EURASIAN JOURNAL OF TECHNOLOGY AND INNOVATION
Innovative Academy Research Support Center
Open access journal www.in-academy.uz

LAZER QURILMASI YORDAMIDA TEKISLANGAN YERLARDA G‘O‘ZANING SUGO’RISH TARTIBI VA SUG’ORISH ME’YORIGA TA’SIRI

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ARTICLE INFO
Received: 02nd Oktober 2023
Accepted: 07th Oktober 2023
Online: 08th Oktober 2023
KEY WORDS
Lezerli yer tekislagich, go’za, sug‘orish meyori, sug‘orish tartibi.

ABSTRACT
Maqolada lezerli yer tekislagich bilan tekislangan yerlarda go’zani sug’orish bo’yicha olib borilgan tadqiqotlar keltirilgan bo’lib, lazerli yer tekislagich bilan tekislanib sug’orilganda tuproqning sug‘orish oldi namligi ChDNS ga nisbatan 70-80-65 % bo‘lganda, suv berish sxemasi 1-3-0, unib-chiqish gullash fazasida sug‘orish meyori 1060 m^3/ga, gullash ko‘sak tugush fazasida sug‘orish meyorlari 900-942 m^3/ga, mavsumiy sug‘orish meyori-3402 m^3/ga yoki nazorat variantiga nisbatan 2774 m^3/ga kam miqdorni tashkil qilganligi keltirilgan.

KIRISH

Hozirgi davrda sug‘oriladigan maydonlarning meliorativ holatini yaxshilash va ekinlardan yuqori hosil olishga qaratilgan barcha agrotexnik tadbirlar orasida sug‘oriladigan maydonlarni lazerli tekislash alohida ahamiyatga ega. Bunda asosiy sabab yer to‘g‘ri tekislanganda sug‘orish uchun yoki sho‘r yuvish uchun berilgan suv sug‘oriladigan maydon bo‘ylab bir xil taqsimlanadi bundan tashqari agrotexnik tadbirlarning samaradorligi ortadi. Agarda sug‘oriladigan maydonlar tog‘ri tekislanmasa sug‘orish yoki sho‘r yuvish uchun beriladigan suv me’yori ortadi bundan tashqari yelarning meliorativ holati yomonlashadi, sho‘r parchalar paydo bo‘ladi hamda qishloq xo‘jaligi ekinlarining hosildorligini pasayishiga olib keladi.

G‘o‘zani sug‘orish tartibini o‘rganish va uni qo‘llash bo‘yicha tavsiyalarni ishlab chiqish davomida hal etilishi kerak bo‘lgan asosiy masalalardan biri, bu tuproqda sug‘orish oldi namligi eng kam nam sig‘imida bo‘lib, bu navbatdagi sug‘orishni amalga oshirishni taqazo etadi. G‘o‘zani sug‘orish davrida fazalariga mos ravishda suvni har xil miqdorda iste’mol qiladi, shuning uchun g‘o‘za rivojlanishining har bir o‘tash fazasi davrlariga tuproq sharoitlarini hisobga olgan holda muayyan sug‘orish tizimi o‘rnatiladi.

G‘o‘zani sug‘orish me’yorlarini aniqlash formulasi Rijov S.N tomonidan tavsiya qilingan. Uning tavsiyasiga ko‘ra g‘o‘za ildizini asosiy qismi 1 m.li qatlamda joylashadi, suvning asosiy qismi esa 30-90 sm.li chuqurlikdan transpiratsiya uchun o‘zlashtiriladi. Shuning uchun sug‘orishda 100 sm. dan keyingi qatlamni namlantirishdan samara kamligi aniqlangan [4].

R.Sleyger, O.Grammatikati g‘o‘zaning sug‘orish me’yori miqdorini belgilashni nazariy jihatdan asoslab bergan. G‘o‘zaning asosiy ildiz massasini 70 santimetr atrofida tarqalishini,

suvning asosiy qismi esa transpiratsiya va boshqa g‘o‘za xossalari uchun 30-90 santimetr chuqurlikdan olinishini aniqlagan. Shuning uchun sug‘orilganda tuproqning 100 santimetrdan chuqurlikda namlashning zaruriyati yo‘q deb ko‘rsatadi [5-6].

S.F.Averyanov, A.A.Avtonomov, X.A.Axmedov, N.F.Bespalov, S.N.Rijov fikirlaricha-g‘o‘zani suv iste’mol qilishini tabaqalashtirganda asosan mexanik tarkibi turlicha bo‘lgan tuproqning fizik xususiyatiga, uning dala nam sig‘imi va vegetatsiya davrining boshi hamda oxiridagi tuproq namligiga asoslangan [7-11].

Bespalov N.F e’tirof etishicha-Sug‘orish tartibini o‘rganish va uni qo‘llash bo‘yicha tavsiyalarni ishlab chiqish davomida hal etilishi kerak bo‘lgan asosiy masalalardan biri bu tuproq namligini sug‘orish oldi pastki chegarasini o‘rnatishdir. Bu navbatdagi sug‘orishni amalga oshirishni taqozo etadi. O‘simliklar sug‘orish davrida suvni bir xil bo‘lmagan miqdorda iste’mol qilishadi, shuning uchun rivojlanishning har bir davrida tuproq sharoitlarini hisobga olgan holda muayyan sug‘orish tartibi o‘rnatiladi [12].

Rijov S.N. ning fikricha, maromida hayot sharoitidagi o‘simliklar oziq moddalarni suyultirilgan eritmalarda 1-2 atmosferadagi osmotik bosim bilan oladi. Har qanday sharoitda ham tuproqning sug‘orish oldidagi namligi cheklangan dala nam sig‘imi (ChDNS) ga nisbatan 65-70 foizdan kamaymasligi kerak. Sho‘rlanishga moyil yerlarda, tuproq eritmasi konsentratsiyasini pasaytirish maqsadida, namlik ChDNS ga nisbatan 80 foiz bo‘lishi lozim. Shunday qilib, tuproqning fiziologik kamyob namligi ChDNS ga nisbatan 30-35 foizni tashkil etadi. Ilmiy tomondan asoslangan agrotexnik tadbirlarni sug‘orildigan maydonlarda ekinni yetishtirishda to‘g‘ri qo‘llanilishi yuqori va barqaror hosil olish ekanligi tavsiya qilingan [13].

A.B.Mambetnazarov ilmiy izlanishlari shuni ko‘rsatdiki- Qoraqalpog‘iston Respublikasi sharoitida g‘o‘zani sug‘orish tartibini belgilashda tuproqning eng past cheklangan dala nam sig‘imi aniqlash va gidromodul rayonlashtirish bo‘yicha dala tajriba ishlari olib borgan hamda g‘o‘zadan yuqori hosil olish bo‘yicha tavsiyalar bergan [14].

Tadqiqotning obyekti: Buxoro viloyati Vobkent tumanida joylashgan-Yangikent Oltin Zamini fermer xo‘jaligi yerlari hamda g‘o‘zaning “Buxoro-102” navi.

Tadqiqot natijalari: Qishloq xo‘jalik ekinlarini yetishtirishda sug‘orish tartibi iqlim sharoitida har bir o‘simlik turi bo‘yicha zarur suv rejimini taminlash yuqori hosildorlikni kafolatlaydi.

Ilmiy-kuzatuvlarning maqsadi yer osti suvlari yaqin 1-2 m, mineralizatsiyasi 1-3 g/l hamda o‘rta va og‘ir qumoq tuproqlarning suv-fizik xususiyatiga va sug‘orish usuliga bog‘liq g‘o‘zani sug‘orish tartibini o‘zgarishi va uni maqbul turini aniqlashdan iborat. Tajribalar bir xil mexanik tarkibli bitta dalada olib borildi. Sug‘orish tartibini o‘rganishda belgilangan tuproq namligi darajalariga va o‘ziga xos iqlimiy ko‘rsatkichlarga bog‘liq har bir suv berish meyori, muddatlari va soni hamda mavsumiy sug‘orish meyorlari aniqlandi. Sug‘orish meyorlari “Chipoletti” suv o‘lchagichi yordamida o‘lchab borildi. Sug‘orish meyorini hisoblashda tuproq suv-fizik xossasini va namlanish chuqurligini hisobga olgan holda belgilangan tuproq namlik qiymatiga ko‘ra S.N. Rijovning (1948 y) quyidagi formulasi bo‘yicha hisoblandi:

$$m = 100 \cdot h \cdot J \cdot (W_{ChDNS} - W_{hn}) + K \quad m^3/ga$$

bu yerda: W_{ChDNS} – tuproq og‘irligiga nisbatan cheklangan dala nam sig‘imi, %;

W_{hn} - tuproq og‘irligiga nisbatan sug‘orishdan oldingi haqiqiy namligi, %;

J – tuproqning hajmiy og‘irligi, g/sm^3 ;

h – hisobiy qatlam qiymati, m;

k – sug‘orishda bug‘lanishga sarflangan suv sarfi, m^3/ga (hisobiy qatlamda yetishmagan namlikning 10 % i).

Tajriba maydonlarida g‘o‘zani sug‘orish ilmiy ish dasturida qabul qilingan tizim asosida amalga oshirildi. Bunda variantlar bo‘yicha sug‘orish muddatlari va sug‘orish me’yorlari tuproq tarkibidagi namlik darajasi asosida aniqlandi. Sug‘orish me’yorini aniqlashda unib-chiqish gullash fazasida tuproq namligi 50 sm. dan, gullash ko‘sak tugush fazasida sug‘orishlar 70 sm. qatlamdan, pishish fazasida sug‘orishlar 70 sm. qatlamdagi tuproq namlik bo‘yicha aniqlandi.

1-jadval

Lazerli yer tekislagich bilan tekislangan maydonda g’o’zani mavsumiy sug’orish me’yori.

№	Sug‘orish usuli	Sug‘orish sxemasi	Mavsumiy sug‘orish meyori, m^3/ga.
1	Ishlab chiqarish nazorati	1-3-1	5000 m^3
2	Lazerli yer tekislagich bilan tekislangan maydon tuproqning sug‘orish oldi namligi ChDNS ga nisbatan 70-80-65 %	1-3-0	3620 m^3

Ishlab chiqarish nazorat variantida vegetatsiya davrida sug‘orish sxemasi 1-3-1, unib-chiqish gullash fazasida sug‘orish meyori 1074-1218 m^3/ga, gullash ko‘sak tugush fazasida sug‘orish meyorlari 1256-1452 m^3/ga, mavsumiy sug‘orish meyori 500 m^3/ga dan iborat bo‘lgan 5 marotaba sug‘orish ishlari olib borildi.

Ikkinchi variantda lazerli yer tekislagich bilan tekislanib sug’orilganda tuproqning sug‘orish oldi namligi ChDNS ga nisbatan 70-80-65 % bo‘lganda, suv berish sxemasi 1-3-0, unib-chiqish gullash fazasida sug‘orish meyori 1060 m^3/ga, gullash ko‘sak tugush fazasida sug‘orish meyorlari 900-942 m^3/ga, mavsumiy sug‘orish meyori – 3402 m^3/ga yoki nazorat variantidagiga nisbatan 2774 m^3/ga kam miqdorni tashkil qildi.

Xulosa: Lezerli yer tekislagich bilan tekislangan yerlarda go’zani sug’orish bo’yicha olib borilgan tadqiqotlarda lazerli yer tekislagich bilan tekislanib sug’orilganda tuproqning sug‘orish oldi namligi ChDNS ga nisbatan 70-80-65 % bo‘lganda, suv berish sxemasi 1-3-0, unib-chiqish gullash fazasida sug‘orish meyori 1060 m^3/ga, gullash ko‘sak tugush fazasida sug‘orish meyorlari 900-942 m^3/ga, mavsumiy sug‘orish meyori-3402 m^3/ga yoki nazorat variantiga nisbatan 2774 m^3/ga kam miqdorni tashkil qildi.

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