531,2*1=3632,8 kg
48. $Q_{мм}$=3,5*5215,3*1=18253,55 kg
49. $Q_{мм}$=0,2*894,06*1=178,8 kg
50. $Q_{мм}$=0,2*2682,1*1=536,42 kg

# Moylash materiallarini va yurgazib yuborishga ishlatiladigan moyni miqdori

## (Salidor) uchun

**22-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz**

$$Q_{MM}=q_{MM}*Q_i*0,8 \qquad q_{MM}=18\text{-ustun} \qquad Q_i=19\text{ustun}$$

1. $Q_{MM}=0,80*240*0,8=153,6$ kg
2. $Q_{MM}=0,2*9000*0,8=144$ kg
3. $Q_{MM}=0,6*13500*0,8=6480$ kg
4. $Q_{MM}=2,43*3225*0,8=6269,3$ kg
5. $Q_{MM}=3,9*5850*0,8=18252$ kg
6. $Q_{MM}=0,20*150*0,8=24$ kg
7. $Q_{MM}=0,2*750*0,8=120$ kg
8. $Q_{MM}=3,9*5850*0,8=18252$ kg
9. $Q_{MM}=27,6*41,400*0,8=914112$ kg
10. $Q_{MM}=13,2*3960*0,8=41817,6$ kg
11. $Q_{MM}=1,9*2850*0,8=4332$ kg
12. $Q_{MM}=6,5*2925*0,8=15210$ kg
13. $Q_{MM}=8,9*4005*0,8=28515,6$ kg
14. $Q_{MM}=8,5*12750*0,8=86700$ kg
15. $Q_{MM}=0,25*206,2*0,8=41,2$ kg
16. $Q_{MM}=0,25*1031,2*0,8=206,24$ kg
17. $Q_{MM}=4*6000*0,8=19200$ kg
18. $Q_{MM}=11,3*847,5*0,8=7661,36$ kg
19. $Q_{MM}=5,1*2295*0,8=7661,36$ kg
20. $Q_{MM}=5,1*7650*0,8=9363,6$ kg
21. $Q_{MM}=0,20*600*0,8=47754,3$ kg
22. $Q_{MM}=3,3*1485*0,8=96$ kg
23. $Q_{MM}=0,2*450*0,8=3920,4$ kg
24. $Q_{MM}=0,20*307,5*0,8=72$ kg
25. $Q_{MM}=0,2*1537,5*0,8=49,2$ kg
26. $Q_{MM}=3,9*5850*0,8=246$ kg
27. $Q_{MM}=4,3*645*0,8=18252$ kg

28. $Q_{MM}=5,1*7650*0,8=2218,8$ kg
29. $Q_{MM}=4,7*7050*0,8=31212$ kg
30. $Q_{MM}=4,8*7200*0,8=26508$ kg
31. $Q_{MM}=4,9*7350*0,8=27648$ kg
32. $Q_{MM}=4,8*7200*0,8=28812$ kg
33. $Q_{MM}=4,9*7350*0,8=27648$ kg
34. $Q_{MM}=4,4*6600*0,8=28812$ kg
35. $Q_{MM}=4,4*6600*0,8=23232$ kg
36. $Q_{MM}=5,3*3975*0,8=23232$ kg
37,1. $Q_{MM}=4,4*43,5*0,8=153,12$ kg
37,2. $Q_{MM}=4,6*45,5*0,8=167,44$ kg
37,3. $Q_{MM}=4,6*45,5*0,8=167,44$ kg
37,4. $Q_{MM}=0,2*17,8*0,8=2,84$ kg
37,5. $Q_{MM}=1,3*128,7*0,8=133,84$ kg
38. $Q_{MM}=0,20*2790*0,8=446,4$ kg
39. $Q_{MM}=0,25*17437,5*0,8=3487,44$ kg
40. $Q_{MM}=6,4*4506,2*0,8=23071,6$ kg
41. $Q_{MM}=0,25*318654,2*0,8=63730,8$ kg
42. $Q_{MM}=0,50*4650*0,8=1860$ kg
43. $Q_{MM}=0,25*11625*0,8=2325$ kg
44. $Q_{MM}=5,5*4070,5*0,8=17910,16$ kg
45. $Q_{MM}=0,25*2867,8*0,8=573,52$ kg
46. $Q_{MM}=0,20*2325*0,8=372$ kg
47. $Q_{MM}=0,25*14531,2*0,8=2906,2$ kg
48. $Q_{MM}=3,5*5215,3*0,8=14602,8$ kg
49. $Q_{MM}=0,2*894,06*0,8=143,04$ kg
50. $Q_{MM}=0,2*2682,1*0,8=429,13$ kg

# Ish birligiga ketgan mexnat sarfi

## 25-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz

$H_0 = m/W_c$        m-24ustun        $W_c$-13ustun

1. $H_0 = 1/3,7 = 0,27$kishi/soat
2. $H_0 = 1/25 = 0,04$ kishi/soat
3. $H_0 = 1/30 = 0,03$ kishi/soat
4. $H_0 = 1/2 = 0,5$ kishi/soat
5. $H_0 = 1/1,5 = 0,6$ kishi/soat
6. $H_0 = 1/8 = 0,12$ kishi/soat
7. $H_0 = 1/2,5 = 0,4$ kishi/soat
8. $H_0 = 1/1,5 = 0,6$ kishi/soat
9. $H_0 = 1/0,55 = 1,81$ kishi/soat
10. $H_0 = 1/1,5 = 0,6$ kishi/soat
11. $H_0 = 1/6,6 = 0,15$ kishi/soat
12. $H_0 = 1/1,6 = 0,62$ kishi/soat
13. $H_0 = 1/1 = 1$ kishi/soat
14. $H_0 = 1/2,8 = 0,35$ kishi/soat
15. $H_0 = 1/5 = 0,2$ kishi/soat
16. $H_0 = 1/20 = 0,05$ kishi/soat
17. $H_0 = 2/0,84 = 2,38$ kishi/soat
18. $H_0 = 1/1,5 = 0,66$ kishi/soat
19. $H_0 = 1/2,14 = 0,46$ kishi/soat
20. $H_0 = 1/0,72 = 1,38$ kishi/soat
21. $H_0 = 1/8 = 0,12$ kishi/soat
22. $H_0 = 1/1,44 = 0,69$ kishi/soat
23. $H_0 = 1/25 = 0,04$ kishi/soat
24. $H_0 = 1/8 = 0,12$ kishi/soat
25. $H_0 = 1/25 = 0,04$ kishi/soat
26. $H_0 = 2/0,24 = 4,16$ kishi/soat
27. $H_0 = 1/1,5 = 0,66$ kishi/soat

28. $H_0 = 1/0,95 = 1,05$ kishi/soat
29. $H_0 = 2/0,95 = 2,1$ kishi/soat
30. $H_0 = 1/1,05 = 0,95$ kishi/soat
31. $H_0 = 2/1,1 = 1,81$ kishi/soat
32. $H_0 = 1/1,15 = 0,86$ kishi/soat
33. $H_0 = 1/1,1 = 0,90$ kishi/soat
34. $H_0 = 1/0,99 = 1,01$ kishi/soat
35. $H_0 = 1/0,99 = 1,01$ kishi/soat
36. $H_0 = 1/4,5 = 0,22$ kishi/soat
37.1. $H_0 = 1/2,28 = 0,43$ kishi/soat
37.2. $H_0 = 1/1,2 = 0,83$ kishi/soat
37.3. $H_0 = 1/1 = 1$ kishi/soat
37.4. $H_0 = 1/25 = 0,04$ kishi/soat
37.5. $H_0 = 1/1 = 1$ kishi/soat
38. $H_0 = 1/5 = 0,2$ kishi/soat
39. $H_0 = 1/20 = 0,05$ kishi/soat
40. $H_0 = 1/0,47 = 2,12$ kishi/soat
41. $H_0 = 1/20 = 0,05$ kishi/soat
42. $H_0 = 1/5 = 0,2$ kishi/soat
43. $H_0 = 1/20 = 0,05$ kishi/soat
44. $H_0 = 1/1,21 = 0,82$ kishi/soat
45. $H_0 = 1/20 = 0,05$ kishi/soat
46. $H_0 = 1/5 = 0,2$ kishi/soat
47. $H_0 = 1/20 = 0,05$ kishi/soat
48. $H_0 = 1/1 = 1$ kishi/soat
49. $H_0 = 1/15 = 0,06$ kishi/soat
50. $H_0 = 1/25 = 0,04$ kishi/soat

# Aperatsiya bajarishga ketganmexnat sarfi

## 26-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz

$H_u = U / H_o$       U-4ustun       $H_o$-24ustun

1. $H_u$=3000/1=3000kishi/soat
2. $H_u$=45000/1=45000 kishi/soat
3. $H_u$=22500/1=22500 kishi/soat
4. $H_u$=75/1=75 kishi/soat
5. $H_u$=1500/1=1500 kishi/soat
6. $H_u$=750/1=750 kishi/soat
7. $H_u$=3750/1=3750 kishi/soat
8. $H_u$=1500/1=1500 kishi/soat
9. $H_u$=1500/1=1500 kishi/soat
10. $H_u$=300/1=300 kishi/soat
11. $H_u$=1500/1=1500 kishi/soat
12. $H_u$=450/1=450 kishi/soat
13. $H_u$=450/1=450 kishi/soat
14. $H_u$=1500/1=1500 kishi/soat
15. $H_u$=825/1=825 kishi/soat
16. $H_u$=4125/1=4125 kishi/soat
17. $H_u$=1500/2=750 kishi/soat
18. $H_u$=75/1=75 kishi/soat
19. $H_u$=450/1=450 kishi/soat
20. $H_u$=1500/1=1500 kishi/soat
21. $H_u$=3000/1=3000 kishi/soat
22. $H_u$=450/1=450 kishi/soat
23. $H_u$=2250/1=2250 kishi/soat
24. $H_u$=1537,5/1=1537,5 kishi/soat
25. $H_u$=7687,5/1=7687,5 kishi/soat
26. $H_u$=1500/2=750 kishi/soat
27. $H_u$=150/1=150 kishi/soat

28. $H_u$=1500/1=1500 kishi/soat
29. $H_u$=1500/2=750 kishi/soat
30. $H_u$=1500/1=1500 kishi/soat
31. $H_u$=1500/2=750 kishi/soat
32. $H_u$=1500/1=1500 kishi/soat
33. $H_u$=1500/1=1500 kishi/soat
34. $H_u$=1500/1=1500 kishi/soat
35. $H_u$=1500/1=1500 kishi/soat
36. $H_u$=750/1=750 kishi/soat
37.1. $H_u$=9,9/1=9,9 kishi/soat
37.2. $H_u$=9,9/1=9,9 kishi/soat
37.3. $H_u$=9,9/1=9,9 kishi/soat
37.4. $H_u$=89/1=89 kishi/soat
37.5. $H_u$=99/1=99 kishi/soat
38. $H_u$=13950/1=13950 kishi/soat
39. $H_u$=69750/1=69750 kishi/soat
40. $H_u$=740,1/1=740,1 kishi/soat
41. $H_u$=1274616,6/1=1274616,6 kishi/soat
42. $H_u$=9300/1=9300 kishi/soat
43. $H_u$=46500/1=46500 kishi/soat
44. $H_u$=740,1/1=740,1 kishi/soat
45. $H_u$=11471,5/1=11471,5 kishi/soat
46. $H_u$=11625/1=11625 kishi/soat
47. $H_u$=58125/1=58125 kishi/soat
48. $H_u$=1490,1/1=1490,1 kishi/soat
49. $H_u$=4470,3/1=4470,3 kishi/soat
50. $H_u$=13410,9/1=13410,9 kishi/soat

# Ish birligiga ketgan eksplatatsion harajatlar quyidagicha topiladi

**so'm/ga     so'm/to'nna     so'm/tkm**

**27-ustunni topish  uchun quyidagi fo'rmuladan foydalanamiz**

**Berilgan qiymatni xar-birini 10000 ga ko'paytiramiz.**

1. $C_o$=0,33*10000=3300so'm/ga
2. $C_o$=0,33*10000=3300 so'm/ga
3. $C_o$=3,1*10000=31000 so'm/ga
4. $C_o$=0,04*10000=400 so'm/ga
5. $C_o$=0,69*10000=6900 so'm/ga
6. $C_o$=0,33*10000=3300 so'm/ga
7. $C_o$=3,7*10000=37000 so'm/ga
8. $C_o$=1,5*10000=15000 so'm/ga
9. $C_o$=3,07*10000=30700 so'm/ga
10. $C_o$=0,55*10000=5500 so'm/ga
11. $C_o$=0,67*10000=6700 so'm/ga
12. $C_o$=1,21*10000=12100 so'm/ga
13. $C_o$=0,55*10000=5500 so'm/ga
14. $C_o$=0,50*10000=5000 so'm/ga
15. $C_o$=0,40*10000=4000 so'm/ga
16. $C_o$=0,25*10000=2500 so'm/ga
17. $C_o$=4,6*10000=46000 so'm/ga
18. $C_o$=0,04*10000=400 so'm/ga
19. $C_o$=0,80*10000=8000 so'm/ga
20. $C_o$=1,58*10000=15800 so'm/ga
21. $C_o$=0,33*10000=3300 so'm/ga
22. $C_o$=0,36*10000=3600 so'm/ga
23. $C_o$=0,33*10000=3300 so'm/ga
24. $C_o$=0,33*10000=3300 so'm/ga
25. $C_o$=0,33*10000=3000 so'm/ga
26. $C_o$=1,87*10000=18700 so'm/ga
27. $C_o$=0,28*10000=2800 so'm/ga

28. $C_o$=0,81*10000=8100 so'm/ga
29. $C_o$=1,87*10000=18700 so'm/ga
30. $C_o$=0,81*10000=8100 so'm/ga
31. $C_o$=4,9*10000=49000 so'm/ga
32. $C_o$=4,8*10000=48000 so'm/ga
33. $C_o$=4,9*10000=49000 so'm/ga
34. $C_o$=4,4*10000=44000 so'm/ga
35. $C_o$=4,4*10000=44000 so'm/ga
36. $C_o$=5,3*10000=53000 so'm/ga
37.1. $C_o$=4,4*10000=44000 so'm/ga
37.2. $C_o$=4,6*10000=46000 so'm/ga
37.3. $C_o$=4,6*10000=46000 so'm/ga
37.4. $C_o$=0,2*10000=2000 so'm/ga
37.5. $C_o$=1,3*10000=13000 so'm/ga
38. $C_o$=0,20*10000=2000 so'm/ga
39. $C_o$=0,25*10000=2500 so'm/ga
40. $C_o$=6,4*10000=64000 so'm/ga
41. $C_o$=0,25*10000=2500 so'm/ga
42. $C_o$=0,50*10000=5000 so'm/ga
43. $C_o$=0,25*10000=2500 so'm/ga
44. $C_o$=5,5*10000=55000 so'm/ga
45. $C_o$=0,25*10000=2500 so'm/ga
46. $C_o$=0,20*10000=2000 so'm/ga
47. $C_o$=0,25*10000=2500 so'm/ga
48. $C_o$=3,5*10000=35000 so'm/ga
49. $C_o$=0,2*10000=2000 so'm/ga
50. $C_o$=0,2*10000=2000 so'm/ga

# Aperatsiyani bajarishga ketgan eksplatatsion xarajatlar

## 28-ustunni topish uchun quyidagi fo'rmuladan foydalanamiz

$$C_u = U * C_o * 10000 \qquad U\text{-}4ustun \qquad C_o\text{-}27ustun$$

1. $C_u$=3000*3300*10000=99000000000   so'm
2. $C_u$=45000*3300*10000=1485000000000 so'm
3. $C_u$=22500*31000*10000=6975000000000 so'm
4. $C_u$=75*400*10000=300000000 so'm
5. $C_u$=1500*6900*10000=103500000000 so'm
6. $C_u$=750*3300*10000=24750000000 so'm
7. $C_u$=3750*37000*10000=375000000000 so'm
8. $C_u$=1500*15000*10000=150000000000 so'm
9. $C_u$=1500*30700*10000=460500000000 so'm
10. $C_u$=300*5500*10000=16500000000 so'm
11. $C_u$=1500*6700*10000=301500000000 so'm
12. $C_u$=450*12100*10000=247500000000 so'm
13. $C_u$=450*5500*10000=75000000000 so'm
14. $C_u$=1500*5000*10000=330000000000 so'm
15. $C_u$=825*4000*10000=103125000000 so'm
16. $C_u$=4125*2500*10000=6900000000000 so'm
17. $C_u$=1500*46000*10000=30000000000 so'm
18. $C_u$=75*400*10000=36000000000 so'm
19. $C_u$=450*8000*10000=237000000000 so'm
20. $C_u$=1500*15800*10000=99000000000 so'm
21. $C_u$=3000*3300*10000=162000000000 so'm
22. $C_u$=450*3600*10000=74250000000 so'm
23. $C_u$=2250*3300*10000=50737500000 so'm
24. $C_u$=1537,5*3300*10000=253687500000 so'm
25. $C_u$=7687,5*3300*10000=4200000000 so'm
26. $C_u$=1500*18700*10000=121500000000 so'm
27. $C_u$=150*2800*10000=42000000000 so'm
28. $C_u$=1500*8100*10000=121500000000 so'm
29. $C_u$=1500*18700*10000=280500000000 so'm
30. $C_u$=1500*8100*10000=12150000000000 so'm
31. $C_u$=1500*49000*10000=7350000000000 so'm

32. **C$_u$**=1500*48000*10000=720000000000 so'm
33. **C$_u$**=1500*49000*10000=735000000000 so'm
34. **C$_u$**=1500*44000*10000=660000000000 so'm
35. **C$_u$**=1500*44000*10000=660000000000 so'm
36. **C$_u$**=750*53000*10000=397500000000 so'm
37,1. **C$_u$**=9,9*44000*10000=4356000000 so'm
37,2. **C$_u$**=9,9*46000*10000=4554000000 so'm
37,3. **C$_u$**=9,9*46000*10000=4554000000 so'm
37,4. **C$_u$**=89*2000*10000=1780000000 so'm
37,5. **C$_u$**=99*13000*10000=1287000000 so'm
38. **C$_u$**=13950*2000*10000=279000000000 so'm
39. **C$_u$**=69750*2500*10000=174375000000 so'm
40. **C$_u$**=740,1*64000*10000=473664400000 so'm
41. **C$_u$**=1274616,6*2500*10000=3186541500000 so'm
42. **C$_u$**=9300*5000*10000=46500000000 so'm
43. **C$_u$**=46500*2500*10000=11625000000 so'm
44. **C$_u$**=740,1*55000*10000=40705500000 so'm
45. **C$_u$**=11471,5*2500*10000=286787500000 so'm
46. **C$_u$**=11625*2000*10000=232500000000 so'm
47. **C$_u$**=58125*2500*10000=145312500000 so'm
48. **C$_u$**=1490,1*35000*10000=52153500000 so'm
49. **C$_u$**=4470,3*2000*10000=89406000000 so'm
50. **C$_u$**=13410,9*2000*10000=2682218000000 so'm

**1.Kultivato'rga xar-xil o'rganlar o'rnatilgan sababliy uning tortishga bo'lgaan qarshiligi quyidagi fo'rmula yordamida topiladi.**

$$R_m = G_m \left[ \int_m (1-p) + i \right] + a \bullet n \bullet k_d$$

$$G_m = 1552kg = 15520N$$

$$f_m = 0,1 \qquad \rho = 0,4 \qquad i = 1,2^0$$

$$n_1 = 4dona \qquad\qquad k_d = 20kn \qquad\qquad a_1 = 12sm$$

$$n_2 = 5dona \qquad\qquad k_{d2} = 50kn \qquad\qquad a_2 = 14sm$$

$$n_3 = 8dona \qquad\qquad k_{d3} = 25kn \qquad\qquad a_3 = 5sm$$

$$n_4 = 16dona \qquad\qquad k_{d4} = 30kn \qquad\qquad a_4 = 6sm$$

$$R_m = G_m \left[\int_m (1-p) + i\right] + a \bullet n \bullet k_d = 15520 \bullet [0,1(1-0,4)+1,2] + 12 \bullet 4 \bullet 20 \bullet 14 \bullet 5 \bullet 50 \bullet 8 \bullet 5 \bullet 25 =$$

$$= 16 \bullet 6 \bullet 30 = 15520[1,26] = 27896$$

## 2.Agro'texnik talablarga muofiq kultivato'rli agregatlar

$$R_{m2} = 15520[0,1(1-0,1)-1,2] + 8340 = 15520(-1,14) + 8340 = -9353$$

$$R_m \frac{R_1 + R_2}{2} = \frac{27896 + (-9353)}{2} = 9272$$

$$P_{il} = 10000 \qquad G_{salt} = 5,8\frac{km}{soat} \qquad G_0 = 2kg$$

$$V_{ish} = 4,1\frac{km}{soat} \qquad G_{ish} = 7,7kt$$

$$V_{soat} = 5,3\frac{km}{soat} \qquad V_0 = 0$$

## 3.Trakto'rni tortish kuchidan foydalanish koeffisenti.

$$\eta = \frac{R_m}{P_{il}} = \frac{9272}{10000} = 0,92$$

## 4.Agregatning soatlik ish unumi quyidagi fo'rmula yordamida aniqlanadi

$$W_s = 0,1 \bullet B_{ish} \bullet V_{ish} \bullet \tau = 0,1 \bullet 3,6 \bullet 4,1 \bullet 0,9 = 1,32\frac{ga}{soat}$$

$$\tau = \frac{T_{ish}}{T_{sm}} = \frac{6,33}{7} = 0,90$$

$$T_0 = 0,42 \qquad T_{sm} = 0,25$$

## 5.Agregatning smenalik ish unumi.

$$W_{sm} = W_c \bullet T_{cm} = 1{,}32 \bullet 7 = 9{,}24 \frac{ga}{sm}$$

**6.Agregatning bitta aperatsiya bo'yicha agro'texnik muddatga Bajarilishi mumkin bo'lgan ish miqdori quyidagifo'rmula yordamida topiladi.**

$$W_{um} = W_{sm} \bullet n_{sm} \bullet D_{ish} = 9{,}24 \bullet 2 \bullet 14 = 255{,}7 \frac{ga}{mavsumi}$$

**7.Xar bir aperatsiyani bajarish uchun talab qilinadigan trakto'r va Qishloq xo'jalik mashinalar soni quyidagi fo'rmula yordamida topiladi**

$$M_{tr} = \frac{U_{ro}}{W_{um}} \frac{1500}{256} = 5{,}95 \approx 6 dona$$

$$M_{qxm} = M_{tr} \bullet n_{qxm} = 6 \bullet 1 = 6 dona$$

**8.Ish birligiga sarflanadigon yonilg'i sarfi quyidagi fo'rmula yordamida topiladi**

$$Q = \frac{G_{ish} \bullet T_{ish} + G_{salt} \bullet T_{salt} + G_n \bullet T_0}{W_{sm}} =$$

$$\frac{7{,}7 + 6{,}33 + 5{,}8 \bullet 0{,}28 + 2 \bullet 0{,}42}{9{,}24} = \frac{48{,}74 + 1{,}62 + 0{,}84}{9{,}24} = 5{,}54 \frac{kg}{ga}$$

**9.Aperatsiyani bajarish uchun kerakli yonilg'i miqdori quyidagi for-mula yordamida aniqlanadi**

$$Q_{um} = U \bullet Q = 1500 \bullet 5{,}54 = 8310 kg$$

**10.Moylash materiallari quyidagi fo'rmula yordamida topiladi**

$$Q_{um} = Q_{um} \frac{4,8}{100} = \frac{8310 \bullet 0,48}{100} = 39,88$$

$$Q_{tr} = Q_{um} \frac{10}{100} = \frac{8310 \bullet 0,10}{100} = 8,31$$

$$Q_{sal} = Q_{um} \frac{0,8}{100} = \frac{8310 \bullet 0,008}{100} = 0,66$$

**11.Bajariladigan ish birligiga sarflanadigon mexnat sarfi quyidagi fo'rmula yordamida topiladi**

$$H_0 = \frac{m_1 \bullet m_2}{W_s} = \frac{1+0}{1,32} = \frac{1}{1,32} = 0,75$$

$$H_{um} = H_o \bullet U = 0,75 \bullet 1500 = 1125 kishi.soat$$

**12.Aperatsiyada ketayotgan mexnat sarfi quyidagi fo'rmula yordamida aniqlanadi.**

$$C_0 = \Sigma C_a + \Sigma C_{pt} + C_{yomm} + C_m + C_{saq} = 31431 + 11080 + 4329 + 1100 = 47940 \frac{so'm}{ga}$$

**13.Bajariladigan ish birligiga sarflanadigan eksplatatsion xarajatlar quyidagi fo'rmula yordamida aniqlanadi.**

$$\Sigma C_a = \frac{(a^1 + a^{11}) \bullet B_{tp}}{T_{ytp} \bullet W_c \bullet 100} + \frac{a_{qxm} \bullet B_{qxm}}{T_{iqxm} \bullet W_c \bullet 100} =$$

$$= \frac{(12+8) \bullet 27000000}{1300 \bullet 1,32 \bullet 100} = \frac{5406460}{1719,96} = 31431 so'm$$

$$T_{tp} = 1300s \qquad T_{ŭчь} = 300s$$

**13,1.Yonilg'i moylashni quyidagi fo'rmula bilan aniqlanadi**

$$C_{yon} = Q_0 \bullet B = 5,54 \bullet 2000 = 11800$$

**13,2.Yonilg'i materiallari quyidagi fo'rmula asosida topiladi**

$$C_m = \frac{(C_{as} + C_{yor})1,094}{W_{sm}} = \frac{(25000+15000)}{9,24} = 4329\frac{so'm}{ga}$$

**13,3.Saqlash muddati quyidagi fo'rmula yordamida aniqlanadi**

$$C_{saq} = 0,06 + 0,05 = 1100\frac{so'm}{ga}$$

**13,4.Bir gektar uchun ketgan sarf xarajat quyidagi fo'rmula yordamida topiladi**

$$C_0 = C \bullet U = 47940 \bullet 1500 = 71910000\frac{so'm}{ga}$$

ILOVA

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