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# agrарul ხარისხის ხარისხის

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სამეცნიერო-საინჟინრო ჟურნალი

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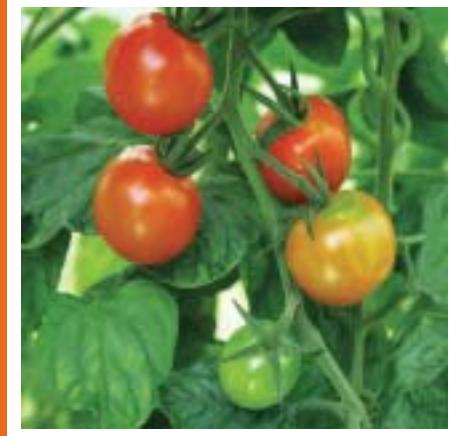
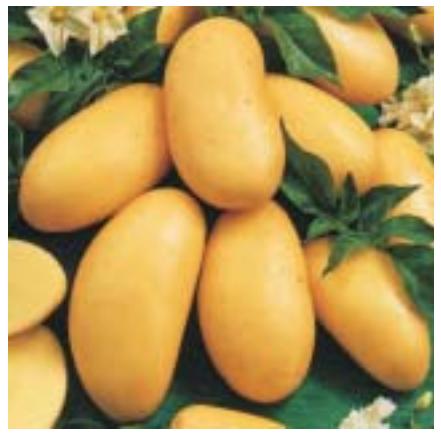
ფასი 1 ლარი

საფრანგეთის  
კლასტიკა დაზენების  
მათოზი 22 გვ.



JAGUAR – აცალები თაობის  
საჭეპლაშავაზიაღებელი  
კომპანია 31 გვ.

სიმინდის სილოსის  
დამზადების  
მარტივი მათოზი 25 გვ.



მაღალეფებური კონტაქტური ფუნგიცილი ბოსტინული კულტურების, ვენახისა და სისილოვანი კულტურების დაავალებათა კომპლექსისაჩან დასაცავად

#### პრეპარატის უაირაცხოება:

- სისაფი მოძრავება და გაუგავისავისთვის
- გვევისი კონტაქტი გარსების კულტურების, ვენახისა და სისილოვანი კულტურების დაავალებისას დასაცავად
- ფიზიოლოგიურობის სრული არასისხობა
- საენტოქრონი ხარჯის დაბალი ტორბა

მოძრავი ნივთიერება: სილენის კლორაციი 170 გ/კბ+ მინერა (340 გ/კბ) არეარაციალი ფორმა: სილენის არეალი ფართისადმი

კიბილი კლასი: არაორგანული გარსები (სილენის მიზანისადმი)

და ლიტორარაციაზე

მოძრავი გვევისი: სილენის კლორაციი განაკირავას სრულად საორგანის ინიციატივისას. მინერა ასლები სრული უარესებაზე შემავალი ფართისადმის ინიციატივას. წარმოქმნის კონტაქტური გარსების სისაცვლის უარდების განახავი შემავალ კიბილისალფაზურ პროცესთან.

რაც არცენის აათობენას უარესების მიზანდებისას.

დასვითო მოძრავის არასისხობა: ზარავილიდან 12 დღე

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ფიზიოლოგიური განვითარება: რეაციურობის დოზების გამოყენების ზემოსვევაში ფიზიოლოგიურია არ აღინიშვნა

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ხარჯის ნორმა, გგ/ჰა	კულტურა	მავნე ობიექტი	გამოყენების თავისებურება	ლოდინის პერიოდი, დამუშავების კვერადობა	დამუშავებულ ნაკვეთზე გამოსვლის დღე
4-5	ვაზი	ჭრაქი, ანთრაქსოზი	შესხურება ვეგეტაციის პერიოდში: ყვავილობამდე (4-6 ფოთლის ფაზაში), კოკრების განცალკევებისას და 10-14 დღეში 0.5%-იანი სამუშაო სსნარით	25(3)	7(3)
5-6	ვაშლი	ქეცი	შესხურება ვეგეტაციის პერიოდში: ვარდისფერი კონტაქტური ფაზის განვითარების, კოკრების ფოთლების განვითარების ფაზაში, ყვავილობისას (10 დღიანი ინტერვალით) 0.5%-იანი სამუშაო სსნარით	25(4)	7(3)
2.5	კარტოფილი	ფიტოფტოროზი ალტერნარიოზი	შესხურება ვეგეტაციის პერიოდში: კოკრების განვითარების ფაზაში და ყვავილობის დაწყებისას 0.4%-იანი სამუშაო სსნარით	20(2)	5(3)
2.5	პამიდორი (ღია გრუნტი)	ფიტოფტოროზი	შესხურება ვეგეტაციის პერიოდში: პირველ სართულზე ყვავილების განვითარებით და 10 დღიანი ინტერვალით 0.4%-იანი სამუშაო სსნარით	15(2)	5(3)
2.5	კოტირი (ღია გრუნტი)	პერონისპოროზი		10(2)	2(2)

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AKHALI AGRARULI SAQARTVELO

(New Agrarian Georgia)  
ყოველთვიური სამეცნიერო-  
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axal i ekonomikuri SesaZI ebl obebis  
iniciativa \_ NEO

NEO proeqtis fargl ebSi qve-  
yanaSi mraval i Tanamedrove teq-  
nol ogia i nergeba.



rogor gavi tanot agroturistul i  
produkti saerTaSoriso  
turistul bazarze

agroturizmis ganvi Tarebas so-  
fi ad mohyveba: umuSevrobis Sem-  
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saZI ebl oba.

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saferavis kl ertze dayenebis  
metodi

Jurnal i `axal i agrarul i saqarTvel o- gTavazobT  
sainformaci o da sarekl amo momaxurebas!

Jurnal Si erTi kvadratul i santi metri sarekl amo farTi s Ri rebu-  
l eba Seadgens: ydl s meore gverdze \_ 60 TeTrs (mTI lani gverdi \_ 350  
l ar), bol oswl na gverdze \_ 50 TeTrs (mTI lani gverdi \_ 300 l ar),  
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urneobi s, sasofl o-sameurneo teqni kls, inventari s, prutyvis da sxva  
produqci i s yi dva-gayi dvi s Sesaxebi.

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matebodes 1,5 l interval IT, 12-lani SriftiT nabewD 5 Tabaxi s gverds.

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1 wl IT Jurnal i gamowera dagl debaT 12 l ar, 6 Tvi T \_ 6 l ar.

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JAGUAR - axal i Taobis  
sakvebdamamzadebel i  
kombai nebi

# axal i ekonomikuri Sesazi ebl obebis iniciativa \_ NEO

ass saerTaSori so ganvi Tarebis saagentos mi er dafinansebul i axal i ekonomikuri Sesazi ebl obebis iniciativa – NEO aris oTxwl iani programa, roml is mizani sofi is mosaxl eobis Semosavl is zrda, si-Raribis donis Semcireba, sasursaTo usafrTxoeba, SerCeul TemebSi mciremasStabiani ekonomikuri infrastrukturis reabilitacia, iZul ebiT gadaadgi-ebul pirTaTv is maTi sacxovrebl is movl a-patrobis mi marTebi T daxmrebi s gawevaa.

**programi s komponentebi:** proeqti oTxli komponenti sagan Sedgeba: Temis doneze ekonomikuri ganvi Tarebis dagegmva; sofi is ekonomikuri ganvi Tareba; uki duresad daucvel i oj axebsa da adgil obrivi mosaxl eobis gaZI ierebis mizni T daxmreba; iZul ebiT gadaadgil ebul pirTa im sacxovrebel i saxl ebi s mdgradobi s xel Sewyoba, romel Tarebil i taciac amerikis SeerTebul i Statebis mTavrobi s mxardar i T xorciel deba.

**sofi is ekonomikuri ganvi Tarebis komponenti:** NEO-s mizani sofi is ekonomikuri ganvi Tarebis komponentis fargl ebSi Si nameurneobaTa warmoebis saSual o maCvenebi s stabiluri zrda, SerCeul sawarmoo j aWvebSi axal i teqnl ogiebsa da praqtkis danergva, oj axebsaTv is Semosavl is diversificirebul i wyaroebis gamovl ena da SerCeul municipal i tetebSi grZel - vadi ani dasaqmebi s Sesazi ebl obebis Seqmnaa.

**komponentis mi dgoma:** sakuTari mi znebis mi saRwend, NEO-s sofi is ekonomikuri ganvi Tarebis komponenti sawarmoo j aWvis princips, efeqtian instrumentad i yenebs, romel i c SerCeul beneficiarebs maTi saarsebo wyaroebis gaumj obesebasa da bi znesi warmoebis Sesazi ebl obebis ganvi TarebaSi daexmare-

ba. sawarmoo j aWvi midgomi s gamoyenebi s gzi T, sofi is ekonomikuri ganvi Tarebis gundi gamoavl ens da Seafasebs maRaL i prioritets mqone seqtorebs, xel s Seuwyobs sawarmoo j aWvis saqmianobas, roml ebi c, sagranto sakonkursi programebi sa da teqni kuri daxmrebi s saSual ebiT, mimarTul ia am sawarmoo gaZI ierebaze. sawarmoo j aWvebisi midgoma damyarebul ia monawl eebis, seqtoris eqspertebis, Temis samuSao da fokus j gufebisi, adgil obrivi xel i sulfi ebi s warmomadgenl ebi s da sxva saerTaSori do-nor Ta programebi s aqt iur monawl eobaze.

**mosal odnel I Sedegi:** proeqtis gammavlobaSi, NEO apirebs teqnikuri da finansuri daxmrebi s gawevaa. mag.: SerCeul i sawarmoo j aWvebisi monawl i Etatv is konsul taci ebsa da treningebis Catarebis da grantebis gadacemis gziT, rac mimarTul ia sabazro kavSi rebi s gaZI ierebaze, SerCeul i ekonomikuri seqtorebi s da geografiul i teritoriebis fargl ebSi warmoebisa da gadammuSavebel i teqno- logii s gaumj obesebaze da bi znesi praqtkis ganvi-Tarebaze,

## NEO-s geografiul i areal i:

- ✓ Sida qarTis regionSi: goris, xaSurisa da qarel i municipal i tetebi;
- ✓ mcxeTa-mTianeTis regionSi: duSeTisa da yazbegi s municipal i tetebi;
- ✓ samegrelo-zemo svaneTis regionSi: zugdi disa dawal enj ixis municipal i tetebi;
- ✓ raWa-l eCxumisa da qvemo svaneTis regionSi: onis, cagerisa dal entexi s municipal i tetebi.

NEO proeqtis fargl ebSi qveyanaSi mraval i Tanamedrove teqnl ogia inergeba.

თანამდებობა თეატრის გენერალური

## saTburebi



sworgverdeblani rkal ul i saTburi s karkasi

</div

zrda-ganvi Tarebi sa da maqsimal urad uxvi mosavl is misaRebad optimal uri pi roebis Seqmnaa SesaZI ebeli.

Tanamedrove saTburebis mSenebl oba sakmaod Sro-matevadi da Zvir i saqmea, ami tom Zal ze didi mni Svnel oba aqvs yvel a im RoniSiebas, romel ic xel s Se-uywobs nakl ebi danaxarj ebi T maRal i da xarisxiani mosavl is mi Rebas.

tradiciul ad Ria gruntsi bostneul i kul turebi s warmoeba ar axel sayrel i garemo pi roebis dad-gomi sas wydeba, ami tom bazarze nedl i bostneul is deficit i qmneba, rac am produqtibis saTburebSi warmoebi T ivseba.

saTburebis konstruqciebi niadagur-kl imaturi pi roebi dan gamomdinare gansxavdeba. maval gvaria saTburis asagebi masal ac - rkina, al umini, xe, msbuqi Senadnobebi, pl astikuri masal ebi da sxva. model i dan gamomdinare saTburebis parametreib (sigre, sigane, simari e) mkeTrad gansxavdeba er-Tmaneti sagan da sakmaod did diapazonSi, sigreSi 10 m-dan 75-85-m-mde (ufro grzel i saTburebis mSenebl oba mi zan Sewonil i ar aris, radgan maTSi haeris cirkul ireba rTul deba) meryeobs, siganeSi - 3-m-dan 18 m-mde, simari eSi (centriSi) 2,5-m-dan 6-7m-mde. sayrden boZebs Soris manZil i 1,5 m-dan 5-7 m-mde.

sagar Tvel oSi uaxl oes warsul Si far Tod iyo gavr-cel ebul i 810-73 proeqtis model i, an misi modifikasi ebi, romel ic - 6,4 metris sigani, -75 metris sigreza da - 3,5 metri simari isa (centriSi) iyo (am model is cal keul i an mcire bl okuri konstruqciebi exl ac gvxvdeba). amis garda saTburis konstruqciebis mni Svnel ovani maCvenebel ia Tovl is dawol issa (55-70 kg/m<sup>2</sup>) da qaris siCqaris (65-80 km/sT) mimarT gamZI eoba.

saTburis gadasaxurad sxvadasxva saxis masal ebi gamoi yeneba:

**SuSa, special uri cel ofani (3 an 5 feniani, roml ebic special ur komponentebs Selcavs) da pol i karbonati.**

yovel maTgans dadebi Ti mxarec aqvs da uaryofi-Tic.

### SuSa

sinati is kargi gamtari anobi T, qimi ur i inertu-1 obi T, abraziul i zemoqmedebis mimarT medegobi T xasi aTdeba.

**nakl ad i Tvl eba:** simyife, sagrZnobi wona, rkina-masal is didi xarj i, maRal i Tbogamtaroba (K=5).

**sasaTbure firi** (cel ofani), sisqe 120, 150, 180, 210, 240 mkr.

Cveni pi roebis Tvis yvel aze misaRebi da rentabe-1 uria 150-180 mkr cel ofnisfiri.

**nakl i:** eqspl oataciis xanmokl eperiodi (3-5 wel i); mis gaSi isa da montajis Tvis saWiroa wynari Tbil i amindi; montajisas aucil ebel ia firis zomieri da Tanbari daWimva.

**upiratesoba:** dabal i fasi, mavne ul traiisferi sxivebis arekvl is unari, antikondensaturi safarvel i, si Tbos dabal i gamtaroba (K=4-4,5). montajis smartive, kul turebis mixedvi T Suqqamtarobis



pol i karbonat iTgadaxurul i bl okuri saTburi

Secvl i ssasual eba, sinati i s gabnevis maRal i koeficienti (rac amci rebs daCrdil visauci l ebl obas.

### pol i karbonati

**upiratesobebi:** maRal i medegoba (or feniani, 6mm sisqis uZl ebs 2,1 joul dar tymas, es ni Snavs, 2 sm-s diamebris setyvas 114 km/sT siCqari T dacemas).

maRal i pl astikuroba da simtkice, dabal i wona da Sesabami sad konstruqcii nakl ebi xarj i, dabal i si Tbogamtaroba (K=2-2,5)

eqspl oataciis xangrZl i vi periodi (15-25 wel i).

### nakl ovaneba – maRal i fasi.

saTburebi zogadad or j gufad i yofa: er Tseqciani da bl okuri. orives bevri upiratesobani da nakl ovanebebi gaaCnia.

mowinave qveynebSi fermerebi produqciis didi masStabi T sawarmoebl ad bl okuri saTburebs iyeneben. er Tseqciani (TaRuri an trapeci i sebri) saTburebi dan ufro metadaa gavr-cel ebul i angarul i tipis SuSi T, pil ieTil enis firiT an pol i karbonat iT gadaxurul i saTburebi. maTSi ganaTeba gacil ebit maRal ia, vidre bl okuri saTburebSi, Tumca si Tbos danakargebi angarul saTburebSi metia. amis garda daCrdil vis Tavi dan acil ebis mizni T maT garkveul i manZil i T aSoreben er TmaneTs, risTvis meti samSenebl ofar Tia saWi ro.

bl okuri saTburebSi si Tbos danakargebi Sedarebi T Semci rebul ia, SesaZI ebel ia meqani zaci i s gamoyeneba (rac sagrZnobl ad amci rebs Sromis danaxarj ebs) da mikrokl imatis avtomaturad regul ireba.

saTburis Tavsaxuris optimal uri daxris kuTxed mi Rebul ia 25-30°, ufro meti daxril obis SemTxveva-Si mzi sxi vebi uxvad ai rekl eba.

nebismieri saTburis normal uri funqcionirebis aucil ebel i wina pi roba ventil aciis SesaZI ebl obaa, rasac saTburebidan zedmeti tenisa da gadaxrebul i haeri mosacil ebl ad iyeneben.

ventil acias saTburis Werze da gverdebze ganl agebul i sarkml ebit axdenen (buner bivi ventil acia). saukenTeso Sedegi mi i Rweva gverdi Ti da zeda sarkml ebit er Tdrooul i gaxsniT, radgan gverdi Ti sarkml ebit dan haeri Seedineba, xol o WerSi ganl a-

gebul i sarkml ebi haris gadinebas uzrunvel yofs. i Zul ebi Ti ventil aciisTvis saTburis gverdebze, an zeda nawil Si ganl agebul Semwov danadgarebs rTaven, roml ebic garedan axdenen haeris Sewovas da mas gadai svrian saTburis siRrmeSi, sai danac haeris nakadi gaedi neba gareT, zeda gaxsnil i sarkml ebis saSual ebi T. es meTodi efekturia, rodesac saTburis gareT haeris temperatura 20°C ar aRemateba. sxva SemTxvevaSi efekt gacil ebi T nakl ebia. savent-i- l acio farTs mTI iani zedapiris aranakl eb 25-30% unda ekavos. sarkml ebis gaxsna xdeba meqani kurad, an avtomaturi RerZul i sistemi T, romel ic damag-rebul ia konstruqciaze. programma iTval i swinebs sarkml ebis sxvadasxva doneze gaxsnas (20, 40, 60, 80, 100%). sawarmoo saTburebSi moTavsebul ia Termoregul atorebi, roml ebic mudmiv reJiSi muSaoben da arsebul informacias central ur marTvissiste-mas gadascemen.

asxvaveben rkal ur saTburebs (romel Ta moxra iwyeba gruntidanve, i sini Sedarebi T nakl ebi simaR- I i saa) da sworgverdebi an saTburebs. rkal ursaTbu-rebTan Sedar ebi T sworgverdebi an saTburebSi kl i-matis kontrol i gaumj obesebul ia.

rkal ur saTburebSi amontaJeben gverdi T venti-l acias, romel ic xel iT an avtomaturad imarTeba. karebis Tavze zogj er gamwovebsac ayeneben.

Si da gani avebas mimar Taven saTburSi haeris moz- rraobis gasaumj obesebl ad. misi ZiriTadi funqciaa, haeris nakadi s Tanabari ganawil ebi s xarj ze (Tanab- rad ganawil des temperatura gagrill ebisa da gaTbo- bisas) mcenareebisTvis Tvi T gagrill ebis saSual ebi s mi cemaa.

saTburebis funqcionirebis aucil ebel komponenTs warmoadgens sadrenaJo sistema, romel ic aum- j obesebis niadagis wyl isa da haeris mdgomareobas, xel s uwyobs saTburebSi dan Warbi wyl is moSorebas.

saTburis gakeTebamde niadagi al ageben daxvre- til mil ebs, romel ic j er sai zoI acio, wyl gamtari masal iT i fareba, Semdeg: – xreSi T, pemzi T, mdinari s I ami T da a. S. zevi dan ki saTburis grunti efineba.

nal equebi, roml ebic bl okuri saTburebis mTI ian farTze modis, saxuravidan special iuri sadinre- bi T i writeba, maTi daxris kuTxe 30-i a da centridan konstruqciis orive bol osken mi emarTeba.

(gagrZel ebaixil eT  
Semdeg nomersi)

## 808040080

# Jol o Zvirfasi kenkrovani kul tura



Jol o (Rubus) uZvirfasesi da uZvel esi kenkrovani kul turaa. misi nayofi metad aromatul ia da mdi da- ri a vitaminebi T, organul i mJavebi Ta da naxSirwyl e- bi T. Jol o kenkra xasiaTdeba Sesani Snavi samkurna- l o da maRal gemovnuri Tvis sebebi T.

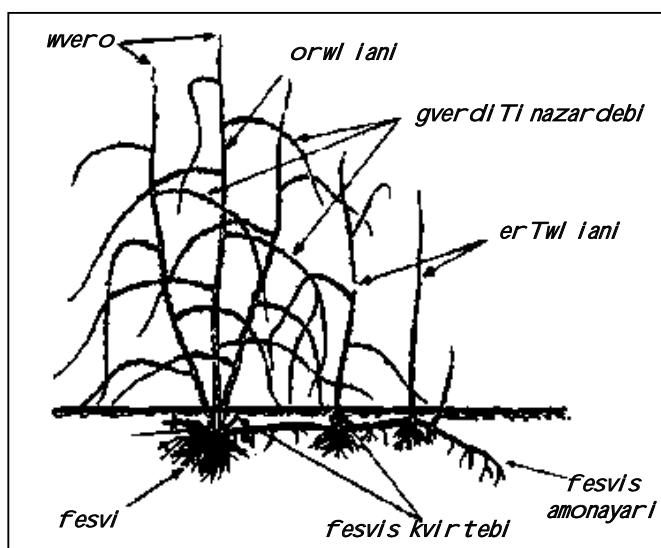
Jol os nayofebi mSral i nivTierebis Semcvel oba 12.8-18.8 % fargl ebSi meryeobs, Saqrebis Semcvel oba 10 procents aRwevs, sakmaod mni Svnel ovani raodenobi T aris peqtinebi – 0.6-0.9%; cil e- bi – 0.8%-ia da uj redana-4.8-5.1%. kenkra Seicavs sxvadasxva saxi s vitaminebs: vitamin C-s – 30 mg./%, foliumis mJavas – 0.17-0.19 mg./%, karotins – 0.1-0.6 mg./%, PP vitamins – 0.6-0.8 mg./% da B<sub>1</sub> vitamins – 0.01-0.09 mg./%. Jol oSi didi raodenobi T aRmoCenil i aminaluri nivTierebebic – igi Seicavs 1200 mkg. rkinas, rac 2-3 j er metia vidre Sav mocxarSi. hematogenuri mikroel ementebis si Warbi s gamo Jol o gamoi yeneba si sxl nakl ul obis dros. misi nayo- febi aseve friad sasargebl oa aTeroskl erozisa da hiper tonul i daavadebebis profil aqtikisa da mkurnal obisaTvis.

Jol os nayofebi mdi daria aqrol adi nivTierebebi Tac, roml ebic xasiaTdeba aseptikuri Tvis sebebi T, magal i Tad igi mni Svnel ovani raodenobi T (0.5-2.5 mg/%) Seicavs sal cilis mJavas. Jol o Sesani Snavi Tafli ovani mcenarea. erTi heqtari Jol os nakveTi- dan Sesazi ebel ia 100 kg-mde maRal xarisxovani Taf- li is mi Reba.

sasofl o-sameurneo Tval sazrisiT Jol o maRal - Semosavl iani kul turaa, radgan masze fasi stabi-

I urad maRaL ia (sabi Tumo fasi 2.0-2.5 l ari/kg.) da kargi sabazro moTxovni Tac xasiaTdeba. i gi dar-gvi dan meore wel s iwyebi mosavl i s mocemas, srul msxmoiarobaSi Sedi smeoTxe-mexuTevel s daswrafad anazRaurebs gaSenebis dros gaweul xarj ebs. wmi n-da Semosaval i 1 heqtarze gadaangari Sebi T saSual o mosavl i anobis (8 t/ha) pirobebSi 12000-15000 l ars Seadgens. pl antaciis eqspl uataciis xangrZl i voba 15-20 wel iwadia.

Jol omraval wl ovani naxevrabuCqovani mcenare, roml i smiwi sqveSa nawi l i Sedgeba fesvurisa da gver-di Ti damatebi Ti fesvebi sagan. zafxul is periodSi mi wi sqveda kvirtebidan vi Tardeba totebi, roml ebic zafxul is dasasrul i saTvis amTavrebs zrdas, i vi Tarebs fesvebs, kavSi rs wyets deda mcenaresTan



da damouki debel erTwl ian mcenare ed yal ibdeba. Jol os mcenare ganvi Tarebis orwl iani cikl iT xasi-aTdeba: pirvel wel s axl ad aRmocenebul i totebi (erTwl iani yl orti) ar iZl eva nayofebs an mcire raodenobi T. i gi mxol od meore wel s iZl eva samrewel o raodenobi T nayofs. nayofis damwifebisa da mokrefis Semdeg orwl iani toti xmeba. amave wel s vi Tardeba axal i erTwl iani totebi, romel ic imave cikl s imorebs. Tumca, arsebobs j iSebi roml ebic msxmoiarobs erTwl ian totebze da mosaval s iZl eva SemodgomiT. msxmoiarobis tipis mixedvi T j iSebi i yofa or j gufad: zafxul Si msxmoiare (tul ei min, kenbi, nova, enkor i da sxva) da Semodgomis msxmoiare (heritej i, otomnbl isi, pol ana, otomn briteni).

zafxul Si msxmoiare Jol os mosaval s iZl eva ivni-sis bol odan agvi stos dasawyisamde.

saSemodgomo j iSebi agvi sto-oqtombersi ikrifeba.

### **nakveTiS SerCeva**

Jol os moi Txovs kargad ganaTebul mzian adgil s da ciudad i tans Warb tenianobas. arasasurvel i drenaJis pirobebSi sasurvel i a SemaRI ebul i kvl ebi gakeTeba. adgil is SerCeviSas upiratesoba eniWeba wyal gamtar, organul i nivTierebebiT mdidar ni a-

dagebs. saqarTvel os pirobebSi Jol os pl antaciis gasaSenebl ad ukeTesi a Crdil oeTis, Crdil o-aRmosavil eTis da Crdil o-dasavl eTis ferdobebis gamoyeneba. gaSenebamde aucil ebel ia niadagi anal iZis Catareba, raTa zustad gani sazRvros niadagi dasabal ansebl ad aucil ebel i sakvebi el ementebi optimal uri raodenoba.

Jol o nakl ebad mgrZhobi area niadagi pH-is mi-mart, magram ufro kargad vi Tardeba 6.0-6.5 pH-is fargl ebsi (odnav mJava). karbonatebis maRaL Sem-cvel ni adagebze, sadac pH > 8, Sei Zl eba ganvi Tar-des ql orozul i movl enebi. gasaTval i swinebel ia, isic rom Jol os dargva nakl ebad sasurvel ia im farTobez, sadac gasul wel s pomidor, kartoffili, an wiwaka moi yvanes, vi nai dan aman Sei Zl eba axal gazar da mcenareze daavadebebis gavrcel ebas Seuwyos xel i.

gaSenebi saTvis nakveTi kargad unda momzaddes: ni-adagi unda i yos kargad damuSavebul i - moxnul i da dafarcxul i. di di yuradReba unda mi eqces nakveTi s sarevel ebi sagan wi naswar gasufTavebas, radgan ga-Senebi s Semdeg sarevel ebi s siWar be di d sirTul eebs qmni s da mkveTrad aqvei Tebs mosavl i anobas.

### **baRiS gaSeneba**

Jol os unda gaSendes gvi an Semodgomaze, savegetacio periodis damTavrebi dan yi nvebis dawyebamde an adre gazafxul ze martSi-april is dasawyisSi. gaSenebi s optimal uri sqemaa 2.5-3.0m X 0.5-0.6 m. nergis dargvisas keTdeba 30-40 sm si Rrmis da 50-60 sm si-gani s kval i (tranSea)sadac xdeba nergis dargva. ar dai Sveba dargvis procesSi fesvebis gamoShoba. is nergerbi roml ebic jer ar dargul a, svel i til os (satomre qsovill i) qsovill iT i fareba, raTa dacul i i yos mzi sa da qaris zegavl enisgan.

nergi i ngveba ise, rom, fesvis yel i 2-3 sm-i T dabili a aRmocndes niadagi zedapiri dan. nergis garSemo niadagi dai tkpneba da moi rwyveba. nergi gadai Wreba niadagi zedapiri dan 10-12 sm-ze. am dros Zal i an efeqturia mul Cis 6-8 sm fenis gamoyeneba. mul Cad gamoi yeneba torfi, gadamvari nakel i, komposti, namj a, naxerxi. dargvis periodSi ar aris rekomendebul i sasuqebsi gamoyeneba. am wel s azotiani sasqui SeaqvT i vniSis Sua ricxvebSi, xol o kompl eqsuri sasuqebsi Semdegi wl i s gazafxul ze.

dargvi dan pirvel wel s Cveni mi zani a mcenari s fesvis gaZl iereba. ami tom dargvis wel s mcenares ar vaz-levT yavil obi sa da mosxmisi saSual ebasi. amave wel s baRSi tardeba niadagi gafxviereba 3-4 j er da sarevel ebi s gamargvl a-ganadgureba.

### **Jol os movl is agroteqnika**

Jol os pl antaciis agroteqniki Roni sZl ebebi-dan yel aze mni Svnel ovani a sarevel ebi s wi naaRmdieg brZol a, morwyva da mcenareTa dacva.

aucil ebel ia, rom mcenare Sei Zl ebi sdagvarad dacul i i yos sarevel a mcenareebi sgan. ami sTvis gamoyeneba rogorc meqani kuri (mul Cireba, gamargvl a, gaToxna, gafxviereba) aseve qimiuri metodebi (her-

bici debis gamoyeneba). rekomendebul ia rigTaSori-sebis or-samj er rotaciul i kul tivatoriT damu-Saveba. Tu Jol os pl antacia 1 heqtars aRemateba, aucil ebel ia herbici debis gamoyeneba. sarevel ebis wi naaRmdeg sabrZol vel ad ZiriTadad gamoi yeneba sarevel is aRmocenebamde da aRmocenebis Semdgomi herbici debi.

Jol os pl antaciebSi sazRvargareT rekomendebul ia „kazaronis” (dikl obenil i) Sesxureba vegetaciis dawyebamde, adre gazafxul ze, 2-3kg/ha dozi T, xol o aRmocenebis Semdeg ivnisis dasawyisiSi – „goali is” (oqsifl uorfeni) 0.2-0.5 l /ha gamoyeneba.

Jol os pl antaciaSi aucil ebel ia dacul i iyos droul i da saTanado morwyvis rejimi. kargi irigacia 2-3j er zrdipl antaciis produqtiiul obas. Jol os zedapirul i fesvTa sistema aqvs da misTvis metad sasar gebl oa xSiri zedapirul i morwyva. ami tom wveTovani morwyvis sistemebs di di upiratesoba gaCniaiT Cveul ebriv morwyvis meTodebTan Sedarebi T. aRmosavl eT saqarTvel os pi roebi saTvis rekomendebul ia moRvriT morwyvis Semdegi vadebi: pirvel i morwyva – yvavil obis wi n, meone morwyva – gamonaskvis periodSi, mesame da meoTxe – simwi f is periodSi, mexuTe – mosavl is aRebis Semdeg.

ni adagis ganoyererebis sistema Semdegi a: adre gazafxul ze rigebsi SeaqvT kompl eqsuri sasuqebei, ( $P_2O_5$ -80; K-80). azotovani sasuqebeis Setana ki nawi l - nawi l unda ganxorciel des: pirvel i Setana xdeba adre gazafxul ze (april i), rodesac mcenare j er ki dev mosvenebis mdgomare eobaSi a. am etapze ni adagSi Sedi s wl iuri normis ori mesamedi. darCenil i nawi l i Setanil unda iqnas ivnisis dasawyisiS Tvis. Tavi unda avari doT sasuqebeis Setanas gvi an zafxul Si, an Semodgomaze, vi nai dan aman Sei Zl eba gamoi wvi os zam-TargamZl eobi s Semcireba.

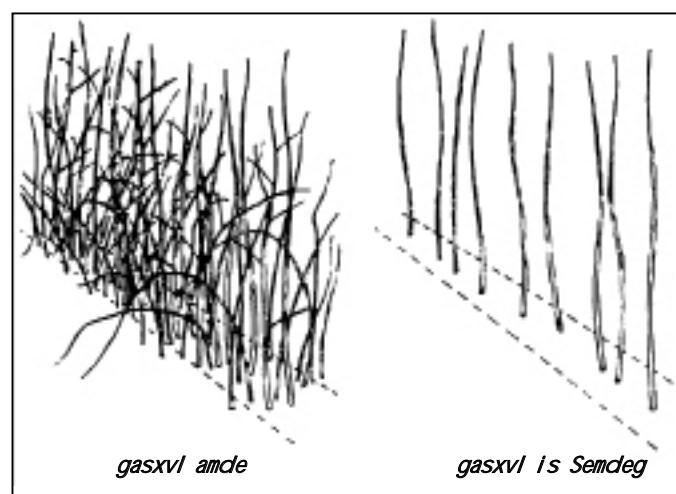
Zal ian mni Svnel ovani saki Txia Jol os pl antaciis dacva mavnebel -daavadebebi sagan. sezoni s ganmavl o- baSi aucil ebel ia pl antaciis 4-5j er Sesxureba mavnebel -daavadebebi sagan dacvis mi zni T. Jol os gansakuTrebiT azi anebs Semdegi mavnebl ebi: Jol os xoWo, kvirtis CrCil i da Jol os Reros buzi, aseve metad



sasiSia Semdegi daavadebebi: anTraqnozi, botricisi da nacari.

### gasxvl a:

Jol o mosaval s ZiriTadad iZl eva gasul i wl is totebze, roml ebi c mosavl is mocemis Semdeg xmeba. imave wel s fesvis kvirtebidan amodis axal i erTw- l iani totebi. am bi ol ogiuri Tavisburebi s gaTvali iswinebaze aris agebul i sxvl is strategia. gasxvl a tardeba gvi an Semodgomi T an adre gazafxul ze. amdros axdenen yvel a Zvel i totis amoWras da axal i nazardebis gaTxel ebas. aucil ebel ia, romrigissi- gane ar aRematebodes 40 sm-s, radgan fartTo rigebsi matul obs daavadebebis gavrcel ebis al baToba. pl antaciis yovel 1 metr ze unda darCes araumetes



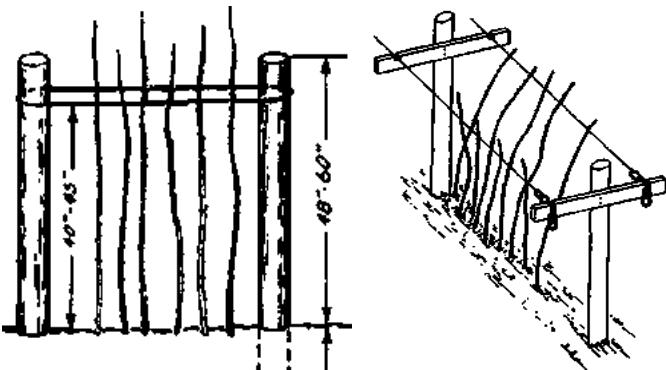
16-20 Zl ier i erTw iani toti. darCenil totebserT meoTxedi T amokl eben. aseTi tipis gasxvl a gamoyenebul ia zafxul Si msxmoi arej iSebze, rac Seexeba Semodgomi msxmoi arej iSebs, maTi gasxvl a ufro mar- tivia: yovel Semodgomaze an adre gazafxul ze xdeba pl antaciis mTI iani gadaWra Zi ramde.

### sayrdeni sistemi s mowyoba:

cnobil ia, rom Jol os totebi sakmaod sustia da advil ad izni qeba nayofebi s simZi mi T, ami tom Jol os pl antaciis gaSenebi sas aucil ebel ia sayrdeni sistemi s mowyoba, yvel aze ufro gavrcel ebul ia martivi tipis Spal erul i sayrdeni sistema da an T-seburi sayrdeni sistema. sayrdeni sistemaze mcenareebi s damgreba xdeba kanafis an pol ieTil eni s bawris meSveobi T.

martivi tipis Spal eri Sedgeba xis boZebi sagan da 0.90-1.00 metr simaRI eze gabmul i erTi mavTul isagan. boZebs Soris manZil i 10-12 metria, boZis diametri 70-80 mm, boZebs simaRI e – 1.30-1.50 sm. mavTul i gabmul ia orive mxridan.

T-sebri tipis Spal eri Sedgeba xis boZebi sagan, roml ebzec T-seburad 1 metr simaRI eze horizontal urad damgrebul ia 40-60 sm sididis ficari. boZebs Soris manZil i 10-12 metria, boZebis simaRI e – 1.30-1.50 sm. ori paral el uri mavTul i gabmul ia orive mxridan.



krefa

kenkra mosakrefad m<sup>z</sup>adar is, rodesac mas aqvs da-  
maxasiaTebel i Ria al isferi Seferil oba da advi-  
I ad scil deba mcenares. kenkra metad saTUTia, ami -  
tom aucil ebel ia misi faqizad da frTxil ad krefa.  
Jol os nayofi ver uZl ebs daxarisxebas, ami tom mo-  
saval i m<sup>t</sup>araSi i k<sup>r</sup>ifeba, roml iTac misi gadagzav-  
na xdeba. krefisas rekomendebul ia ori sakrefi kon-  
teineris gamoyeneba, erTSi i deba msxvil i nayofebi,  
meoreSi saSual o da wvril i nayofebi. Jol os nayo-  
febi araTanabrad mwi fdeba, ami tom misi krefa unda  
ganmeordes yovel meore-mesame dRes, si mwi fis peri -  
odi gansxavebul ia j i Sebi s mi xedvi T da grZel deba  
ori-sami kviri s ganmavl obaSi.

mosavI i anoba

Jol os mosavl i anoba damoki debul ia ni adagobri v pi - robebze, movl is agro teqni kur fonze daj i Sur Tavi se- burebebze. Sesabam si movl is pi robebSi SesaZI ebel ia 1 heqtar ze 8-10 tona mosavl is aReba. msolf ios mexil e- obis wamyvan qveynebSi (aSS, ital ia) intensiuri movl is pi robebSi 1 heqtar ze 12-15 tona mosaval sac i Reben.

qveMOt mocemul ia zogierTi axl adintroducire-  
bul i perspektiul i j iSebi s bi ol ogi ur-sameurneo  
Tvi sehebi s daxasi aTeba

kenbi

kanaduri j i Sia, mi Rebul i a vikingi sa dal o i d j or-  
j i s Sej var ebi T.

**mcenare:** xasi aTdeba uekl o Reroebi T, saSual od i vi Tarebs amonayrebs, vi r usul i daavadebebis amta- ni a, mgr Znobi area fesvi s si dampi is mi mar T.

**nayofi:** wi Tel i ferisaa, saadreo simwi fis perio-  
dis, Si da qarTL is pi robebSi sakrefi simwife iwyeba  
ivni sisSuar icxwebSi dagrZel deba ivl isis dasawy-  
samde, nayofi didi zomisaa, saSual o masa 2.9-3.2 gra-  
mi, konusuri formis, mkvri vi, Sesani Snavi aromatiT,  
Ria wi Tel i, advil ad mosakrefi, Sesani Snavia ned-  
I ad.

tul ei mi ni

**mcenare:** zafxul Si msxmoi are, farTodaa gavr ce-  
l ebul i mTel s msofI ioSi , saukeTeso j iSia sasaT-  
bure war moebis aTvis

**nayofi:** wiTel i ferisaa, saSual o-sagviano sim-wifi s periodisaa, Si da qarTI is pirobebSi iwyeb damwi febas ivl isis dasawyissi da grZel deba ivl isis Sua ricxvebamde, nayofi – di dia, saSual o masa 3.5-4.1 grami, konusuri moyvanil obis, mkvri-vi, al isferi wiTel i, xasiaTdeba saucxoo gemo-Ti

her i tej i

**mcenare:** wiTel i, Semodgomaze msxmoia re, Zal i an ZI ieri zrdis, vertikal uri totebi T, daavadebebis mimar T Sedarebi T gamZI e, uxvmosavl i ani.

**nayofi:** sakrefi simwif e iwyeba agvistos meore naxevarSi da grzel deba oqtombris meore dekadamde. Zal ian didi zomis, mkvrivi, kargi aromatiT, Ria wi Tel i, gankuTvnil ia nedl ad moxmarebis mizniT.

*zviad boboqaSvili  
sofi ismeurneobis akademuri doqtori,  
mexli eobis special isti*



**NEO** New Economic Opportunities Initiative  
ახალი ეკონომიკური განვითარების ინიციატივა



# kartofil is mosavl a-moyvani teqnol ogia

kartofili far Tod gavrcel ebul i kul turaa. iTvl eba metad gemri-el produqtad da moxmarebis mixedvi T puris Semdeg meore adgil zea. bol qvebSi 75% wyal i da 25% mSral i nivTierebaa, roml is 18% saxamebebi ia. mdidaria C vitamini T. bol qvi Sei cavs toqsi kur nivTierebas so-l anins, roml ic bol qvis sinATI eze gamwanebi sas warmoi qmneba.

kartofil is mosavl i anobis matebas Semdegi faqtorebi ganapi-robebs: j ansaRi, maRal i xarisxis saTesl e-sargavi masal a, j iSebis swori SerCeva da dargvi swi na momzadeba, kartofil is moyvani sas aucil ebel i Tesl brunvis dac-va, niadagis sworad damuSaveba, programul i kveba da morwyva, sa-revel ebis da mavne organizmebi-sagan mcenareTa integrirebul i dacva.

mcenare bol qvebi dargvi dan 20-22 dRis Semdeg aRmocendeba. er-Ti bol qvi dan ramdenime nazardivi Tardeba da qmnis buCqs, roml is simaRI e 70-90 sm-s aRwevs.

## mosavl i anoba

kargi movl is pirobebSi mosavl i anoba erT heqtarze 60 tonas

aWarbebs. saadreo kartofil is mosavl i anoba SedarebiT dabali ia, heqtarze – 20-25 tona.

## kartofili i ikviduri produqtia

Sesaferis pirobebSi igi didxans, 5-6 Tve i naxeba da ekonomiku-rad momgebiani kul turaa.

## kartofili da garemo

garemo pirobebis mimarT kartofili i nakl ebad momTxovnia. misi kul tivireba SesaZI ebel i arogorc zRvispira, i se maRal mTian, (2000 metr zemaRI a) zonaSi.

## temperatura

kartofili si Tbos zomierad momTxovnia. zrda-ganvi Tarebi-saTvis saukeTeso dRis zomie-

ri si Tbo 15-20 gradusi da grill i Rame 8-12 gradusi. 40 gradusze maRal i da 7 gradusze dabali i temperatura uaryofi Tad moqmedebs saasimil acio procesebze, am dros mcenaris zrda-ganvi Tareba wydeba. saqar Tvel os baris rai-nebSi kartofili i saadreo kul-turis saxiT modis da zafxul Si i Teseba. zafxul Si Tesvisas bol-qvis formireba grill periodSi mimdinareobs. mi Rebul i mosaval i saukeTeso momaval i wl is saTesl emasal ad.

## Tesi I

kartofili sinATI isadmi Zal i-an momTxovnia. misi nakl ebobis sas mwvane masa intensiurad i zrdeba (iwoweba), bol qvebis ganvi Tareba ferxdeba da mosavl i anoba sagr-


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Znobl ad mcirdeba. kartofil is dargva daCrdil ul adgil ebSi an xexil i srigTa SorisebSi mi uRebelia.

### wyal i

wyl isadmi zomierad momTxovni kul turaa. wyl is moTxovni l eba didia bol qvebis aRmocenebis da maTi formirebis fazaSi. am periodSi niadagSi tenianoba misi srul i wyal tevadobis 75-80% unda iyos. tenis deficit iwevs bol qvebis deformacias, siWarbe ki – l pobas.

### ni adagi

kartofil i TiTqmis yvel a tipis niadagzemodis, Tumca misTvis saukeTesoa strukturiani, humusi T mdi dari da msubuqi niadagebi. mi uRebel ia mkvriv, wyal gaumtar niadagebze kartofil is moyvana. am dros xel i eSi eba bol qvebis zrdas, ferkdeba maTi formireba da vi Tardeba deformirebul i bol qvebi.

### sasuqebi

kartofil i niadagis nayofierebi sadmi momTxovni a. maRal i mosavl is mi Reba SesaZl ebel ia organul i sasuqebiT ganoyierebul niadagze. sakvebi el ementebid an yvel aze di di raodenobi T i gi moi Txovs kaliums – bol qvebis formirebisTvis, azots – zrdisaTvis, fosfors – momwi febisTvis.

1 ha-ze 60-80 tona gadamwari nakel is, an 8-10 tona bi ohumusis Setanisas, mineral uri sasuqebis gamoyeneba araris saWiro.

organul i sasuqebis uqonl obis SemTxvevaSi gamoiyeneba mineraluri sasuqebi. mineraluri sasuqebis Setanis normebi gani sazRvreba niadagis nayofierebis, dagemil i mosavl is raodenobis da mcenaris sakvebz moTxovni l ebi s mi xedvi T. Sesabami sad, aucil ebel ia dargvamde niadagis anal izis gakeTeba.

SeTvisebis koeficientis gaTval i swinebi T yovel i erTi tona producqiis sawarmoebl ad, wveTovani morwyvis SemTxvevaSi, saWiroa – 4.4 kg. azoti, 2.5 kg. fosfori, 8.5 kg. kaliumi. sxva SemTxvevaSi ki – Sesabami sad: 4.8; 3.5; 10.5



kg. sufta ni vTierebaze gaangariSebi T.

wveTovani morwyvis sistemis gamoyenebis SemTxvevaSi azotiani sasuqis 20-30%, fosforianis 70% da kaliumani 50% j obia kg-ze gadaviyvanot da SevitanoT niadagis Ziri Tadi damuSavebisas. sasuqebis danarCeni raodenoba + kaliumi da magniumi ki – wveTovani morwyvi T da foTI ovani gamokvebit. sxva SemTxvevaSi fosforiani sasuqis mTI iani norma, kaliumani sasuqis 50% da azotiani sasuqis 20-30% Sedis niadagis Ziri Tadi damuSavebisas. danarCeni raodenoba vegetaciis – periodSi wil obri vad, xol okal ciumi da magniumi foTI ovani – gamokvebit.

### adgi I i Tesl brunvaSi

kartofil isTvis kargi winamorbedebia TavTaviani kul turebi, parkosnebi, baRCeul i, mraval wiiani bal axebl. misi moyvana da uSvebel ia pamidvris, TambaQos, wiwakis, badrij nis Semdeg. kartofil i pirvel i wl is nakveTze unda dabrundes aranakl eb 3 wl is Semdeg. dabl ob zonaSi kartofil is zaFxul Si dargva SesaZl ebel ia nawveral ze da saadreo bostneuli is (niori, xaxvi, kombosto, kitri) mosavl is aRebis Semdeg.

### gamravl eba

kartofil i mravl deba vegetatiurad da Tesl iT. Tesl iT gamravl ebas mimarTaven sel eqciuri mi znebisTvis. vegetatiuri gamravl eba SesaZl ebel ia bol qviT. dasargavi bol qvebis saSual o wona 60-70 g. unda iyos..

### bol qvebis dargvi swi na damuSaveba

niadagis mavnebl ebi (mavTul a Wiibi, crumavTul a Wiebi, agreTve kol orados xoWo, virus gadamtani veqtorebi), daavadebebi (roqztonia, qeci) wi naaRmdeg dasargavi masal a dargvis wi n unda damuSavdes mcenareTa dacvis saSual ebebi T. bol qvebis damuSaveba moxdeba dargvis dRes an 1 dRiT adre. mi uRebel ia svel i bol qvebis dargva...

### bol qvebis gaRiveba

bol qvebis Tesvi swi na gaRiveba amoki ebs vegetaciis periods da kartofil i adre iwyebas momwi febas. gaRiveba xdeba sinATI eze (dRis, xel ovnuri) 5-10 gradus temperaturaze. gazafxul ze dasargavi kartofil is gaRiveba dargvamde 30-40 dRiT adre iwyeba.

### ni adagi s damuSaveba

niadagis moxvna 27-30 sm. si Rrmeze: aRmosavl eT saqarTvel os



nakl ebadi tenian rai onebSi Semod-gomaze, xol o Warbtenian zonebSi – adre gazafxul ze. organul -mineraluri sasuebis Ziri Tadi Setana xdeba niadagis moxvnis win an dargvamde 1-2 TviT adre. minerali uri sasuebis Setana SesaZI ebelia uSual od dargvis drosac.

dargvamde tardeba niadagis dargviswina damuSaveba (kul tivacia, frezireba) da saWiroebis SemTxvevaSi, damatebi T mineraluri sasuebis Setana.

### **dargva**

kartofil is rgva iwyeba, roca niadagis (10 sm. si Rrmeze) temperatura 7-8 graduss miaRwevs. did farTobebze kartofil is dargva sargavi manqanebiT xdeba. kvebis are: 70-75X28-35 sm., mcire zomis farTobebze ki – xel iT. erT heqtarze igrveba 40-45 aTasi bol qvi (3-4 tona). msubuqi meqanikuri Sedgenil obis niadagze kartofili i Rrmad – 10-12, xol o mZime niadagebze – 6-8 sm. si Rrmeze igrveba. maRal efeqtiania kartofil is SemaRI ebul bazoebze dargva. am dros kartofil is bol qvebis formireba niadagis msubuq fenaSi xdeba, rac sagrZnobl ad zrdis mosavl is raodenobas da xarisxs.

### **movi a**

kartofil is aRmocenebis Semdeg Catardeba niadagis msubuqi kul tivacia da miwis pirvel i Semoyra. am dros ZI ierdeba haeris

mi wodeba fesvTa sistemasTan da iqmneba mcenaris zrda-ganvi Tarrebis optimal uripirobebi. vegetaciis periodSi 3-4 j er tardeba rigTaSorisebis kul tivacia, miwis meore Semoyra da damatebi T mineraluri sasuebiT gamokveba. SemaRI ebul bazoebze dargvisas miwis Semoyra araris saWiRo.

### **morwyva**

Tu temperatura 12-16 gradus a dania adagis saxnav fenaSi tenianoba misi srul i tentevadobis 80-85%-s Seadgens bol qvebis wonaSi mateba intensuria. 19-20 gradus temperaturaze bol qvebis wonaSi mateba maRal ia, roca niadagi tenianoba 90%-ia. savegetacio periodSi amindis mixedviT kartofils sul mcire 4-5 morwyva swinreba. Cveul ebrivi morwyvisas (kval Si mi Sveba) erT heqtarze erT j erze 750 kuburi metri wyali i ixarjeba, rac mTel savegetacio periodSi minimum 3000 kubur metrs Seadgens. kartofili swyal i yvel aze didi raodenobiT esaWi-roeba buttonizaciis da bol qvebis formirebis periodSi. Warbi tenianoba iwyevs fesvebis CaxuTvaz, Jangbadis miwodebis SezRudvas, sabol ood ki – bol qvebis dal pobas. gansakuTrebiT saSiSi a wyl is

Catboreba. ganvi Tarrebis bol o periodSi, roca mwane masa iwyebis gayvi TI ebas niadagis optimaluri tenianoba 65-70% unda i yos.

saukeTeso Sedegs iZI eva wveTovani morwyva. am dros misawodebel i wyl is raodenoba saSual od 2,5-j er mcirdeba. mcenareebi optimal urad aris uzrunvel-yofil i teniT da sakvebiT. sasuebis gamoyenebis koeficienti, sul mcire, 20-25%-iT matul obs, mcirdeba sasuebis raodenoba 15-30%-iT, izogeba dro, muSaxel i, izrdeba mosavl ianoba da mi Rebuli produqciis xarisxi.

mvnebel -daavadebebTan da sarevel ebTan brZol a.

kartofil is naTesebis Tvis di diziani moaqvs fitoftoras, al ternarias, makrosporiozs, kol orados xollos, bugrebs, virus matarebl ebs, CrCil s da sxv., agreTve sxvadasxva saxi s sarevel ebs. naTesebi dargvidan mosavl is aRebamde sufTa unda i yos. vegetaciis periodSi mvnebel -daavadebebTan da sarevel ebTan sabrZol vel ad 4-5 waml obis Catareba iqneba saWiRo. iqneb mi vuTiToT mcenareTa dacvis integrirebul i sistema. gamoi yeneba kontaqturi dasistemuri moqmedebis fungicidebi da inseqticidebi. sarevel ebis mosaspobad ki – sel eqciuri moqmedebis herbi ci debi.

### **mosavl is aReba da Senaxva**

mosavl is aReba xdeba mSrAl, mzian amindSi specialuri manqanebiT an xel iT. mosavl is aRebis win 10 dRiT adre, kartofil is naTesebs unda moSordes mwane masa. mosavl is aRebis Semdeg kartofili daxarisdeba, badurebSi an special ur yuTebSi Caiyreba da SenobaSi moTavsdeba.

sasursaTod da saTesl ed gankuTvnili i bol qvebi pl us 1-2°C da 80-85% haeris Sefardebi Ti tenianobis pirobobi cal -cal keinaxeba.

**nugzar Sengel ja sofi is meurneobis mecnierebaTa doqtori**

P.S. wi namdebare statistebis gamocema SesaZI ebel i gaxda amerikis SeerTebul i Statebis saerTaSorI soganvi Tarrebissaagentos (USAID) mi er gaweul i daxmarebli Sedegad. dokumenti SemuSavebul la USAID/NEO proqtismierdamisi Sexedul ebeblsgaTval i swinebl T. statistebi ar gamoxatas amerikis SeerTebul i Statebis saerTaSorI so ganvi Tarrebis saagentosa da amerikis SeerTebul i Statebis mTavrobis mosazrebebs.



## rogor gavi tanoT agroturistul i produqt saerTaSoriso turistul bazarze

agroturizmi, rogorc turizmis erT-erTi Ziri-Tadi mimarTul eba XX saukuni s meore naxevarSi evropis kontinentze Camoyal ibda. msolfi losi XX-XXI saukuni s mij nazemimmarTul ebiT l ideri qveynebi gamokveTa, romel Ta Sorisaalitalia, Svei caria, xorvacia, kvi prosi, saber ZneTi da ssv. sxvadasxva qveynebSi agroturizms gansxvavebul i termini T aRni Snaven: ingl issa da zogierT ingl isurenovan qveyanaSi mas „sofl i turizmi T“ i cnoben (rural Tourism), germanul enovan qveynebSi mi Rebul i a termini „Bauernhof tourismus“, rac si tyvasityvi T gl exis kar-mi damos turizms ni Snavs. romanul enovani qveynebSi ki upiratesobas termins – agroturizms ani Weben, rac i aTinuri warmomavli obissi tyva „agro“-dan (agros) da mi sgannawarmoebi „agrarul i“ – agrarius – sasofl o-sameurneo, momdinareobs.

encikl opediuri i eqsikonis gammartebiT, agroturizmi – „rodesac turisti Camodisimmizni T, rom i cxovros adgil obrivi mosaxl esaviT, masTan er Tad mindorSi imuSaos, mowvel os Zroxa, daamuSaos mi wa, ikvebos masTan er Tad, anu garkveul i droiT gaxdes maspinZi is oj axis wevri.“

rogorc arVni SneT, turizmi sofl ad, did i industriul qveynebSi Camoyal ibda, sadac mcxovrebTa mni Svnel ovan nawil s sofl i dan Camosul i mosaxl eobi s mesame Taoba war moodgenda. sofl ad dasvenebis msurvel ni sazRvargareT arCevndnen mimzi dvel regejonebs, ixdidnen qirnas da maspinZel oj axebs Semo-saval i uCndebodaT.

mimzi dvel oba, xal xi, produqt – swored es gax-1 avT agroturizmis Ziri-Tadi Semadgenel i komponentebi. agroturizmis mTavari mizania turistebis ganTavsebis saSual ebani sofl ad mdebareobdes da

swored aqedan gamodinare cxovrebis aCqarebul i ritmi adamianis survil s ucens, rom periodul ad mSvid, wynar garemoSi, qal aqgareT dai svenos.

agroturistul i meurneobebi Tu istoriul -kul-turul i Zegl ebi s sai xl oves aris ganl agebul i, turistebs am Zegl ebi s gacnobis garda, SesaZl ebl oba aqvT Ramec gaaTion meurneobaSi da tradiciul i teqnologi i damzadebul i produqtеби daagemon-non, meti c Tvi Ton mi i Ron monawi l eoba am procesSi, mag: yurZnis dawurva, CurCzel ebi s amovl eba, tradiciul i yvel i s damzadeba da a.S. swored es aris turistisTvis mimzi dvel i, vi naidan i sini Tvi Ton monawi l eoben meurneobi s saqmi nobaSi.

saqarTvel oSi turizmis perspekti vebze da, zogadad dargis mdgomareobis gasaanal i zebi ad, qveynis turistul potencial ze unda gavamaxvil oT yuradReba.

saqarTvel os sakmaod didi turistul i potencial i aqvs: 102 kurorti, 182 sakurorto adgil i, 2400 sam-kurnal o mineral uri wyaro, 12000 istoriisa da arqiteqturis Zegl i, maTgan 4 Setanil i auneskos msolfi i o mni Svnel obis Zegl Ta nusxaSi, 7 arsebul i da perspektiul i erovnul i parki da a. S. e. i. Tu l ogi kas mi v-yebi T da arsebul potencial s turizmis saxeobebi s mi xedvi T gavanawi l ebT, maSinCvens qveyanaSi real urad perspektiul i gaxdeba agroturizmis ganvi Tareba.

agroturizmis ganvi Tarebas ki sofl ad mohyveba:

1. umuSevrobis Semci reba;
2. adgil obrivi produqtis gasaRebis moclub obis gazrdi s SesaZl ebl oba;

ra Ziri-Tadi koncefciebia, romel ic unda gai Tval i swinos saqarTvel om agroturistul i produqtis saerTaSoriso turistul bazarze gasatanad:

1. agroturistul i produqtis saerTaSoriso turistul bazarze upiratesad turistul ma firmebma unda

gai tanon, radgan sofi is mosaxl eobasjerj erobiTara aqvs pir dapiri marketingis, ucxoETSi reklamis dafinanebis, an internetiT produqtis gayidvis saSual eba.

2. turistul i produqtis saerTaSori so bazarze moumzadebel i gadis. moumzadebl obaSi vgul isxmobT ucxoel i turistis moTxovni l ebebis arasrul yofil ad codnas, ris gamoc mi wodebul i produqtis Seicav mosal odnel momsxurebas.

3. agroturistul i produqtis iafi unda iyos. es garemoeba gansakuTrebiT sagul isxmoa saqarTvel os pir obebSi, radgan damwyebi bi znesmenebi gatacebul - ni arianmaRal procentiani mogebis mi Rebi T.

4. agroturizmis Tvis SerCeul sofi ebSi unda Cartades sainformacio-saagi tacio samuSaoebi turizmis rol i sa da adgil is Sesaxeb adgil obriv doneze. unda moxdes sofi is mosaxl eobis da mmartTvebI obiTi rgol i momzadeba turistebis mi saRebad.

5. gamocdil ebis uqonl obis gamo sirTul es war-moadgens agroturistebisaTvis special uri programis Sedgena, romel Sic gasaTval i swinebel ia Semdegi: sofel Si damsvenebi ebi ZiriTadad 2-4 kaciani ucxoel Ta oj axebia. maTTvis dasvenebis organizebisaTvis gasaTval i swinebel ia SeTavazebebi oj axis TiToeul i wevrisaTvis cal cal ke: mamakacisaTvis es SeiZI eba iyos nadiroba, Tevzaoba, cxeniT jiriTi, Tibva qarTvel maspinZel Tan er Tad. di asaxl i sisat-

vis qsova, qargva, kerzebis momzadeba. sasurvel ia bavSvebiani oj axis Camosvl is SemTxvevaSi maspinZel oj axSi i yos daaxl oebi T imave asaki s bavSvebi. uarresad didi mni Svnel oba eniWeba maspinZl ebis mier sakomunikaci od auci ebel i ucxo eni codnas.

6. sainformacio-sarekl amo masal ebi sazRvar-gareTul i anal ogebis gaTval i swinebel (kvi prosi, bul gareTi, da sxv.) unda damzaddes. rogorc wesi, sofi is turizmis sarekl amo masal ebi uxvad aris il ustril ebul i gl exis kar-midamos amsaxvel i feradi fotoebiT, mimRebi rai onis Sesaxeb vrcel i informaci iT, gansakuTrebiT, adaT-wesebis da tradiciebis Sesaxeb, agroturistul i produqtis gasa-Rebis erT-erTi saSual ebaa special izirebul i da iseTi bazrobebia, sadac momxmarebl ebi Warbaben profesional ebs.

SeiZI eba i Tvas, rom agroturizmi saqarTvel osi i sev da i sev ganvi Tarebis stadiaSi imyofeba. auci ebl ad unda vecadoT da, rasakvirvel ia saxel mwifo organoebic unda CavrToT agroturizmis ganvi-TarebaSi, naTa avamaRI oT sofi is mosaxl eobis done da agroturistul i produqtis mTel smsofi i osicnobil i gaxdes.

*nino jerenaSvili  
biznesis administratrebis doqtoranti*

## ეს საინფორმაცია



M-teqnologija Sereul i kulturebis da sasargebl o mikroorganismebis gamoyenebas efuzneba. pirvel ad egrerotdebul i efeqtiani mikroorganizmebi (M) i aponiaSi doqtor teruxigas mier iyo kul tivirebul i. isini Sei caven 80 mde mikroorganizmebis saxeobas, roml ebi c mekuTvnebian xut oj axsa da 9 j iSS. es teqnologija saSual ebas iZI eva uzrunvel yos sofi is meurneobis maRal i produqtul oba da xarisxiani ekologuri produqcia.

dReisaTvis es teqnologija aRitarebul i amTel smsofi i oSi da intensi urad i nergetebi bevr qveyanaSi.

## M-teqnologija

raSi mdgomareobs am teqnologii is efeqtianoba? si namdvil eSi yvel aferi martivadaa. kvebis mineraluri el ementebi, roml ebsac Seicaven mineral ebi da niadagis organul i massa-humusi, TavisTavad ver gadadian SesaTvi sebel formaSi. am funqciias asrul eben niadagis binadrebi – mikroorganizmebi, razec pirvel rigSi undavirzunoT. Tunia dagSi mikroebi da Wiayel ebi sakmarisi raodenobi-Taa, maSi nmcenareebi komfortul ad grZnaben Tavs. mosavl i anobis arsi, niadagSi bi ol ogiuri mraval ferovenebis xel Sewyobasa da SenarcunebaSi.

qimi is intensurma gamoyenebam mkveTrad Seamcira niadagis bioli ogiuri aqtiuroba, rac xasi aT-deba mikroorganizmebis da niadagis cxovel ebis raodenobi vi da j i Sobrivi mraval ferovenebi T. arada swored isini uzrunvel yofeni niadagis mosavl i anobas.

qimi isagan ganadgurebul niadagbeze mi zanSewoni l i ar aris min-

raluri sasugebis gamoyeneba, i sinni bol omde gamofitaven niadags. Tumca mdgomareoba mTI ad ui medo ar aris: mikroebis, Wiayel ebsa da sxvadasxva organul i sasugebis daxmarebiT Sesazi ebel ia 2-3 weI iwadSi aRdges mosavl i anoba niadagSi humusis matebis xarj ze.

humusi – mcenarisTvis sakvebi el ementebis wyaroa, sadac normirebul adaa ganawi ebul i azoti, fosfori, gogirdi, mikroel ementebi da sxva sasargebl omikroorganizmebi. humusi niadagis strukturis Camoyal i bebaSi i Rebs monawil eobas, uzurnvel yofs haeris, wyl is da si Tbos optimal ur reJims. niadagis gasacocxl ebl ad, humusis swrafad Camosal i bebbi ad gamoyeneba M-teqnologija.

M-teqnologija is Rirseba mdgomareobs ara mxol od niadagis ardgeneSi, aramed moweu i mosavl is maRal xarisxSi. ami T ai xsneba misi aqtiuri danergva wamyvan qveynebSi.

# venaxi s movl i s Roni sZi ebebi, kompania `agrovi tas- SemoTavazebul i sqem i s mi xedvi T

mevenaxeoba saqar Tvel os sofi i s-meurneobi s uZvel esl da tradi ci- ul i dargia.

venaxSi agroteqniki kuri Roni sZi ebebis droul , xari sxian Catarebasa da mavnebel -daavadebaTa sawi naaRmdego saSual ebebi s sworad gamoye- nebas gadamwyeti mni Svnel oba aqvs.

**gasxvi** a. vazis zomieri datvir- Tva xel s uwyobs uxvi mosavl i s mi- Rebasi. gasxvi i sas vazze toveben samamul e da sanayofe rqebs. vazis j i Sisa da si ZI i eris mixedvi T sa- mamul es – 2-3, xol o sanayofes – 7-12 kvirtze.

**Seyel va.** mosavl i s regul i rebris mi zni T gazafxul ze, mart-april - Si, gasxvi as mosdevs Seyel va. Seyel va Semdegnai rad mi mdinareobs: pirvel mavTul ze vazis Ziri mag- rdeba, Semdeg ki – 7-12 kvirtiani sanayofed datovebul i grzel i rQEbi.

**mwvane operacia (gafurCvna).** mwvane operaciebis Catareba vazis normal uri ganvi Tarebi sTvis mni Svnel ovania. vazis Zirze unda Sevacal oT gamonayari. namxaris Secl a 3-j er mainc tardeba, amas yl ortebis axvevasTan er Tad vakeTebT.

**cis gaxsna.** ivl i s is meore naxe- varSi, zeda mavTul i s Semdeg 3-4 muxl ze vazis wverebis wavyvetis operacia tardeba.

praktikaSi xSiria vazis mtevnis damwrobis SemTxvevebi, amit om gafurCvnisas sifrTxil e unda gamovi cinoT, raTa vazis mtevani zomaze metad ar gavaSi Svl oT da mzi sxi vebi sgan daucvel i ar dav- tovoT.

**sarevel ebi s mospoba.** kul ti- vaci i s gar da sarevel ebi s mosas- pobad herbi ci debi gamoi yeneba. venaxSi i yeneben, rogorc – kon- taqtur, aseve – sistemur herbi- ci debs.

herbi ci debi s gamoyenebi sas gansakuTrebub i sifrTxil easaWi ro, raTa i gi mwvane masaze ar mi esxas, ramac Sei ZI eba mcenare daazi a- nos. gansakuTrebub i yuradReba

unda mieqces sistemur herbi ci- debs. venaxSi Sei ZI eba warmatebi T gamovi yenoT herbi ci di – „svi pi”. xarj vis norma 3.0-4.0 l /ha-ze.

**ni adagi s ganoyi ereba da da- muSaveba.** venaxs vamuSavebT mo- savl i s aRebis Semdeg. xvnis win Segvaqvs organul -mineral uri sa- suqi (damvari nakel i, mineral uri -NPK an Tanamedrove Txevadi organul -mineral uri sa suqi „ag- rovi ta”).

qveynebi, sadac mevenaxeoba-meR- vineobi s dargi ganvi Tarebul ia, venaxSi ZiriTadad Tanamedrove mikro da makroel ementebi T gam- didrebul i sa suqebi gamoi yeneba, maT Soris upiratesoba ekol ogi- urad usafri Txo organul -minera- l ur sa suqebi s eni Weba. es prepara- tebi Tavsebadia vazis movl i s ag- roteqni kaSi far Tod gamoyenebul fungi ci debTan, inseqtici ci debTan da herbi ci debTan. saqar Tvel os bazarze bol o periodSi gamoCnda Tanamedrove teqnol ogiebi T dam- zadebul i organul -mineral uri sa suqi „agrovi ta” da misi anal o- gebi. preparati „agrovi tas” gamo- yenebi T mii Rweva mosavl i anobi s zrda da xari sxis gaumj obeseba, Cqar deba momwieba, xel i ewyoba produqtSi Saqrianobi s momate- bas, amas Tan mcenare i Rebs saWi ro sakvebs – makro da mikroel emen- tebs. „agrovi tas” saheqtaro nor- ma 4-5 l i t r s aRaRemateba(1l i tri sa suqi ixsneba 100-200 l . wyal Si).

**rTvel i.** mosavl i s aReba tarde- ba sxvadasxva periodSi, j i Sebi sda mi xedvi T. mokrefidan dawurvam- de sasurvel ia teqnol ogiuri vad- debi s dacva. vadebi s dar Rveva da yurZni s dagvi anebi T dawurva Rvi- ni s xari sxis gauar esebas i wevs.

**vazis Ziri Tadi daavadebebi da mavnebl ebi:**

**Wraqi.** daavadeba gavrcel ebu- l i a praqtkul ad yvel a im regi- onis venaxebSi, sadac haer i teni- anoba momatebul ia. infeqcia azi-



anebs vazis yvel a mwvane organos, ramac Sei ZI eba gamoi wi os mosav- l i s nawi l obrivi, an mTI iani ga- nadgureba.

WraqisTvis damaxasi aTebel i a in- feqci i s swrafi gavrcel eba. xSir SemTxvevaSi daavadebi s gavrcel ebi s aTvis xel sayrel i pirobe- bi s ar sebobi sas ramdenime saaTSi Sei ZI eba venaxi s di di far Tobebi daazi anos. vazi gansakuTrebti advi l ad avaddeba yvav i obi s win da marcvl i s Camoyal i bebi s peri- odSi.

**mkurnal oba:** Wraqis winaaRmdeg gamoi yeneba kontaqturi da sis- temuri fungi ci debi, vegetaci- i s dasawyisi s da bol os vi yenebT kontaqturi fungi ci debs: „kauri- til i” 3.0 kg/ha, „pol i ram df” 2.0- 2.5 kg/ha, „del ani” 0.7 kg/ha., xol o Sual ed waml obaSi 3-4 j er gamo- yeneba sistemuri fungi ci debi, rogoricaa: „kabrio topi” 2kg/ ha, „akrobati mc” 2kg/ha, „akrobati topi” 2kg/ha. foTI ovani gamok- vebi s aTvis samuSao xsnarSi rek- mendebul ia Txevadi organul -mi- neral uri sa suqi „agrovi tas” an- misi anal ogebi s gamoyeneba.

**nacari.** gavrcel ebul ia im re-  
gi onebSi, sadac Tbil i da mSral i



kl imatia. daavadeba mni Svnel ov-  
nad amci rebs mosavl i anobas. nac-  
riT mtevnebis dazianebis SemTx-  
vevaSi Rvinis xarisxi uaresdeba.

yuradsaRebi a is faqt, rompi-  
vel adi inf eqci a Tval iT SeumCne-  
vel ia da igi j er ki dev yvavil ob-  
is dawyebamde vrcel deba, ami tom  
nacris wi naaRmdeg kontaqturi an  
sistemuri fungici debis Sesxu-  
reba 3-6 foTI is fazaSi unda da-  
iwyos. operaciebs Soris periodi  
ar unda aRematebodes 10-12 dRes.

**mukurnal oba:** nacris wi naaRmdeg  
kontaqturi da sistemuri fun-  
gici debi gamoi yeneba. vegetaci i s-  
dasawyissa da bol os gamoi yeneba  
kontaqturi fungici debi: „ku-  
mul us df“ - 4-6 kg/ha., xol o Su-  
l eduri waml obisas – sistemuri  
fungici debi: „kabrio topi“ - 2kg/  
ha., „vivando“ - 0.21 /ha., „kol isi“ -  
0.31 /ha., „strobi“ - 0.2 kg/ha.

**anTraqnozi.** anTraqnozi aavad-  
ebs vazis yvel a organos: rgas, foT-  
I ebs, mtevnebs, nayofebs da a.S.

avadmyofobis yvel aze damaxa-  
siaTebel i ni Sani a rqaze gaCeni l i  
momrgval o patara l aqebi. anT-  
raqnozi foTI is firfitaze qmni s

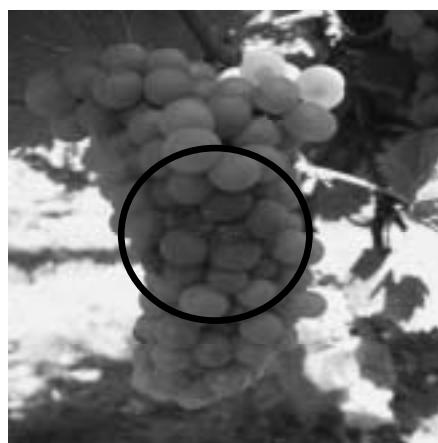


wvrl monacisfro-mowi Tal o ar-  
Si iT Semovl ebul I aqeb. daZve-  
l ebul i l aqis gamxmari nawil i if-  
Svneba da cvi va.

nayofebs daavadebis dros,  
marcvl is zedapirze momrgval o,  
mowi Tal o an Savi arSi iT Semovl e-  
bul i l aqebi Cndebe. anTraqnozi  
Tavs i Cens adre gazafxul ze, daa-  
vadebi saTvis yvel aze xel sayrel  
peri odad i Tvl eba 13-14°C da 75-  
85% tenis pirobebi, rac axal gazar-  
dayl or tebis daavadebas i wvevs.

**mukurnal oba:** daavadebis gamo-  
Ceni s Tanave saWi roa gamovi yenoT  
kontaqturi fungici di: „pol ira-  
mi“ - 2.5 kg/ha, „kauritil i“ - 3.0 kg/  
ha, Semdegi waml obisas ki sistemuri  
fungici di, rogoricaa: „akro-  
bat mc“ - 2.0 kg/ha, „kabrio topi“  
- 2.0 kg/ha, „strobi“ - 0.2 kg/ha.

**yurZnis nacrisferi si dampi e.**  
vazi yurZnis nacrisferi si damp-



i iT Ti Tqm is yvel astadi aSi avad-  
deba. foTI is daavadebis masze  
Cndebe sxvadasxva moSavo l aqa,  
romel ic xel Semwyob pirobebi  
mTel foTol s faravs. daavadebu-  
l i foTol i xmeba da miwaze cviva.  
igi metad uaryofi T Sedegs i ZI e-  
vamaSin, rodesac marcvl i zrdis  
peri odSi a.

nacrisfer si dampi es yvel aze  
didi zianis motana yurZnis simwi-  
fis peri odSi SeuZl ia. mis ganvi-  
Tarebas agreTve xel s uwyoobs uxvi-  
nal equebi simwi fis peri odSi, sety-  
va, mavnebl ebi da sxva avadmyofob-  
ebi: yurZnis Wi a, nacari, Wraqi da  
sxva.

**mukurnal oba:** pirvel i waml oba  
tardeba yvavil obis win sistemuri  
fungici di T, rogoricaa: „kol  
isi“ - 0.41 /ha, xol o meore wam-

I oba – SeTval ebis, an simwi fis  
dawyebi sa sistemuri fungi ci di T  
– „kantusi“ - 1,0-1.2 kg/ha.

**Savi l aqi anoba, anu fomofsi-  
si.** Savi l aqi anoba saqar Tvel osi



yvel ganaa gavrcel ebul i, igi aava-  
debs vazis miwis zeda yvel a organos:  
rgebs, yl or tebs, foTI ebs,  
ul vaSebs, yvavil edebs, mtevnebs.

**mukurnal oba:** i givea, rac Wraqi s  
wi naaRmdeg. Zi ieri gavrcel ebi s  
SemTxvevaSi saWi roa gazafxul ze  
foTI ebi s gamoCeni s Tanave gamo-  
vi yenoT kontaqturi fungici di -  
„kauritil i“ - 3kg/ha, xol o Semdeg  
„kabrio topi“ - 2kg/ha

**wi Tura.** daavadebis dasaxel e-  
ba warmoSobi l i a simptomebidan  
gamomdinare, wi Tura aRini Sneba,  
rogorc wi Tel yunwovan j i Sebze,  
aseve TeTri j i Sis vazis foTI eb-  
ze. daavadebi s pirvel i simptom  
Cndebe j er ki dev yvavil obamde,  
ami s Semdgom dazianebl i nawil e-  
bi xmeba da mTI i anad cviva, xol o  
mSral i ami ndis SemTxvevaSi fo-  
Tol i Tavis saR Sexedul ebas ar  
kargavs da i se scviva.

inf eqci i s gamomwvevi mi zezia as-  
kosporebi, maTi aqtiurobis droa  
gazafxul i, rodesac temperatu-  
ra 15-20°C aRwevs.

**mukurnal oba:** wi Turas wi naaR-  
mdeg sabrZol vel ad gamoi yeneba  
i give preparatebi, i ave vadебsi  
rac Wraqi s Tvis.

**vazis gal ebi ani tki pa.** gal e-  
bi ani tki pa mevenaxeobis yvel a  
regionSi a gavrcel ebul i, igi mo-  
nofagia. tki pa imdenad pataraa,  
rom SeuiaraRebel i Tval iT ar-  
Cans, mavnebel i kvirtSi i zamT-  
rebs, mozamTreobi dan gazafxul -

ze, kvirtebis gaSl is periodSi gamodis, gamosvl isTanave saxl deba da mrvl deba Ziri Tadad foTI is firfitis qveda mxareze, sadac bususa gal ebi Cndeba, zeda mxareze ki warmoiqmneba amonaburcebi.

vazis tkipa saxl obs foTI is qveda mxareze da wel iwadSi 7-10 Taobas iZI eva.

**vazis abl abudiani tkipa.** vazis abl abudiani tkipa mTel saqarTvel oSia gavrcel ebul i. mas didi ziani moaqvs, mcirdeba mosavl ianoba, yurZenSi qvei Tdeba vi tamini C-s Semcvel oba da Saqrianoba.

mvnebel i vazis foTI ebs mTel i vegetaciis periodSi azianebs, rasaç maTi gauferul eba da naadre- vi Camocvena mohyeba.

gamozaTrebul i tkipa gazafxul zej er axal gaSl il kvirtebs azianebs, xol o Semdeg-foTI ebsa dayl orebs.

**mkurnal oba:** kvirtebis gaSl amde vazi da sayrdenebi unda damu-

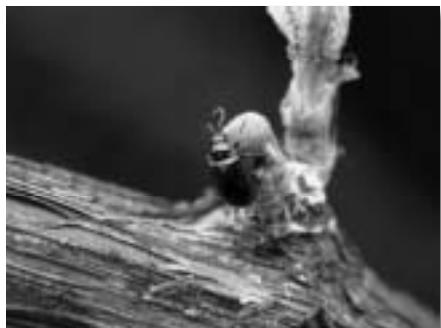


Savdes mineraluri zeTiT „ovipron 2000”-iT, xarj visnorma - 15 l / ha, kvirtebis gaSl isTanave gamoi - yeneba preparati „masai” - 0.5 kg/ha.

**yurZni s Wi a.** saqarTvel oSi far-Tod gavrcel ebul i mvnebel ia, igi didzi ans ayenebs vazs.

**mkurnal oba:** yurZni s Wi i wi naaRmdeg sabrZol vel ad gamoi yeneba inseqticidi „fastaki” - 0.3-0.4 l /ha. pi rvel i waml oba tardeba yvavil obis wi na dReebSi. momdevno waml oba unda moxdes isrimis fazaSi, vidre matl ebi marcvl Si Rrmad SeWras moaswrebdes. mesame waml oba tardeba marcvl ebi s SeTval ebi sas.

**kvirtis Wi a.** mvnebel i gazafxul ze vazis kvirtebs azianebs. martis bol osa da april ispi rvel dekadaSi gamozamTrebul i matl i jer ki dev gauSi el i kvirtiT, xo-



I o Semdeg foTI iT ikvebeba. mvnebel i erTwel iwadSi erT generacias iZI eva.

**mkurnal oba:** waml oba unda Catardes vazis kvirtebis dabervisas, inseqticidebi T - „bi-58 axal i” - 1.5 l /ha, „fastaki” - 0.3-0.4 l /ha.

**vazis fqvili sebri crufariana.** mvnebl i gamravl ebi s da gavrcel ebi s saqarTvel oSi optimaluri pirobebi a Seqmnili i.

mvnebel i azianebs vazis miwiseda organoebi: foTol s, yl orts, mtevans da Stams, i gi we- l iwadSi iZI eva 3-4 Taobas. crufariana zamTars atarebs vazis amskdari qerqis qveS, mozaTrebidi dan gamodis adre gazafxul ze, martis bol os, april is meore na- xevarSi.

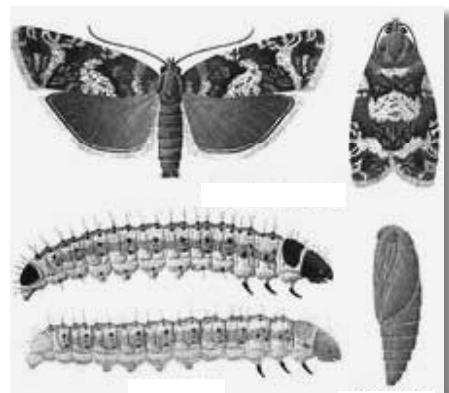
crufarianas eqskrementebze (tkbil gamonayofze) saxl deba si-Savis gamomwevi soko kapnodi umi, romel ic vazis mwvane nawi l ebsa da mtevnebs aSavebs da gadasamu-Savebl ad uvargiss xdis. dazianebl i yurZni dan mdare xarisxis Rvino dgeba. crufarianaTi dazianebl i vazi wl ebi s manZil ze ZI ier knindeba da xmeba. dazianebl venaxebSi mosaval i 70-75%-iT mcirdeba.

**mkurnal oba:** crufarianebi s wi-naaRmdeg sabrZol vel ad gamoi yeneba inseqticidi „fastaki” - 0.3-0.4 l /ha.



**foTol xevlia.** mvnebel i zam-Trobs mcenaris daxeTqi l kanSi. gazafxul ze pepl ebi iwyeben gamCekas, foTol xevlia Tvi Teul nayof Tan 70-100 kvercxs debs. 7-10 dRis Semdeg i Cekeba pepl ebi s meore Taoba; swored eseni iwyeben nayofis Wamas. matl ebi Zvrebian da ikvebebi an nayofis siRrmeSi, sami kviri s Semdeg zr dasru- l i matl ebi gamodian nayofidan da mcenaris merqanze pou oben gamosazamTrebil adgil s. Tbil ami ndebSi SeiZI eba mesame Taobac mogvces, romel ic ukve mwi fe na- yofs azi anebs.

**mkurnal oba:** yurZni s SeTval vi-sas gamoi yeneba kontaqtur-naw-



I avuri inseqticidi „fastaki” - 0.3 l /ha.

germanul i kompania „BASF”-i s warmoebul i preparatebi s damoyenebi T SesaZI ebel ia vazis mvnebl ebi s da daavadebebi s damarcxeba da uxvi mosavl i s mi Reba.

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# ra unda i codes furis patronma

**furi dan maqsimal uri produqci is mi Reba SeuZI ebel ia teqnologiuri, veterinarul -sani tarul i, zooteqni kuri, saerTo profil aqtikuri da epi zo-ot is sawi naaRmdego Roni sZiebebis Seusrul ebl ad. qvemoT ganxi l ul i Roni sZiebebis Ziri Tadi mi zani a Semdegi amocanebi s gadawyeta: furisa da buRis momzadeba Sewyvi l ebi saTvis, make furebi sa da dekeul ebi s movl a-Senaxva da momzadeba mSobi arobi saTvis (i zvebi saTvis), mSobi arobi s Catareba, mewvel i furebi sa da axal Sobil i xboebi s saTanado kveba da movl a-Senaxva.**

## **furi s momzadeba dagril ebi saTvis**

j anmrTel i xbos mosagebad da di di raodenobi T rZis misaRebad gansakuTrebiT di di mni Svnel oba eni Weba furisaTvis Sesaferisi buRis SerCivas. Tu furi da buRa imyofeboden cud pi robebSi, i kvebe- bodnen arasrul fasovnad, ganayofierebis procent- ic dabali a, nayofi i Rupeba ganvi Tarebis sxvadas- xva periodSi andabal i si cocxl is unaris mqone xbo- ebi i badebian.

aRwamoebi saTvis di di mni Svnel oba eni Weba cxove- l is asaks. mi Rebul ia, rom msxvi l i r qosani pirutiyi fiziol ogi ur momwi febas aRwevs 16-20 Tvis asakSi da swored am asakSi unda davagril oT isini. fure- bis axureba xdeba regul arul ad, yovel 21-28 dReSi erTxel . es saSual ebas gvaZI evs Tval yuri vadevnoT pirutiyi s mdgomareobas.

rogor ganvsazRvroT dagril ebis dro? axurebis dros furs (dekeul s) sasqeso organodan gamosdis gamWvi rval e I orwovani si Txe. 1,2 – 2 dRis Semdeg i wyeba aRgzneba, Zroxebi, dekeul ebi metsmoZraoben, mousvenrad arian, bRavian, xSi rad i acvl eben fe-



xebs, axtebi an sxva cxovel ebs (Sei ZI eba adami ansac), cxovel s ekargeba mada, qvei Tdeba wvel adoba. aseTi furi (dekeul i) advil ad i karebs buRas. ndomi speri- odi xanmokl ea, grZel deba 10-23 saaTs.

furs (dekeul s) SevamChevT Tu ar a axurebas, swrafad unda Sevawyvi l oT buRasTan. dagvi anebi sas Sei ZI eba cikl ma uSedegod Caiar os. furebi s makeobi s regul i rebi saTvis Sei ZI eba gamovi yenoT Zroxebi s makeobi s kal endari.

xbos mogebi dan furi rac Sei ZI eba mal e unda dagri l des. rac ufro gvian dagri l deba furi, mi T nak- l eb rZesa da xbos mi vi RebT mi sgan. sauKeTeso Sedegad mi Cneul ia, Tu furi yovel 10,5 TveSi moi gebs xbos.

xboebi s simaxinj i asari debi ad dauSvebel ia cxovel ebi s Si danaTesiari Sewyvi l eba. furs unda SevurcioT misi tanis Sesaferisi buRa; es Tavi dan agvacil ebs gaZnel ebul mSobi arobas. Sewyvi l ebi sas unda davi cvaT veterinarianul -sani tarul i normebi. buRa gamokvl eul i unda iyos inf eqci ur daavade- bebze, gansakuTrebiT brucel ozze. es agvacil ebs abortebs, garTul ebul mSobi arobas, momyol i Se- Cerebas, endometritebs, mastitebs, xsenisa da rZis xarisxi s daqvei Tebas da sxv.

## **furi s makeoba**

makeoba i wyeba cxovel i s ganayofierebi dan. es fiziol ogiuri mdgomareoba dakavSi rebul ia nayofim- tarebi obasTan, romel ic mTavr deba si cocxl i sunariani xbos dabadebi T. furis makeoba grZel deba saSual od 285 (240-311) dRe.

Tu Zoxa makeobi s periodSi cud pi robebSi imyofeba da arasrul fasovnad i kvebeba, es uaryofi Tad moqmedebs nayofis ganvi Tarebaze. ami tom makeobi s mTel periodSi pirutiyi i se unda vkveboT, rom ar ganicados vi tami nebis, makro- da mikroel ementebi s deficit i.

## **furi s droul i gaSroba**

rodesac furi xbos mogebamde i wvel eba, nayofi arasworad vi Tardeba, mcirewonisa da fiziol ogi- urad nakl eb aqturia. garda amisa, ar xdeba xsenis sabol oo formireba da is Raribia seTi mni Svnel ovani cil ebi T, rogoricaa imunogl obul i nebi, ris gamoc axal Sobil i xboebi xSi rad mi drekil ebas i Cenen mTel i rigi inf eqci ur i daavadebebi sadmi. makeobi s bol o 2-3 TveSi xbos wona 63-73%-i T matul obs da, aqedan gamomdinare, gansakuTrebul i yuradReba unda mi vaqci oT furebi s kvebasa da movl as makeobi s am periodSi. zemoTqmuli dan naTel ia, rom di di

mn SVnel oba eni Weba make furebis droul ad gaSrobas. es unda moxdes mogebamde 2-2,5 Tvi T adre. im fu-rebs, roml ebi c mogebamde 2-2,5 Tvi T adre dReSi 3-4 I i tr rzes i wvel i an, wvel a Sei ZI eba swrafad Sevuwy-vitoT, magram maRaL produqtul Zroxeks ki – Tan-mimdevrobiT. furi maSinaa gamSral i, rodesac wve-i is Sewyvet i dan 1 kviris Semdeg sarZeve jirkvI ebi daupataravdeba.

### **mSral i furebis Senaxva**

wvel is Sewyvet i Semdeg furs gansaku Trebul i yu-radReba swi rdeba, raTa pirutyma Sei vsos is defi-citi, rac am periodamde hqonda. unda mi vceT kargi xari sxis sakvebi, romel ic unda Sei cavdes 100-120 gr proteins da amdeni ve Saqars, 7-9 gr kal ciums, 5 gr fosfors da 40 – 5 mg kar otins. 400-500 kg masi s furs dReSi eZI eva 8-10 kg kargi xari sxis Ti va, 15-20 kg si-l osi an 12-16 kg senaJi, 1-2 kg kombinirebul i sakvebi. aucil ebel ia, rom yovel dRi urad sakvebs daematos 30-40 gr sufris maril i, dafqil i carci da sxva mi-neral uri nivTierebebi. ar Sei ZI eba make furebs mi-eces gafuWebul i sakvebi: dampal i, obmoki debul i senaJi an Ti va da sxv. aseTma sakvebma Sei ZI eba gamo-iwvi os saWml i momnel ebel i sistemi s moSI a da gav-I ena i qoni os nayofze. aucil ebel ia Zroxeks mi ecies vi tami nebi. bol o xanebSi far Tod i yeneben trivita-



mins da sxvadasxva premi qsebs. furebi, gansaku Trebi T ki uSobl ebi, yovel dRi urad unda gadi odnen 2-3 sT-i an moci onze. zafxul Si ukeTesi a maTi gaSveba saZovarze. mogebamde 1 Tvi T adre furebi unda aic-ras kol i baqteriozisa da paratifis sawinaaRmdego vaqcini T.

*rusudan barkal aia  
,el kanas" mrCevel i mecxovel eobis dargSi*

## **futkris bunebrivi gamravl eba - nayaroba**



1. is stiqi urad xdeba;
2. nayarebis daWera-dabi naveba bevr dros da energias moi Txovs;
3. amcirebs mefutkreobis pro-duqci i gamosaval s;
4. arTul ebs sel eqciur muSaobas.

futkris oj axis bunebrivi gamravl eba nayarobi s saxi T xdeba. bunebrivi nayaroba romara, futkari Cvenamde ver moaRwevda. cxadia, futkris yovel i oj axis wi luri ganvi Tareba nayarobas aucil ebl ad ar mol-cavs. ami sTvi s unda arsebobdes bunebrivi xel Semwyobi pi robebi. avve unda Sevni SnoT, rom Tanamedrove samrewvel o mefutkreoba ebrZvis bu-nebriv nayar i anobas, radgan:

nayaroba kidev erTxel amtki-cebs, rom futkris oj axi erTi bi-bol ogiuri organizmia. nayarobi s dros futkris oj axi war moodgens erTian reproduqciul organos, romel ic sakmaod rTul i fizio-ogiuri cvl il ebebi s Semdeg i yofa or nawil ad. deda futkari, muSa da mamal i futkrebis nawil i gamoeyofianZiriTad oj axs dacdil oben Seqmnan axal i oj axi. deda futkars, ramdenime aTas muSa futkars da asobi T mamal futkars, roml ebic bunebrivad gamoeyvnen futkris oj axs, bunebrivi nayari ewodeba, xol o gayofis process – nayaroba.

Tvi Ton nayarobi s procesi uaRresad STambelWdavia. skid an Zal i-an damaxasi aTebel i guguni T 2-3

wuTSi gamodis ramdenime aTeul i aTasi futkari, romel ic erTian RrUBL ad ganagrZobs moZraobas da, Cveul ebriv, xis tots, Robes, raime Senobas konusuri formis gundai Seexveva. aseTnairad Sexveul i nayari 1 saaTi dan 3-5 dRemde Sei ZI eba gaCerdes (minaxavs i seTi SemTxvevebi c, roca nayars xis totebze fi Webi c hqoni aT CamoSenebul i). bunebrivi nayari xSi rad ucnaur adgil ebs Seexveva, rac aznel ebs mis Camoxsnas (mag., 5-10 m-iani xis wvrl totebs, xis varj s da msxvili totebi ganSto-ebebs, Senoba-nagebobebis uswor-masworo adgil ebsa da a.S.) aseT SemTvevebSi, cxadia, Znel deba nayaris Camoxsna, rac xSi rad mefut-



krisgan garkveul gamomgonebl o-bas moi Txovs.

saer Tod, nayarad gamosul i futkari, mi uxedavad di di masisa, arc i se avia da advil ad itans manipul irebas. magal i Tad, Sei ZI eba Sexveul i nayari di di kovzi T an aqandazi T avi RoT nawil -nawil da Cavyar oT sanayare yuTSi, romel - Sic 2-3 mSral i fiWa gvaqvs Cadebul i.

roca nayari maRI a xezea, Sei ZI eba grZel bambukis j oxze gamobmul i mSral i Savi CarCo mi vabaT da SevaxoT nayars -j er erTi, me-reomeoremxridan. futkris nawil i gadmova CarCoze, romel ic Camogvaqvs Zi rs da gamzadebul yuTSi vdebT. ase gavimeorebT ramdenimej er, sanam futkris Ziri Tad masas ar movxsniT. bol o futkrebis mosakrebad bambukis j oxze mimagrebul CarCos mivitanT nayaris Sexvevis adgil ze, meore j oxze vamagrebT bal axis an foT- I ebiani xis totebis cocxs da av-SI iT futkars cocxi T. afrenil i futkris umetesi nawil i CarCoze daj deba. ase gavimeorebT, sanam umetesi futkari ar gadava CarCoze, romel sac Semdeg sxva CarCoebTan er Tad CavdgamT skaSi. kargia, Tu axl ad dasaxl ebul nayars erT Riabartyian-Tafl i an CarCos miscemT, es amcirebs nayaris mi-er budis mi tovebis al baTobas. is faqt, rom nayaris futkari i Svi-aTad inestreba, ganpi robebul ia nayaris arasrul fasovnebiT da nakl ebi wi naaRmdegobis unariT.

nayari arasrul fasovani oj axis, masakl i a futkris oj axis 3 Semadgenel i nawil i: sakvebi maragi, aSenebul i bude da bar tyi. Tumca zogierT wi gnSi SexvdebiT mcdar debul ebas: Ci CaxvSi maragad aRebul Tafl i s gamo futkari ver i Runeba da ver inestreba. ar daij eroTi! Sei ZI eba, sananebl ad gagi xdeT.

Cveul ebrivid, dabl a xis wvriI totebze Sexveul i nayari advil i Camosaxsnel i a. amisTvis sakmari-sia sanayare yuTi, an mCate 8-CarCo i an ska, ramdenime mSral i fi-WiT, qvevi dan SeudgaT (ise, romnayaris konusuri wveri fiWebs Sua iyos moqceul i). amis Semdeg xel i an mZime keti davcxoT tots nayaris zevi T. me aseT TavRia sanayare yuTs kapronis l entiT vkravT, rac aadvil ebs mis Camoki debas nebi smier totzexis, rki nisan msxvi- I i mavTul i skauWi T.

ufis organul i qimiis instituti uSvebs preparat „apimil s”, romeli ic deda futkris #1 feromonisa da muSa futkrebis nasonis j irkv-I i sgamonayofissinTezur anal ogs war moadgens. ampreparatiT poxaven special ur sanayareebs da ki deben safutkreSi nayarobi s dros. Sede-gi Ti Tqmis 100%-iania. cdis dros 35 gamosul i nayari dan yvel a apimil wasmul sanayares Seexvia.

nayar futkars di di energia aqvs rogorc Senebis, aseve neqtris motanisa da gadamuSavebisTvis. nayari Ziri Tadad Sedgeba fizi-ol ogi urad gaucveTavi, kargad ganvi Tarebul i, cil ovani nivTi e-

rebebiT mdi dari futkrebisagan; amas Tan er Tad nayar futkars Tan miaqvs Tafl is maqsimal uri raodenoba, romel ic mas ramdenime dRe hyofnis.

axl ad dasaxl ebul nayars asaSe-nebel i CarCoebi frTxil ad unda mivceT; j obia, meore-mesame dRes, raTa pirvel dReebSi xel ovnuri fiWebi futkris simZimem ar Camoxios. aj obebs, pirvel ad mcired wamoSenebul i da erTi bartiyian-Tafl i an fiWa CavudgaT.

aRsani Snavia, rom nayarad gasuli i futkari iviwebs Zvel i skis adgil samyofel s, amit om axl ad Camoxsnil da skaSi dabinahebul nayars Segvi ZI i a nebi smier i adgi-i i mi vuCinoT.

### **futkris oj axebs xel ovnuri gamravl eba**

futkris oj axis xel ovnurad (mefutkris mier) gamravl ebi s ramdenime xerxia cnobil i. maT cal -cal ke ganvi xi l avT. amas Tan SevecdebiT gavaanal i zoT maTi dadebi Ti da uaryofi Ti mxareebi.

### **futkris oj axebs gamravl eba indi vi dual uri da nakrebi ganayofebi T**

mefutkris mier futkris oj axis nawil i s cal ke gamoyofas individualuri ganayofi ewodeba. cxadia, amisaTvis yvel aze xel sayrel i dro futkris oj axis ganvi-Tarebis III stadiia. am dros xdeba axal gazrda dausaqmebel i futkrebis dagroveba, rac, Tu Ral a ar aris mosal odnel i, nayarobi damTavr deba. Tu axl o momaval Si Ral i anobaa mosal odnel i, maSin ganayofebi s Seqmnisagan Tavi unda Sevi kavoT, radgan futkris oj axis Tvis ramdenime CarCo futkris war Tmevam Sei ZI eba 8-10 kg Tafl i dagvakarginos. aseT SemTxvevaSi xel ovnur ganayofebs Ral i dam-Tavrebis Semdeg vayal i bebt (ase-Ti situacia gvxvdeba dasavl eT saqar Tvel oSi akaci i s yvav i obis win). xel ovnuri ganayofebi s Seqmna mxol od ZI ieri oj axebsagan Sei ZI eba. susti oj axebsagan ganayofebs ver mi vi RebT.

xel ovnur ganayofebs cveul ebrivid udedod 4-5 CarCoTi da zed msxdo-

mi futkriT qmnian. Tu ganayofebs i que vtovebT safutkreSi, maT ki-dev unda davumatoT futkari 1-2 CarCodan, radgan moRaL e futkari Tavis skaSi dabrundeba da ganayofi dasustdeba. ganayofs Sei ZI eba mivceT ganayofierebul i deda futkari, mwi fe sadede, an vacal oT Tvi Tongamoi yvanos deda. es ukana-sknel i SemTxveva Zal ze ararentabeluria, radgan deda futkris gamoy-vanis procesi 1 Tves grZel deba da es dro ganayofisaTvis dakargul ad unda Cai Tval os, Tanac Sedarebi T sust ganayofs xarisxiani deda futkris gamoyvana ar SeuZI ia.

xel ovnuri ganayofi iseTi siZ-i erisa unda i yos, rom mas damo-uki debi ad arseboba SeeZI os da mudmi v mrunvel obas ar saWi roebdes. amisaTvis kmara 4-5 CarCo zed msxdomi futkriT. aqedan 2-3 bartyiani unda i yos, xol o ori ki deSi Tafl ian-Weoiani. ganayofebs formirebis dros Weos di di mni Svnel oba eni Weba, radgan Taf- li is danakl i si sSevseba gacil ebiT martivia, vidre yvavil i sntvrisa.

Tu axl ad SeqmniI ganayofs ganayofierebel i deda futkari unda mivceT, maSin deda futkars gal i iT ganayofis formirebisTa-nave vaZI evT. Tu ganayofs mwi fe sadediT vayal i bebt, maSin mwi fe sadede 4-8 saaTis gavl is Semdeg an meore dRes eZI eva.

xel ovnuri ganayofis formirebisTvis SegviZI ia avi RoT rogorc Ria, aseve gadabewdil bartyiani CarCoebi. mTavari aq aris mi zani, risTvisac ganayofs vqmniT. varo-atozis pirobebSi kargi iqneba, Tu ganayofis formirebas da varo-atozTan brZol is zooteqnikur me-Tods erTmaneTs davukavSi rebT. ganayofierebul dediani ganayofi umj obesia, Ria-bartyiani CarCoebiT davakompl eqtoT da amave dros Sewwaml oT romel imo aprobi-rebul i akri ci diT. mwi fesadediani ganayofi, piriqiT, umetesad gadabewdil bartyiani CarCoebiT kompl eqtdeba, xol o varoas wi naaRmdeg waml oba formirebi dan me-12-14 dRes xdeba. nakrebi gamonayofis formireba arafriT gansxavdeba individualuri ganayofebs formirebi sagan, garda imisa, rom nakrebi ganayofebsTvis CarCoebi

zed msxdomi futkriT sxvadasxva oj axebe dan vi RebT. sxvadasxva oj axebe dan aRebul i futkriani CarCoebiS ganayofad formirebis dros Cems praqti kaSi arasdroS mixmaria aromatizebul i si rofebi (pi tnis, kami san sxva). Tu geSi ni aT, rom sxvadasxva oj axis futkrebi erTmaneTSi brZol as daiwyeben, SegiZI iaT xel ovnuri ganayofis yvel a CarCo formirebis procesSi pirdapir ki ar CadgaT axal skaSi, aramed j er iqi dan futkari CaferTxoT. axal skaSi CaferTxil i futkrebi kargaven wi naaRmdegobis gaweviS unars, erTmaneTSi i revian da Tavdacvaze aRar fiqroben.

### **futkris oj axis gamravl eba, oj axebeis Suaze gayofa dafreniT**

am meTodiT futkris oj axis gayofis upiratesoba is aris, rom sakvebi, bartyi da moRaL e futkari Sedarebi T Tanabrad nawiI deba, rac aadvil ebsaxl ad SeqmniI i oj axebeis movl asa da dacvas. Tumca es meTodi ufrro Sromatevadia, vidre wi naaTavSi aRweril i meTodi.

Suaze gayofa-dafreniT oj axebeis gayofis dros unda avi RoT Zi reul i oj axis formisa da feris ska, romel sac vdgamT Ziri-Tadi oj axis gverdiT da masSi Ziri-Tadi oj axi dan gadmogvaqs na-xvari raodenobis CarCoebi zed msxdomi futkriT, bartyiTa da sakvebiT. amis Semdeg orive skas i se val agebT, rom Ziri-Tadi skis safrebis adgil i dan Tanabrad iyvnen daSorebul i. ramdenime wuT-

Si vubrundebiT gayofil oj axs da vakvirdebiT moRenil i (Semosul i) futkris ganawil ebasi. Tu is ararTanabar ia, skebis ramdenime santimetrit gawevis vcdil obT maT Tanabrad ganawil ebasi. am pro-ceduris Catareba Sei ZI eba ki dev mogviwi os 15-20wuTis Semdeg. Cve-ul ebriv, am dros deda futkars ar veZebT, rac ZI ier amartivebs gayofis process. udedo gamonayofs meore-mesame dRes vadgenT CamoSenebul i sadedeobis moxedviT. am ganayofs vaZI evT mwi fe sadedes an ganayofierebul deda futkars gal i iT, an vacl i iT, Tvi-Ton gamoi yvanos deda futkari.

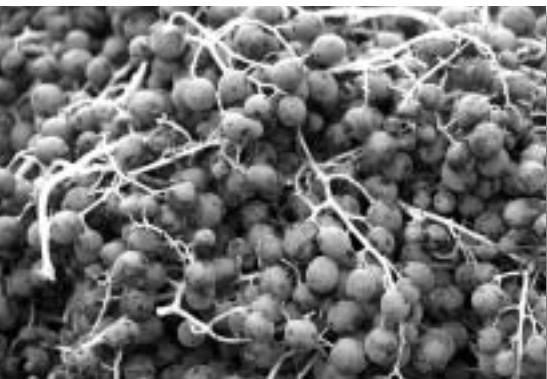
cxadia, zemotT ganxiI ul i gayofis drosac umj obesia, deda futkari da Ri abar tyiani CarCoebi erT skaSi movaqcioT, xol o gadabewdil bartyiani CarCoebi – meoreSi, romel sac axal dedas an mwi fe sadedes mivcemT. pi rvel i, dediani ganayofi gayofis dResve Sei ZI eba damuSavdes varoas sawi naaRmdeg romel imo preparatiT, xol o meore gadabewdil bartyiani ganayofi muSavdeba orj er: gayofid an 7-8 dRisa da 14-15 dRis Semdeg. am procedurebiT tkipiT dai nvazi-rebis xarisxi ramderj erme mcir-deba, rac zaFxul is ganmavl obasi sxvagvar ad SeuZI ebel i iqneboda.

**vaxtang RoRoberiZe  
, el kanas" mrCevel i  
mefutkreobis dargsi**

**dasawyisi ,axal i agrarul i sa-qar Tvel o" #7(15), ivl isi, 2012**



# saferavis kl ertze dayenebis meTodi



Cven SevecdebiT mokl ed vupasuxoT, rogorc am Seki Txvebs, i se mosazrebas zogadad kl ertsaci el is rol ze Rvinis qarTul ad dayenebis saqmeSi.

ra Tqma unda, yovel dargs esa-Wi roeba ganvi Tareba da winsvl a, Tumca es mxol od im SemTxvevaSi, Tuki romel i me dargi Tu sagani ganvi Tarebasa da winsvl as saWi-roebi. isic safiqral i da gansaxil vel ia, raime siaxl is SemoRebit Cven, ama Tu im dargs raimes vmatebT Tu vakl ebT?

siaxl em, rac, ra Tqma unda, auci-l ebel i da sasargebl oa, gavrce-l eba adgil obrivi, saukunebis mi er gamocdl i adaT-wesebis xar-j ze ar unda hpovos. isic unda iT-qvas, rom aseTi siaxl e, SesaZl oa di dad misaRebi da gamarTI ebul i i yos ama Tu im erSi, magram aris ki misi auci-l ebl oba da gar dauval o-ba CvenSi? iqneb aseTi siaxl e ukan dahxevs Cvens saqmes? amgvar siaxl e Ta gauazrebl ad SemoRebis ar-aerTi Tval saCino magal iTi moyvana SeiZl eba, romel TacaraTu SeumatbebiA T raime Cveni qveyni saTvis, aramed karga ukan dauxeviAT i gi.

yurZnis kl ertsaci el ebiS Semosvl as CvenSi, vfiqrobT, rom mevenaxeoba-meRvineobiS indust-riul ma mimarTI ebam Seuwoyo xel i. sxvagvarad saferavis Rvinis dayenebis saqmeSi kl ertsaci el is rol i namdvil ad ar gvevl i neba gadamwyvet da gardauval movl enad. SesaZl oa yurZnis kl ertsaci el i evropul i wiTel yurZni an-

sagarTvel oSi Cveni wi naprebi saferavis Rvinis kl ertis monawil eobiT ayenebdnen. yurZnis meqani kuri Tu el eqtro kl ertsaci el ebi CvenSi mecxramete-meoce saukuneebSi gamoCnda pi rvel ad, ramac swrafi da farTo gavrcel eba hpova.

ratom moi ki da fexi CvenSi kl ertsaci el maaseZl ierad da ram gamo-iwvia esyvel aferi?

vazis j i SebisaTvis gardauval ic-kia, magram vfiqrobT, rom saami-sod araertI mizezic arsebobs; Tavad vazis j iSis xasiaTi, niadagur-kl imaturi pirobebi, yurZnis fiziol ogiuri simwife, momxmar-rebl is gemovneba da ssv. yovel i ve zemoCamoTvl il i dan gamodinare, yurZnis kl ertsaci el i umetes SemTxvevaSi aucil ebel i wi napi ro-baa xarisxiani produqciis misaRebad ucxoETSi, magram qarTul si-namdvil eSi saferavis j iSis vazi-saTvis, Tuki, raRa Tqma unda saqme gvaqvs dargis Zireul codnasTan, kl ertsaci el is gamoyeneba aranai rad ar warmoadgens aucil ebl i obas. Cven vfiqrobT, rom kl ertsaci el is ase farTo danergva qarTul meRvineobaSi aseve gamo-iwvia im mcdarma da aramarTebul -ma mosazrebamac, romel i mosazrebi Tac mavanni Tvl idnen, rom qar-Tul i Rvin no maqsimal urad unda mi msgavseboda evropul i Rvin obis xasiaTs, raTa ucxoETis bazars i gi advil ad da daubrkol ebl ad mi eRo da morgaboda mas, sxva eni T rom vTqvaT – aTqvefil iyo msolfi o Rvin oTa Soris. amisi mizezi ki maTive Tqmi T qarTul i tradiciu-l i Rvin is si uxSe da siZel ge iyo, romel i azri da mimarTul ebac salval al o aRmoCnda CvenTvis, ris Sedegsac Cveni qveyni s meRvineoba dRemde imkis. Tuki odesme, moyo-l ebul i istoriis Soreul i warsu-l i dan dRevandel dRemde, qarTul i Rvin mouwonebiA da daufasebiAT, es mxol od imi tom, rom i gi qarTul i, ZirZvel i da saukuneebis mi er gamowrTobil i wesiT yofili a dayenebul i! swored amgvar wesad gvevl i neba qarTul i saferavis dayeneba kl ertis monawil eobiT, romel SemTxvevaSiC Rvin metad

strukturul i, Sinaarsiani, sxeu-l iani da daZvel ebiS didi potential i s mqone dgeba. rogorc ukve aRini Sna, aseTi SemTxveva mxol od dargis safuZl iani codna-gamoc-dil ebiS SemTxvevaSi amarTI ebs, roml is drosac aucil ebl ad unda i qnas gaTval i swinebul i yurZni sa da Tavad kl ertis simwife, venaxis gaSenebiS si swore, misi adgil mde-bareoba daeqspozicia, Rvinis dayenebis wesi da ssv.

ra Tqma unda, saferavis Rvinis SemTxvevaSi daduReba-davar gebiS procesSi kl ertis monawil eoba drois iseTi xangrZl ivi periodiT, rogorc, magal iTad, kaxuri rqawiTel is Rvinis SemTxveva, arigul i sxmeba, aramed saubaria mxoi od al kohol uri duRil ze da mis Semdgom periodze, mciredi xniT, ramac SesaZl oa Seadginos, magal iTad 7-14 dRe...

unda aRini Snos, rom kl ertis simwife, SeiZl eba erT-erT umTavres moment ad Cai Tval os saferavis Rvinis dayenebis procesSi, i seve rogorc, magal iTad, rqawiTel is kaxurad dayenebiS, romel i periodic Tavad meRvinem unda gansZR-vros. Semousvl el i kl ertiT SesZl oa Rvinis xarisxi gauaresdes, radgan ammomentma SeiZl eba Rvinos „mwane kl erti sa“ da aqedan gamodi nare, simwar i sa da sxva ar asasur-vel i gemo da suni SesZl nos da Rvin no gaauxoS. yurZnis kl ertis Semosvl a garkveul wi ad Tavad yurZnis simwife es Tanacaa dakavSi rebul i. Tavi sTavad cxadi a, dabal Saqriani, anu moumwi febel i yurZnis SemTxvevaSi kl erti momwi febas ver moasvrebs, rac Rvinis xarisxe uaryofiTad imoqmedebs, misi gemovnuri Rirsebis gauaresebis Tval sazrisiT. magal iTad, rqawiTel is Rvi-

nis kaxur ad dayenebis SemTxebaSi, rodesac saqme gvaqvs Rvinis WaWa-kl ertze davargebis i seT xangrZ-l iv procesTan, rogoricaa 6 Tve, Semosul i da momwi febul i kl erti aucil ebel i winapi robaa xarisxani da tipuri Rvinis misaRebad. dargis special istebi mi i Cheven, rom aseT dros, rqawi Tel is yurZnis Saqri-noba unda Seadgendas aramcires 23%-isa. yurZnis simwi fis es periodi SeiZI eba CaiTval os erTgvar oqros Sual edad kaxuri Rvinis dayenebis saqmeSi.

Rvinis qarTul ad dayeneba Tavis mxriv Zal ze Rrma Sinaarss atarebs, roml is drosac meRvines Zal ze bevri faqtoris gaTval is-wineba uwevs, rogoricaa magal i-Tad: yurZnis simwi fe da xarisxi, niadagur-kl imaturi pirobobi,

Rvinis WurWel i, al kohol uri duRil is warmarTva da misi kontrol i, vazis j i Si, Rvinis dayenebis adgil i da iqauri adaT-we-sebis gaTval i swineba da araerTi sxva metnakl ebad mni Svnel ovani detal i, romel Ta erTobl i obi Ta da maTi gaTval i swinebi T mi i Reba qarTul i Rvino, romel ic Tavisi saintereso da rTul i Sinaari-si Tarc erTsxva Rvinos arahgavs, rac TavisTavad xazs usvams Rvinis qarTul ad dayenebis Tavisebure-basa da gansakuTrebui obas.

qarTul meRvineobaSi, konkretul ad rqawi Tel i sa da saferavis qarTul ad dayenebis saqmeSi, SeiZI eba i Tqvas, romkl ertserT-erTi umTavresi adgil i ulWiravs, xol o kvl eva-samuSaoebi am mxriv bevria Casatarebel i. gamosakvl evia, Tu

konkretul ad yurZnis Saqrianobis romel etapze i qnebarTvel i Cata-reba optimal uri saferavis Rvinis dayenebis kl ertis monawil ebiT; al kohol uri duRil is CaTvl iT ramdeni dRe unda CaiTval os saferavis Rvinis WaWa-kl ertTan Sexe-bis optimal ur per iodad da sxv.

dasasrul s aRvni SnavT erTsac, rom qarTul i meRvineobis ganvi-Tareba gul isxmobis ara ucxouri teqnol ogiebisa Tu manqana-danadgarebis gauazrebel kopireba-sa Tu kal ki rebas, aramed, upi rve-I esad Cveni wi naprebis mier Seqmni i tradiciebis pativiscemas da maT CaRravebas.

**giorgi barisaSvili  
el kanas" mrCevel i mevenaxeoba-  
meRvineobis dargSi**

## mcenareul i nayenebi da naxarSebi

mcenareebs, romel Ta nayenebi da naxarSebi gamoi-yeneba mavnebl ebi sa da daavadebebi s wi naaRmdeg, pestici duri aqtivobi s mcenareebi ewodeba.

gagacnobT ramdenime aseTi mcenari s nayeni s dam-zadebi s teqnol ogi as:

### WinWris nayeni

gamoi yeneba bugrebi s wi naaRmdeg da sasuqad (Sei cavs di di raodenobi T azots). gazafxul ze da zafxul Si unda davkri fOT WinWari (Tesl i momwi febamde), dav-WraT wrii ad, 1 kg-s davasxaT 10 l wyal i. nayeni ramdenime dRis Semdeg daiwyeb duRil s. duRil is dam-Tavrebamde WurWel s davafaroT bade, dReSi erTxel movuriOT, nayeni mzad i qneba 7-12 dRis Semdeg (haeris temperaturaturi s Sesabami sad). gadawuroT.

Tu nayens vi yenebT mavnebl ebi s wi naaRmdeg, 11 nayens unda davumatoT 19 l wyal i da SevasxuroT mcenares. 20 l xsnari gamoi yeneba daaxl oebi T 200 m2 far Tobze.

Tu nayens vi yenebT sasuqad (xexil i, kenkrovnebi, dekoratiul i mcenareebi, bostneul i kul turebis umetesoba. gamonakl i sia xaxvi, ni ori, barda, l obi o 1 l nayens unda davumatoT 9 l wyal i da davusxaT mcenares Zi rebSi. 10 l xsnari gamoi yeneba daaxl oe-bi T 100 m2 far Tobze.

wyl i T gazaveba unda moxdes uSual od nayeni s gamoyenebi s wi n.

### xaxvis furcl i s nayeni

gamoi yeneba bugrebi da Trifsebis wi naaRmdeg. xaxvis mSral furcl ebs (200 gr.) unda davasxaT 10 l



wyl i da gavaCeroT 5 dRe-Rami s ganmavl oboSi, (dro-dadro vuriOT). 10 l xsnari gamoi yeneba daaxl oebi T 100 m2 far Tobze.

### cxare wi waki s naxarSi

gamoi yeneba bugrebi da farianebs wi naaRmdeg. cxare wi waka, mwvane - 1 kg, an xmel i - 0,5 kg unda vanduRoT 1 sT 10 l wyal Si, naxarSi gavaCeroT 48 sT-s. 120 ml nayeni gavazavoT 10 l wyal Si. 10 l xsnari gamoi yeneba daaxl oebi T 100 m2 far Tobze.

### pomi dvr i foti i s nayeni

gamoi yeneba kombostos TeTrul as wi naaRmdeg. 2 muW pomi dvr i mwvane fotol s unda davasxaT 20 l wyal i da gavaCeroT 2 saaTis ganmavl oboSi. mcenares SevasxuroT (gauzavebl ad) mavnebl i frenis peri-odSi, preparats aqvs gamafr Txil ebel i efeqti.

**nukri memarniSvili  
el kanas" mrCevel i mebostneobis dargSi**

# futkris axal i sakvebi danamati - BIO BEE ADDITIVE

**futkari dedamiw s uZvel esi binadaria, romel mac ganvi Tarebis sxvadasxva etapebze kl imaturi Tu sxva uamravi cvl II ebebi aqvs gamovi II I.**

futkris Srromis nayofierebi dan gamodinare mas bevr mavnebel Tan da daavadebebTan uxdeba brZol a, magram ZI ieri imunuri sistemis mi - uxedavad, xSi rad ver umkl avdeba maT, TumcadRemdeaxer xebs biol o- giuri wonasworobi s Senar Cunebas.

cnobil ia, rom Sinauri futkri vel ur pirobebSi veRar xarobs. mas baqterol ogiuri, virusul i da fiwuri tal Rebis zemoqmedebis gamo mudmivi movl a-mkurna- l oba sWi ndeba.

Tanamedrove teqnol ogiebi futkris daavadebebi sgan samkurnal od bevr sxvadasxva qimi ur pre- paratebs i Tval i swi nebs, romel Ta arasworad gamoyeneba, futkrisa da Wupris qimi ur mowamvl asa da skis dabinZurebas i wevs, rac, bu- nebrivia, TafI is xarisxe i saxebea.

svvadasxva daavadebebi sgan da- sacavad qar Tvel ma special istebma SeimSaves „futkris kompli eqsuri sakvebi danamati – Bio Bee Additive”, romel ic futkris imunuri sistemisa da mwarmoebl obis mosamatebl ad gamoyeneba da uni- kal ur Sedegs iZI eva.

„futkris kompli eqsuri sakvebi danamati”, rogorc „Bio Bee Additive”-s erT-er-Ti avtori gia Cekuri Svili ganmartavs, biol ogiurad sufTa produqtia, roml is gamoyenbac mTel i wl is ganmavl obaSi, nebi smi er pirobebSi a rekomendebul i.

igi Sedgeba kompli eqsi sgan, romel ic Setani i a evrokavSi rismi- er damtkicebul bi osaSual ebaTa CamonaTval Si. amsakvebi danamatis regul arul ad micemis SemTxveva- Si, imunuri sistemis zrdis xar- j ze, mimdinareobs daavadebul i futkris gamoj anmr Tel eba. fut- kari ikurneba virusul i da baqte- riol ogiuri daavadebebi sagan.

futkari i Zens gamZI eobas radi- aciul i da mikrotal Ruri zemoq- medebis mimarT.

deda futkrisa da mTl i anad- oj axis gaZI ierebasTan erTad,

2-3-j er i zrdeba biol ogiurad sufTa, j anmr Tel i da ZI ieri futkris oj axis mwarmoebl oba.

– Cvens mier SemuSavebul i „futkris kompli eqsuri sakvebi danamati – Bio Bee Additive” – ambobs batoni gia, – dRes erTaderTi biol ogiurad sufTa saSual ebaa, roml is moqmedebis speqtri gacil ebit didia, vidre zemoT Ca-



movTval e, ami tom CvenTvis Zal i an mni Svnel ovani a, am si axl i se fut- kreebamde mi tana, raTa maT Tval - saCi nod naxon da darwmundnen mis efeqtianobaSi.

mni Svnel ovani i sic, rom „futkris kompli eqsuri sakvebi danamati – Bio Bee Additive”-s bio produqtis statusi aqvs minniWebul i.

sakvebi danamati aZI ierebs futkris imunuri sistemis zrdas, futkris uZI ierebs garemo pi- robebSi gamoweul i negatiuri zemoqmedebisa da araxel sayrel i atmosferul i cvl II ebebis mi- marTwinaaRmdegobis unars, zrdis futkris produqtul obas.

## 1. futkris kompli eqsuri sakvebi danamati – Bio Bee Additive”-s Semadgenl oba:

– kal ciumis karbonati, askorbiinis mJava, mzesumzira, I erwmis Saqari, wyal i.

## 2. momzadebis wesi:

– sakvebi danamatis efeqturoba di dad aris damoki debul i wyal Si gazavebis wesze. sakvebi danamati wyal Si ixsneba 1:100-Tan Sefardebi T (sakvebi danamati wyal i).

– saval debul oa, gazavdes pl astmasis WurWel Si ZI ieri Senj Rrevi T, ar anakl eb 10-j er.

– „Bio Bee Additive”-i war moodgens ufero, usuno si Txes.

– ar fuWdeba da uZI ebs temperaturul reJimebs.

## 3. kvebis grafiki

– sakvebi danamati obieqts Sesazl ebel ia mi ewodos wyal Si gazavebul i saxiT, an tradiciul sakvebSi Sereul i. sakvebi danamati futkars mi ewodeba si Txis saxiT, nebi smier dros: skaSi Car- Coebs Soris 10-10 ml -is Sefrqevi T kviraSi erTxel, tradiciul sakvebSi Sesazl ebel i raodenobi s Serevi T da skis Sesasvl el Si, an skaSi sakvebi danamatis wyl i saxyT SeuzRudavi mi wodebi T.

## 5. upi ratesobebi

– Cvens mier SemoTavazebul i sakvebi danamatesbs ar axasiaTebs mutacia (gardaqmna).

– ar aris toqsikuri, ar iwevs Tval is, piris Rrusa da kanis ga- Rizianebas;

– aris mdgradi temperaturul i reJimebis mimarT;

## 6. dafasoeba:

sakvebi danamati „Bio Bee Additive”-i fasovdeba: 0,05; 0,10; 0,25; 0,5; 1,0; 2,0; 5,0; 10,0; 20,0; 50,0; 100,0; 200,0; 220,0; 1000,0; i litrian pl astmasis WurWel Si.

## 7. dasawyobebis wesi:

– sakvebi danamatis Senaxva Sesazl ebel ia mSral, mZis sxivebis- gan dacul adgil as;

– Senaxva Sesazl ebel ia nebi smi- ri temperaturul i reJimi piro- bebSi;

– Senaxvi vada gani sazRvreba 2 wel i.



## simindis sil osis damzadebis martivi meTodi

dRes bevr mcire meurnes sazamTrod Tivis, sil osis, furaJis an sxva koncentratebis saWi ro raodenobi T SeZena da pirutyvis yuaTiani sakvebi T gamozamTreba uWirs. Cven gTavazobT simindis sil osis damzadebis martiv meTods, rac Tqveni meurneobis produqt i ul obas mni Svnel ovnad gazrdis.

sil oss uwodeben wvni an sakvebs, romel ic mi Rebu-  
l ia damwni l ebi s, mJave ares warmqmni s (Ph-4,2) gzi T.  
dasi l oseba sakvebi s damzadebis yvel aze i affasi an  
da saimedo xerxa. xarisxiani sil osi, rogorc wvni-  
ani sakvebi, aZl ierebs pirutyvis madas, aumj obesebs  
monel ebas, organizms uzrunvel yofs vi tami nebi Ta  
daminaluri nivTi ererebebi T. pirutyvze dadebi Tad  
moqmedebs sil osis sasi amovo, specif kuri suni da  
gemo. mas unarCundeba mwvane foTI is yuaTianoba da  
xangrZI i vad Senaxvi s piroebSi cki ar kargavs yuaTi-  
an ni vTi ererebebs – danakargi 8-10% ar aRemateba.

### dasi l osebi s arsi

dasi l oseba mcenaris mwvane masi s dakonservebi s  
bioteqnol ogiuri meTodia da uhaero garemoSi  
rZemJava duRil s efuZneba. dasi l osebi s procesi s  
normal urad warmar Tvis Tvis saWi roa sasi l ose ned-  
l eul is sil osobadobi s codna, anu sakmarisia Tu  
ara masSi Saqriza da sayuaTo mineral uri nivTi er-  
ebi s raodenoba. dasi l osebul mcenareSi yuaTiani  
da mineral uri nivTi erebi s raodenoba mcire  
icvl eba, rac saSual ebasi ZI eva damzaddes sil osis  
1,5-2 wl is maragi (sil osis Senaxvi s xangrZI i oba 25  
wel s aRemateba). amasTan, Cveul ebriv piroebSi zo-  
gierTi ciudadWamadi mcenareebi dasi l osebi s Semdeg  
karg sakvebad i qceva. sil osi SeiZI eba damzaddes er-  
Twl iani damaval wl iani, marcvl ovani da parkosani  
kul turebi s narevi sagan. advil ad sil osdeba marc-  
vl ovnebi, maT Soris simindis, mzesumziris, sudanis  
bal axis, sorgos da sxv. mwvane masa. Znel ad sil os-  
deba Saqrebis mcire raodenobi T Semcvel i parkosani

mcenareebi, maT Soris i onj a, esparceti, soi o dasxva.  
kargi xarisxisi, proteini T gamdi drebul i sil osi Se-  
iZI eba mi vi RoT marcvl ovan-parkosani bal axnarevi-  
sagan (mag. 75-85% simindi + 15-25% soi o an i onj a).

### sasi l ose masi s aReba

xarisxiani sil osi s damzadeba bevrad ar i s damoki -  
debul i nedl i masi s dr oul ad aRebaze:

– xarisxiani sil osi mi i Reba maSi n, rodesac mwvane  
masi s tenianoba 60-70%-is fargl ebSia.

– 75%-ze maRal i tenianobi sas sasi l ose masas ema-  
teba 15%-mde namj a.

i mis gansasazRvr avad, Tu rod i s unda avi RoT mwva-  
ne masa, ramdenime meTodi ar sebobs, rac fermers,  
gi exs Tavis yanaSi Tavadve SeiZI ia gansazRvr os:

pirvel i – taro Seafasos gar egnul ad, Tu i s gamag-  
rebul i a da mosaxar Sad aRar gamodgeba, gadamwi fe-  
bul ia, am SemTxvevaSi mwvane masa mzad ar i s asaRebad.

meore – simindis Reros unda davakvi rdeT qveda  
nawi l Si, Tu simindis pirvel i ori-sami foTol i uk-  
ve gamxmaria, es ni Snavs, rom mcenare mzad ar i s asa-  
Rebad, rom aseTi masi sgan sauke Teso sil osi damzad-  
deba. sasi l ose masa sasurvel i a avi RoT damqucmace-  
bel i manqana-i ar aRebi T, Tu ar gvaqvs aseTi mowy-  
bil obebi, SeiZI eba gamovi yenoT namgal i, cel i, sxva  
basri i ar aRebi.

simindi unda avi RoT i se, rom Rero miwi s pirid an  
5-7 sm. simaRI eze moi Wras, raTa ar Seyves miwa da ar  
daabinZuros sakvebi. aseve di di mni Svnel oba aqvs  
i mas, rom sasi l ose masas Sxam-bal axebe ar Seeri os.

dRi s ganmavl obaSi unda avi RoT i mdeni sasi l ose  
masa, ramdeni s dasi l osebasac i mave dRes SevZI ebT.

sasi l ose masa unda Cai dos swrafad, rac Seamci-  
rebs si Tbos gamoyof i s aSi Sr oebas da Saqr i anobi s  
danakargebs. rac ufro kargad ar i s daqucmacebul i  
mwvane masa, mi T ufro advil i a misi mwidrod datkep-  
na da haer i s gamodevna.

### dasi I osebi s teqnoI ogia

di di raodenobis sil osi winaswar momzadebul sa cavebSi i deba. saTavsoSi sil osis Cadebis xerxebi damoki debul ia sasiI ose saTavsoS tipze. sasiI ose masis Cadebis mTavari pi robaa am procesebis da sawiSi ve moxdes sasiI ose masis saTavsoS zedapi rze Tanabrad gadanawil eba. di di mocl obis sasiI ose ormoebSi sasiI ose masa traqtoriTi tkepneba.

mcire raodenobis sil osis Sesanaxad yvel aze martivi da saimedo sacavia pol ieTil enis parki da pl astmasi kasrebi, sadac sasiI ose masis mWidrod datkepna da haeris maqsimal urad gamodevna i ol ia. masal a haeris srul i gamodevnis mi zniT itkepneba, rac xel s uwyobs l pobiS Tavi dan acil ebas, anaero bul i garemo anel ebs fuWebas da aferxebs daobebis process, safuarebis da mavne baqteriebis warmoqmnas, amavdroul ad iZI eva mni Svnel ovani sakvebi ni Tierebebis SenaxviS saSual ebas.

mcire fermerul meurneobaSi (3-5 furi Tavisi namatiT) gacil ebiT xel sayrel i sasiI osis pol ieTil enis parkebSi Cadeba. pol ieTil enis parkebSi i ol ad i deba daqucmacebul i masa, itkepneba fexiT. aseTi sil osi unda Caidos ormag parkSi da cal -cal ke orive kargad Sei kras, romSi gni T haeri ar Sevi des. aseT parkebSi dasiI osebul i masis gamotana sawyobi dan i ol ia.

sasiI osed unda Sei rCes sagul dagul od, gamZI emasal i sgan damzadebul i parkebi. maTi tevadoba 50-70 kg unda Seadgendes (zomebi – 1,5 x 1,5m). es teqnoI ogia, GRM-is proeqti fargl ebsi (proeqti xel mRvanel i – teri osal ivani) 2008 wel s kaxetis daSi da qarTI is regionebSi, pi rvel ad saqarTvel osi Cven, statiis avtorebma davamuSaveT da ganvaxorciel eT.

### sil osis parkebi s Senaxva

sil osiani parkebi s Sesanaxi zedapi ri sagangebod unda Sei rCes. kargia sufta betonis zedapi riani saTavso. gamodgeba asfal tis safaric, magram saWi roa misi kargad damuSaveba, aseve gamodgeba xreSiT, an miwiT kargad „drenirebul i“ zedapi ric, magram am dros teni anobaze kontrol i aucil ebel ia.



sil osiani tomrebi sakvebi s Sesanaxi sawyobebi dan moSorebi T unda ganl agdes, raTa i gi mRrRnel ebma da frinvel ebma ar daazi anos. parkebi regul arul ad unda Semowmdes, romni si hermetul oba ar aferma daaRvi os.

Tu sil osis Cadebi s da SenaxviS wesebi kargad aris dacul i, i gi misi Cadebi dan 25-30 dRi s Semdeg Cadebul i masa ukve sakvebad vargisia.

### sil osis xarisxis gansazRvra

kargi xarisxis sil oss sasi amovno momJava suni aqvs, romel ic dampal i vaSl is, oj axSi damzadebul i kombostos, ki trisa mwnil is an puris buraxis suns waagavs. gaf uWebul i sil osi moSavo, an Savi Seferi- l obi saa. sasi amovno suni, Ri a momwvano feri da mce naris nawi l ebi s agebul ebi s Senarcuneba – sil osis kargi xarisxis maCvenebel ia.

sil osis tenianoba saorientaci od Sei ZI eba Semdegnairad gani sazRvros: muWiT vi RebT sil oss da vuWerT xel s, Tu teni 80%-ze metia, aseT SemTxevati xel is moWeris Semdeg bevri wveni gamoi yofa; 75-80% tenianobi s dros si Txe nakl ebi iqneba, xol o Tu wveni sul ar gamoi yofa, es ni Snavs rom tenianoba si- l osSi 65 %-s ar aRemateba.

### sil osis gamoyeneba

karg sil oss Zroxa madianad Seeqceva, is optimaliuri proporciiT Sei cavs yuaTi an ni vTierebebs da, amavdroul ad, xel s uwyobs sxva sakvebi s monel ebi s gaumj obesebas. mi uCvevel i cxovel ebi c ki, roml ebsac sil osi arasdro s gausinj avT, or-sam dReSi eC-vevian da kargad Wamen mas. sil osis xvedriTi wi l i furis zamTris saerTo dRiur ul ufaSi yuaTiano- bis 30-50 %-is fargl ebsi Sei ZI eba i yos. 300-350kg. cocxal i masis furs dReSi Sei ZI eba 30-35kg. sil osi mi vceT; 6 Tvi dan 1 wl amde mozards – 4-5 kg; 1 wel ze uxness mozards – 6-7 kg; meZuZur xbos sil osi Sei ZI eba mi vceT 1,5 Tvis asaki dan.

sworad gansazRvrul i doziT sil osis da sxva sakvebi s kombini rebul ad mi cema produqt i ul obas sag- Rznobi ad zrdis. sil osis gamoyenebi s dros saqon- l i s sakveburebi narCenebi sgan yovel dRiur ad unda gasufTavdes, raTa sil osis narCenebi ar dal pes da axl ad mi cemul i sakvebi ar daabinZuros.

**350kg cocxal i masis furis zamTris samagal i To ul ufa (kg/dReSi)**

sakvebi s saxe	fiziol ogi urli mdgomareoba/dRiurul monawvel i		
make-mSral i	8kg rZe	10kg rZe	
Tiva	4	3	5
namj a anCal a	3	3	3
Sil osi	15	30	35
qato	0,5	0,8	0,5
simindis RerrRI i	-	-	1

*I evan TortI aze  
profesori, sofi ismeurneobis mecniereba Tadoqtori;  
giorgi xatisvili  
akademuri doqtori*



# qimi is rol i mecxovel eobaSi

**mecxovel obis qimi zacia – mecxovel eobi s sakvebi s xarisxi da nayof ierebis gasaumj obesebl ad dagegmi! Roni sZiebaTa kompl eqsia, roml is Ziri Tadi mimarTul ebebebi a:**

**cxovel Ta sakvebi s damzadebi s Tvis qimuri konservantebi sa da stabili zatorebi s gamoyeneba.**

xazi unda gavusvaT, rom cxovel ebi s sakvebi s mZI avri bazis Sesaqmnel ad saWiroa aramto gavzardoT misi raodenoba, aramed gavaumj obesot xarisxi da SevamciroT danakargi sakvebis damzadebis da Senaxvi s periodSi. mwane sakvebi s damzadebis ert-erTi forma maTi qimuri konservacia. qimuri konservacia uzrunvel - yofs sakvebi ni vTierebebis karg Senaxvas. gamori cxavs I pobisa da erbomJauri baqteriebis ganvi Tarebas da uvnebel yofs arasasurvel fermentaciul procesebs.

qimuri konservantebis saxiT gamoyeneben propionjavas da benzomjavas, natriumis pirosul - fats da hidrosul fats, Sardovanas da amiaks. qimuri danamatebi Tvis, simindis, mzesumzirisa da parkosan-marcvl ovani kul turebi sagan si l osi s damzadebi sas aumj obeseben cxovel Ta sakvebi s xarisxs da mni Svnel ovnad amci reben mkvebavi ni vTierebebi s danakargi.

**safuarebi s da mi krozoool o-  
giuri cil ebi s gamoyeneba da  
maTi gavl ena cxovel Ta produ-  
ti ul obaze.**

mecxovel eobaSi qimizi s meoremi marTul ebamgomareobs i maSi, rom gadasamuSavebel i proteinis Semcvel obi sgasazr del adcxovel - Tada frinvel Tasakvebi s racionSi, i yeneben sakvebi s safuarebs, mi krozoool ogiuri warmoSobis cil ebs. ase magal iTad, frinvel ebi s sakvebi racionSi safuarebi s gamoyenebi sas Sei ZI ebami vi RoT damatebi T2 tonaxorci, an 35 aTasi kvercxi.

Samrewel o warmoebas i mi krozoool ogiuri cil ebi s misaRebad

nedl eul is saxi T navTobi sa da xi s gadamuSavebi s narCenebs da bunebriv airi yeneben. amavdroul ad unda gvaxsovdes, rom sakvebi ci- l ebi s warmoSoba unda i yos ekoiogi urad sufta da eyrdnobodes adamiani s amrTel obis Tvis usaf- RTxo teqnol ogi ebs.

cxovel Ta gamosakvebi racionis Sedgenisas, ekol ogiuri usaf- RTxoebis Tval sazrisiT saWiro iqneba mcenareul sakvebSi davumatoT amnomJavebi, romel Ta mi Reba warmoebs fermentul i metodi T an qimuri sinTezi T. ase magal iTad, 0,4% I izinis damateba xorbil is fqvil Si zrdi mis biol ogiur Rirebul ebas ara nakl eb 50%-ia, mefrinvel eobasa da meRoreobaSi cil ebi s danamatis saxi T upiratesobas ani Weben muxudos fqvil s, romel ic gamdidrebul ia metioni- ni T. arsebobs I izinis sakvebi koncentratis samrewel o warmoebac. 2 Tvis goWebi s racionSi 40g I izingis sakvebi koncentratis damateba uzrunvel yofs maTi cocxal i masis gazar das 15,6%-i T, xol o sakvebi s xarj va amavdroul ad 15%-i T mci rdeba.

**Sardovanas da sxva sakvebi danamatebi s gamoyeneba mecxovel eobaSi .**

mecxovel eobi s qimizi s mesame mimarTul ebi s ganxi l visas unda aRvn SNO T, rom proteinis ukmarisoba cxovel Ta sakvebis racionSi ekoiogiuri Tval sazrisiT ukeTesi a Sei vsos ara cil ovani - vi tami nebis, an koncentrati T, aramed Sardovanas, amoni umis hidrokarbonatis sxva amni umis maril ebi s, organul i mineraluri mJavebi s damatebi T.

Sardovanas damateba cxovel Ta kvebi s racionSi gvaZI evs sakvebi

cil ebi s 20-dan 35%-mde ekonomi- as. gadasamuSavebel i azotis xarisxi T 1g. Sardovana Caanacvl ebs 2,6g. sakvebi s proteins. danaxar- jis erTeul i Sardovanas SeZenaze mogvcems 8-j er meti Rirebul ebebi s mecxovel eobi s produqcias.

sasofl o-sameurneo cxovel ebi s sakvebi racionis srul fasovnebas gansazRvraven sakvebSi mineral u- ri ni vTierebebi s, vitaminebi s da sxva biol ogiurad aqtiani ni vTierebebi s dabali ansebi T. cxovel Ta organi zmSi aRmoCenil ia 80-ze meti qimuri el ementi, magram Seswawl il i amxol od maTi 1/3-i mni S- vnel oba. mineraluri ni vTierebebi Sedis cxovel Ta yvel a organosi da asrul ebs ama Tu im special ur funqcas (organi zmSi aregul i- rebs sisxl is da sxva si Txeebis os- mosur wnebas. inarCuneben mJaur- tutovan bal anss, makro da mikro el ementebi uzrunvel yofen bio- qimuri reaqciebis optimal ur pirobebs, fermentebi sda hormonebis funqcionirebas, organul i ni vTierebebi s daSl as da sinTezs, roml ebi c aqturad exmarebian ni vTierebebi s daSl as, Sewovi s da aTvi sebi s procesebs, uvnebel - yofen organi zmidi dan gamosayof ni vTierebebi s). magal iTad, mni Svnel ovania biogenuri el ementi- fosfori. fosfori Sedis cil ebi s mol ekul ebi s, nukl einmJavebi s da sxva ni vTierebebi s Semadgenl o- baSi, romel Ta gareSe sicocxl e ar Sei ZI eba. fosforis Semcvel o- ba cxovel is organi zmSi P2O5 gadaan- gar i Sebi T aRwevs 1%. fosfori da kal ciumi erTad aris ZVI is qso- vil is Ziri Tadi Semadgenel i na- wil i. maT akisriaT mni Svnel ovani rol i mimocvl is procesebSi. es



ori el ementi Sedis 65-70%. organizmis yvel a mineral uri nivTierebebis Semadgeni obaSi, amitom cxovel ebs normal uri zrdisa da ganvi Tarebi saTvis sWildebaT sakvebi fosfatebi. maTi danamati Zroxebis sakvebis racionSi zrdis wvel adobas 5-10%. fosforis deficitis Sesavsebad sakvebi dana matis saxi T gamoyeneba agreTve dinatriumfosfati, diamoniumfosfati da Sardovanas fosfati, uwyl o fosfatis precipiTati. fosforis siWarbe sakveb racionSi aZnel ebs cxovel ebs organizmSi magnumi maril ebs Sewovas da aTvis sebas. racionSi aseve mniS vnel ovania sxva mineral uri nivTierebebis rol i. ase magal iTad, rkina, spil enZi, magniumi, kobal ti da kal ciumi monawil eoben hemoglobinis sinTezSi, gogirdi-ci-ebis sinTezSi, iodi – farisebri jirkvli is hormonis Semadgenel i

nawil ia, ql ori Sedis kuWis wvenSi arsebul i maril mJavas Semadgeni obaSi. maval cxovel s sWildeba sufris maril i, rogorc natriumi sa da ql oris wyaro. cxovel Ta sakveb racionSi, ama Tu im mikro da makro el ementebis nakl eboba aferxebs maT zrda-ganvi Tarebas, auares ebs gamravl ebs funqci as da iwevs sxvadasxva daavadebebs.

#### **zrdis stimul iatorebis gamoyeneba mecxovel eobaSi.**

Cxovel ebsa da frinvel ebs zrdis dasaCqarebl ad, maTi produqtul obis gasaumj obesebl ad da xarisxis asamaRI ebl ad, bol o xanebSi far Tod gamoyeneba bi ostimul atorebi, vi taminebi, hormonebi, fermentebi, antibiotikebi da sxva preparatebi. amJamad mecxovel eobaSi gamoyeneba 30-ze meti sxvadasxva vi tamin, upirvel esad ABCDE vi taminebs gansakuTrebi TsaWi roben make Zroxebi. radgan vi taminebis ukmarisoba aferxebs bioqimiuri reaqciebis mmdinareobas, rogorc dedis aseve nayofis organi zmSi. vi taminebi da sxva zrdis stimul iatorebis gamoyeneba uzrunvel yofs msxvil fexarqosani saqonl is, cxvris, Rorisa da qaTmebis sadReRami so wonis 10-15%, sakvebi masis Semcirebas 0,5-2,5 kvebis erTeul iT. 1c. Zroxis Tvi TRi rebul eba 5-15%-iT mcirdeba, 3-8%. kl ebul obs daavadebebis ricxvi. biol ogi urad aqtiuri nivTierebebi ufro xSirad miece-

ma mirkoel ementebis, vi taminebis, fermentul i preparatebis da anti biotikebis narevis saxi T. agreTve di di mni Svnel oba aqvs cxovel ebs zrdis stimul iatorebs-ni vTierebebs, roml ebic ganageben organi zmSi mmdinare sinTezisa da daSi is procesebs.

Mecxovel eobaSi gamoyenebadi zrdis stimul iatorebi SeiZI eba dai yos orad: hormonal ur da arahormonal ur stimul iatorebad. hormonal ur idan upiratesobas aniWeben usafrTxo, bunebriv stimul atorebs. cxovel ebi fitoestrogenes Rebul oben zafxul Si mwvanemcenareebi saxi T adamani kontrol is gareSe. maT mi Rebas ar SeiZI eba ziani mohyves. es gamoc dili ia maval wl ovani praqtkiT. arahormonal uri stimul iatorebi poul oben ufro mzard gamoyenebas, magram eqimebi zogiert maTganze, adamani organizmze saziano qmedebis gamo, Tavis Sekavebas urCeven. cxovel ebs zrdis dasaCqarebl ad amJamad upiratesobas aniWeben hormonal ur stimul atorebs, rogoricaa somatropiul i, ukonkurento stimul iatorebi, roml ebic organizmSi ar grovdebian da Zal ian swrafad i SI ebian peptidebad da aminomJava vebad, xol o Semdgom maT iol ad i Tvis ebs cxovel is organizmzi.

*merab ebanoize  
qimis mecnierebaTa doqtori  
akaki wereTi is universiteti*



## **sursaTis uvnebl obis saxel mZRvanel o**

IFC, msofI io banki s j gufi yve l aze msxvil i saerTaSoriso ins titutia, romel ic ganvi Tarebad qveynebSi kerzo seqtoris gaZi ie rebas uwyobs xel s.

IFC-m bol o wl ebi s ganmavl obaSi sofI is meurneobis sferoSi mniS vnel ovnad gazarda investiciebi. 2011 wels IFC-ma agrobi znesSi warmoebis gafarToebis, l i kvidu robis zrdis, l oj istikis da dis tribuciis gaumj obesebis, mci-

re fermerebis Tvis dafinansebis xel misawdomobis gazrdis Tvis 2 ml rd. aSS dol arze meti investicia ganaxorciel a.

SursaTis uvnebl obis gaumj obesebis proeqti IFC-ma saqarTvel oSi 2010 wl is martSi daiwyo. proeqtis mizani sursaTis adgil obriv mwarmoebel Ta konkuren tunarianobis amaRI eba da eqsportis mocl obis zrdis xel - Sewyobaa. proeqti saqarTvel oSi

BP-sa da misi partnoriebis, aseve avstriis finansTa saministros Tan TanamSroml obiT xorciel deba.

IFC-ma saqarTvel os sursaTis mwarmoebel i kompaniebis dasax marebl ad, raTa maT gauiol deT warmoebaSi sursaTis uvnebl obis sistemebis da saxel mwi fo organoebis mier kontrol is ganxorciel ebis meqanizmebis danergva, Seimusava yovl is momcvel i doku-

menti, romel ic sursaTis yvel a mwarmoebel s, sursaTis uvnebl obis marTvis efeqtiani sistemebis Seqmnis Sesazi ebl obas miscems.

sursaTis uvnebl obis saxel mZRvanel o 7 modul i sgan Sedgeba.

saxel mZRvanel oSi ganxil ul ia sursaTis uvnebl obis xarisxis is ZiriTadi da nebayofl obiTsqemebi da standartebi, romlebsac sursaTis mwarmoebel ebi yeneben. ganxil ul ia sursaTis uvnebl obis kanonmdebl oba; gansazRvrul ia FBO-is pasuxismgebl oba; aRweril ia sakanonmdebl o da marekul irebel i moTxovnebi, romlebic dakavSirebul ia FBO-s da mesame qveynebis mier warmoebul sasursaTo produqtebTan; marekul irebel i regionul i Tu erovnul i kompetenturi organos Sesaxeb detaluri informaciaa moemul i; ganmarkebul ia yvel aze gavrcel ebul i terminebi, romlebic mnisvnel ovani a sursaTis uvnebl obis sakanonmdebl o da marekul irebel moTxovnebTan Sesabami sobisTvis; ganxil ul ia agreTve evropis da saqarTvel os sursaTis uvnebl obis kanonmdebl oba da misi gamoyenebis wesi.

saxel mZRvanel o sursaTis mwarmoebel s daexmareba daawesos, SemuSaos, danergos da awarmoos aucil ebel i winaswari programebi Codex Alimentarius-i s da ISO/TS/22002-1:2009, HACCP principi pebis da etapebis ISO 22000-smoTxov-



nebis mixedvi T; ssvadasxva dokumentis mokl e aRwera, ganxil ul ia maTi marTvis sistemebi da sxva.

saxel mZRvanel o SemuSavebul ia

IFC-is sursaTis uvnebl obis gaumj obesebis proeqti fargl ebSi da saqarTvel os real obazea morgebul i mis momzadebasa da gamoemaSi gansakuTrebui Rvawl i miuZRviT IFC-is regionul menejers samxreT kavkasi aSi Tomas I ubeks da IFC-is evropisa da centraluri aziis biznesis mdgradi ganviTarebis sakonsul tacioganyofil ebis regionul menejersa patriki uternauers.

IFC-is sursaTis uvnebl obis saxel mZRvanel o kompaniebs daexmareba TavianT moqmed sistemebis arsebul naki ovanebaTa gamovi enaSic; es aris saxel mZRvanel o, romel ic warmatebi-Taa aprobirebui i samxreT-aRmosavl eT evropaSi, ukrainasa da bel orusSi. darwmunebul i varT, am dokumentiT qarTul i kompaniebic isargebl eben, rom sursaTis uvnebl obis saxel mZRvanel o daexmareba saqarTvel os sasursaTo seqtorSi dasaqmebul adami anebs sursaTis uvnebl obis saukeTeso praktikis moTxovnebis codnis mi RebaSi, rac, sabol ood, waadgeba rogorc am kompaniebs, ise qarTvel Tu ucxoel momxmarebl ebs.

## აგროტექნიკა

# kompania `MASHCIO-GASPARDÓ~ damqucmacebel i mowyobil obebi

## SMASHING EQUIPMENTS OF "MASCHIO - GASPARDÓ" COMPANY

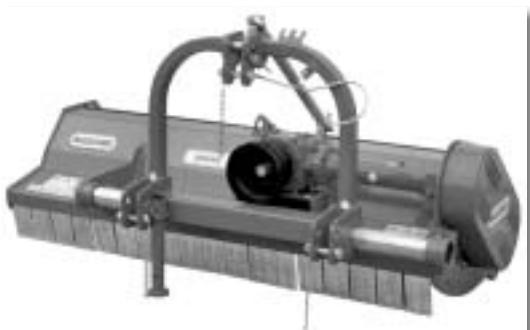
**The article is about different smashing machines of Mascio Gasparado. There are 14 different models. The superiorities of these models are trustworthiness, firmness of construction and high quality. All this is absolutely satisfying high demands of modern market.**

Kompania MASHCIO GASPARDÓ mcire da di di meurneobebisTvis amzadebs ssvadasxva simZI avrisa da gabari tebis damqucmacebel mowyobil obebs, romel Ta damaxasiaTebel i Tavisebureba konstruqciis saimedoba, teqnol oguri operaciebis Sesrul ebis maRal i xarisxi da novaci uroba. firmis mier warmodgenil i yvel a model i uzrunvel yofs organul i masal ebis (bal a xebi, sarevel ebi, simindis Reroebi da sxv.) motibvas da maTi i se daqucmacebas, rom drois mcire monakveTSi maTi mcenarisTvis sakveb maRal noyier humusad gar daqmna moxdes.

Kompaniis mier SemoTavazebul ia damqucmacebel i mowyobil obis 14 mo-

del i, romel ic saeqspl oatacio pirobebis da dasamuSavebel i masal i tipis mixedvi T oTx kategoriad iyofa.

warmodgenil i model ebiskonstruqciebi srul yofil ia da anal ogebTan SedarebiT rigi upiratesobebi gaaCnia:





- mWrel i danebis brunvis maRaI i si Cqare;
- gver di T panel ebi s Si ga maxares ganl agebul i special uri (mtkice fol adis) saki srebi (Long life);
- muSaobi s dros maqsimal uri usaf r Txoeba;
- minimal uri teqmomsaxureba gamZI eoba.
- uswormalasworo zedapi ri s mqone ni adagebi s Tana-

bari damuSavebi s mi zni T manqanebi 3 wer ti I i an mi sabmel Tan samagri kompl eqtebi Taa aRWurvil i.

– manqanebs aqvT sai medo gverdi Ti gadacema, rac uzrunvel yofii i a kbi l anebiani Rvedi s gamoyenebi s pi robebi s mi xedvi T.

4 mm-de diametris bal axebi sa da totebi s damqucmacebel i mowyobil obebi s gamoyeneba mi zanSewoni - I i a sabaRe-sargav meurneobaSi . amj gufSi warmodge ni ll i a modul ebi : Bivba, Furba da Bavbi;

6mm-de diametris bal axebi sa da totebi s damqucmacebel i mowyobil obebi s gamoyeneba gaTval i swinebul i a xexil i baRebSi da venaxebSi . amj gufSi warmodgeni - I i a model ebi : Brava, Bella da Vita.

12 mm-de diametris bal axebi sa da totebi s daqucmacebel i mowyobil obebi mraval funqciuria . am modelebi s mi ekutvneba Corozza, Tigre da Bisonte.

si mi ndis Reoebi s damqucmacebel i mowyobil obebi s ser i a warmodgeni l i a model ebi s: Chiora, Tornado, Reopard, Grifone da Genella-s saxi T.

## italiuri kompania `MASHCIO-GASPARD`-S wli i i saqarTvel os sofi i s meurneobis teqnikis gadai ararebaSi

cxril Si naCvenebi a italiuri kompania „MASHCIO Gaspardo“-s teqnikis CamonaTval i, romel ic Semotanili a saqarTvel oSi da mTel i qveynis masStabi T gadanawi l ebul i a fermerTa momaxurebi s centrebsi .

teqnikis dasaxel eba	model i	raodenoba
bostneul i saTesi	OLIMPIA 4 ROWS	60
mi sabmel i i afeti 10 t	2B100 2 AXLE TRAILER 10T	20
segmenturi saTibel a	MASCHIO FBR PLUS	40
si mindi s pnevmaturi saTesi 6 rigiani	MTR 6	30
sasuql s gamfantvel i	LAMPO 1000	10
rigTaSoriskul tivatori 6 rigiani	HL6F75-805 M/P	30
diskoebi an farcxi 3 m	PRESTO 300	75
sarwyavi danadgari tumboTi 320 m	ARCOBALENO 75-320	30
rotaciul i forcxi 4,10 m	GOLIA 410 SNT	50
rotaciul i saTibel a 2,8 m	DEBORA 287C	50
xorbi i s meqani kuri saTesi 3,6 m	SC MARIA 360 25 DD PORT	60
mTI i an damuSavebi s kul tivatori 4,5 m	GRATOR 450 DELTA SPRING	30
mindvris Semasxurebel i mi sabmel i tipis 2500 i 24 m	PELICANO 2500/24	50
mindvris Semasxurebel i sakidli tipis 800 i 15 m	GIOVE 800/15	50
diskoebi an farcxi	RAMBO XP36	100
mTI i an damuSavebi s kul tivatori 4,5 m	GRATOR 450 DELTA SPRING	20
bostneul i s vertikal uri frezi 1,4 m	SUPER BED 140	50
arxis gamWrel i	DBR75/32' ROTARY DITCH DIGGER	10
Rrmadgamafxvlererebel i 2,5 m	PINOCCHIO 250/5	30
i afeti 13 t	2B130 2 AXLE TRAILER 13T	15
Rrmadgamafxvlererebel i 3 m	ARTIGLIO 300/7	20
kombinirebul i saTesi 4 m	ALIANTE 400 PLUS 32 COREX DM	5
venaxi s guTan-kul tivatori 1,7 m	CPRF-9 WINEYARD TILLER	20
venaxi s frezl 1,5 m	DELFINO 1500 PACKER ROLLER	20
Semasxurebel i 1000 i	APOLLO PORTATO 1000/800/13	20
vertikal uri frezl 3,0 m	DOMINATOR 3000 CAGE CAM	70
Tivissatuki	TUAREG COMBI FIX 120X125	5
Tivissatuki oTxkuTxa 60X80	608 SUPER	10
mul Ceri 3,1 m	TORNADO 310 ROLLER	10
diskoebi an farcxi	RAMBOX 44	20
	TOTAL	1131

evropul i sasofi o-sameurneo teqni ka i m periodSi gamoCndi da saqarTvel oSi , roca qarTvel i i fermerebi mxol od sabWouri warmoebis Zvel ebur teqnikas i yenebdnen da Tanamedrove sa sofi o-sameurneo teqni kasa da teqnol ogiebze, bevri arafe ri gaegebodaT, magram rogorc xdeba xol me, drom Zal i an mal e naTel i gaxada, rom saqarTvel o sofi i s meurneobis momaval i swored evropul teqnol ogiebs unda dafuZneboda.

nel a, magram saqme TandaTan daiZra. qveyanaSi erTi meores mi yol ebi T i zrdeboda evropul i kompaniebi s sasofi o-sameurneo teqni kis raodenoba.

amsaqmeSi Sps „msofi i o-teqni kas“ I omis wi i mi uZRvis. man SeZi o evropul i sasofi o-sameurneo teqnikis mowinave mwarmoebl ebi „kl aasi, „grime“, „emkeni“, „maski o gaspardo“ da sxvebi qarTul i bazri T daeinteresebina.

italiuri kompania „MASHCIO Gas pardo“ dRes erT-erTi umsxvli es kompania aa, romel ic saqarTvel os sofi i s meurneobis Tanamedrove teqni ki T gadai ararebi s saqmeSi aqturad monawi l eobs. Sedegi ki, marTl ac, Tval saCinoa:

## JAGUAR – NEW GENERATION OF FORAGE HARVESTER

**The article is about the forage harvester combines of the JAGUAR 800 self-propelled series made by firm CLAAS. These machines are being sold in the best way among the analogues in the world. It has 50 % of market. In 1993 year company CLAAS put out JAGUAR 800 on market for the first time. And continues it's technological and constructional perfecting till today. That's why these combines absolutely satisfy demands of farmers of many countries in the world.**

JAGUAR-i s sxvadasxva serii s kombai nebi s teqni kuri maCvenebel i



## JAGUAR - axal i Taobis sakvebdamamzadebel i kombai nebi

kompania CLAAS-is Tvi Tmaval i JAGUAR 800-i s seriis sakvebdamamzadebel i kombai nebi msofl i oSi am tipis sasofl o-sameurneo manqanebs Soris, yvel aze kar gad i yi deba mas bazris 50% ukavia. JAGUAR 800 kompania CLAAS-ma bazar ze pi rvel ad 1993-wel sgamoitana da dRemde agr Zel ebs mis teqnol ogi ur da konstruqci ul srul yofas, amitomac es kombai nebi dRes msofl i os mral i qveynis fermerTa moTxovnebs srul ad akmayofil ebs.

kompanias dRemde ar Seuwyetia JAGUAR 800 seriis kombai nebis war-moeba, Tumca i Tvi sebs da bazars aw-dis axal i Taobis JAGUAR 900 seriis ufro maRal teqnol ogi ur manqanebs.

axal i Taobis JAGUAR-ebi gamoir Ce-va simZl avri T, rasac uzrunvel yofs mercedes bencis Zravebis gamoyeneba. JAGUAR 930 Cadgmul i aqvs 303/412 (ECER24) kvt/c.Z. simZl avris mqone Zravi, xol o JAGUAR 980-ss 610/830 kvt/c.Z. simZl avris Zravebi, rac am manqanebi s maRal warmadobas uzrunvel yofs.

JAGUAR 980 da 970 model i s kombai nebs ori Zravi uyenia (cxril Si Zravebis j amuri simZl avrea moyvanil i). Zravebi erTdroul ad gamoi yeneba kombainis datvirTvis Sesabami sad. es model ebi aRWurvil ia mar Tvis „intel eqtual uri” – DOUBLE SIX sistemebi T. roca kombaini srul ad datvirTul i araris, meore Zravi avtomaturad i TiSeba, roca saWiroa srul i simZl avre, Zravi avtomaturad i Tveba.

arsebi Tadaa gadamuSavebul i „kombainis gul i” – damqucmacebel i aparati. 800 seriis iagurisa da sxva firmis, kombainebs damqucmacebel dol uraze brtyel i danebi uyenia, roml ebic brunvis kuTxis cvl is dros yovel Tvis bol onde ver wvdeba dasaqucmacebel masas, rac asaRebi masi s erTgvar ovnad daqucmacebas ver uzrunvel yofs. axal i Taobis kombai nebi ki am mxriv srul i ad axali i sistemi T V-MAX aparati Taa aRWurvil i. damqucmacebel dol uraze damagrebul ia mbrunavi, ki deebi dan Tanabrad daxril i danebi, romel ic daqucmacebasTan erTad gamfantvei is, daqucmacebul i masis gamomtannis, gamotyorcniis funcriasac asrul ebs. damqucmacebel i aparatis konstruqcia diametrul i „ventil atoris” msgavsi. moZraobis mimar Tu-l ebi T daxril i danis pirebi, frTebis funcriasac asrul ebs, romel ic sil osgamtarsi haeris maRal wnevas warmoqmnis.

am model i yvel a kombai nebs aqvT farTo, komfortul i, avtomatizebul i sistemi T aRWurvil i kabina, rac maT mar Tvas ai ol ebs.

model i maCvenebel i	980	970	960	950	940	930
ZravissimZl avre (ECER24) kvt/c.Z.	610/830	537/730	458/623	372/507	333/453	303/412
sawvavis avzis tevadoba. I	1350	1350	1350	1350	1350	1000
mi mwodebel i kameri s sige. mm	730	730	730	730	730	730
damqucmacebel i dol ura:						
si gane. mm	750	750	750	750	750	750
diametri. mm	630	630	630	630	630	630
brunvaTari cxvi wT.	1200	1200	1200	1200	1200	1200
danebi s raodenoba	yvel a model ze: 2x18=36; 2x9=18; 2x6=12 2x12=24; 2x6=12					
V-MAX 36						
V-MAX 24						
amkrefis modebi s gani . m.	3,0; 3,8	3,0; 3,8	3,0; 3,8	3,0; 3,8	3,0; 3,8	3,0; 3,8
DIRECT DISK samkal i s modebi s gani , m.	5,20; 6,10	5,20; 6,10	5,20; 6,10	5,20; 6,10	5,20; 6,10	5,20; 6,10
simindis samkal i s modebi s gani	12/9,0; 10/7,5; 8/6,0			10/7,5; 8/6,0		



**USAID**  
FROM THE AMERICAN PEOPLE



John Ogonowski  
and Doug Bereuter  
Farmer-to-Farmer  
Program

# kompania „herbia“ mwvani l i sa da bostneul i s bazars afarTovebs

*,fermeri-farmers“  
programa „herbias“ Si da  
bazarze gayidvebi sa  
da eqsportis zrdaSi  
exmareba.*



*,fermeri-farmers“ programis  
moxal i sebatoni j adson  
reidi (daCoqil i marj xni v)  
uCvenebs universitetis  
studentebis j gufs  
saTburebSi pomi dvrvis  
mwvanis swor meTodebs*

*—FTF-is moxal i si s brilus  
vii iamsis azri T, saqmis  
warmatebi T damTavrebis  
SemTxvevaSi, erT-or wel i wadSi  
fermeri warmatebul i da  
sakmaod gamocdi l i xdeba.  
moxal i si s saqmek i fermere-  
bisTvis maTi produqci i s  
mwvanis sistemi smci redi  
cvl il eba da swori mimar-  
Tul ebi s mi cemaa.*

U.S. Agency for International Development  
[www.usaid.gov](http://www.usaid.gov)

Kompania „herbia“ 2006 wel s Camoyal ibda, romel mac saqar Tvel os sa-Tbure bostneul i sa da mwvani l i s moyvani sa da distribuci i s pi rvel i Tanamedrove da far Tod gavrcel ebul i sistema Seqmna. Kompania orma qar Tvel ma eqsporti forma daarsa, roml ebsac ruseTsa da ukrainasi mwvani l i s, xil -bostneul i s gayi dvi s aT wl i ani gamocdi l eba gaačnai a. mwvani l i s moyvanas Tan er Tad „herbia“ adgil obrivi fermeri ebi sgan bazar ze cocxal mwvani l i s i Zens da eqsport ze gaaqvs.

2009 wel s „herbi am“ konkurentunar i anobi s gaumj obesebi sa da axal evropul bazarze Sesvl i s xel Sewyobis mi zni T CNFA-as „fermeri-farmers“ programas (FtF) daxmar ebas Txova. produqci i s xarisxis da mosavl i s aRebis Semdgomi etapi s menej mentis gaumj obesebi s mi zni T „herbi asa Tvis“ aSS-i agronomi doqtori brius vil iamsi Sei r Ca. saqme exeboda aseve i megzotikuri mwvani l ebi s mzard mo Txovnas Tan gamkl avebas, roml i s wi naSec kompania aRmoCndca. vil iamsma „herbias“ personal s i eqci a Cautara aragul as moyvani s, Senaxvi sa da Sef uTv i s teqnol ogiaSi. man aseve Seaswavl a pi tnis da rehani s moyvani s Tanamedrove meTodebi, daexmara maT axal i produqci i s SemuSavebasa da momxmarebel Ta raodenobi s gazar daSi. vi iamsma „herbias“ mi er moyvani l i aragul asa da sxva mwvani l ebi s xarisxis gaumj obesebi s mi zni T gansaku Trebul i yuradReba nakveTze mcenareTa ganl agebaze, ni adagi s ganoyi ebi s meTodebsa da i m strategiebze gaa-maxvil a, rac produqci i s saeqsport tod gamzadebas uzruvel yofs.

2010 wl i s gazafxul ze ki vil iamsi saqar Tvel oSi dabrunda, raTa „herbias“ TanamSroml ebi s aTvis uTesl o sazamTros moyvana eswavl ebi na. doqtor vil iamsi s fermeri-farmers programasi (FtF) monawil ebi s Sedegad „herbia“ saqar Tvel oSi uTesl o sazamTros moyvani pi rvel i kompania gax-deba. zustad i mave zaFxul ze fermeri-farmers programi s (FtF) moxal i se, konsul tanti sofi s meurneobi s saki TxebSi ni uorkis Statidan, j adson reidi Camovi da, romel mac amave kompani i s mier saTburSi produqci i s moyvani s gaumj obesebi s saki Txebze imuSava. „herbias“ TanamSroml ebs Caatara treiningi mcenareTa dacvis aTvis, gaRebul i xarj ebi s sworad gamoyenebasa da daavadeba Ta wi naRmdeg brZol i s, xexil i s damynobi s meTodebz. reidis mi si s Sedegad „herbi am“ SeZl o gaeZl i erebia warmoeba da gae far Tovebi na momxmarebel eTa qsel i. kompania am Jamad mwvani l i Ta da bostneul i T saqar Tvel oSi didi supermaketebis qsel ebs amaragebs. i gi afar Toebs eqsports yofil i sabWoTa da evropul bazrebzec.

Fermeri-farmers programi s (FtF) mesame moxal i sem, batonma kir k Smid-tma vil iamsi da reidis saqmi anoba gaagrZel a da kompani i s personal s produqci i s Senaxvi s, Sef uTvasa da transport i rebis saki Txebze, rac Zal i anmi Svnel ovani a eqsportis xarisxis gaumj obesebi s aTvis, treiningi Cautara. Smidtsi s mier gaweul i daxmari ebi T kompaniam SeZl o gae xangr-Zl i vebi na mwvani l i s Senaxvi s vada, uzrunvel yo produqci i s xarisxi anad Senaxva da moexdina produqci i s Ri rebul ebi s gazar da.

CNFA-i s „herbias Tan“ muSaoba warmatebul i aRmoCndca. moxal i si s rekomeniaci ebi s gaTval i swinebi s Sedegad, herbi am gaaumj obesa rogorc Tavis i saoperaci o saqmi anoba, aseve finansuri mxare. rac yvel aze aRsani Snavia, kompaniam gayidvebi s 15%-i T gazar da SeZl o. man aseve 200%-ze metad gazar da dasaqmebul Ta raodenoba. amas Tan er Tad kompani i s Tvis aragul a eqsportis umTavresi produqci a gaxda. dRes qar Tul i aragul a Sei Zl eba vnxaoT saqar Tvel os, ukraini s, pol oneTi s, germani i s, hol an-di i s da sxva bazrebze.



## Horticulturalist Expands Herb and Vegetable Market in Georgia

### **Farmer-to-Farmer Program assists Herbia to increase domestic sales and exports**



*Farmer-to-Farmer volunteer Mr. Judson Reid (kneeling at left) shows a group of university students the proper techniques for growing tomato plants in greenhouses.*

*If you've done your job, your producer will outgrow your expertise within a year or two. [T]hey're living it day by day, producing the crop in multiple cycles. [The volunteer's job] is just to help them tweak their growing systems a bit.*

*- Bruce Williams, FTF volunteer*

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Founded in 2006, Herbia is the first modern, large-scale system for greenhouse production and distribution of fresh herbs and vegetables in Georgia. The company was founded by two Georgian exporters with over a decade of experience selling fresh herbs, fruits and vegetables to Russia and Ukraine markets. In addition to producing herbs, Herbia also buys and exports fresh herbs from local farmers.

In 2009, Herbia requested assistance from CNFA's Farmer-to-Farmer Program (FtF) in order to improve their competitiveness and facilitate entry into new European markets. US agronomist Dr. Bruce Williams was recruited to assist Herbia in improving their production and post-harvest management to better address the increasing demand for exotic herbs they were facing. Williams trained Herbia in arugula cultivation, storage and packaging. He also provided training on mint and basil gardening and supported Herbia staff in developing new products and expanding its client base. Williams emphasized plant spacing, fertilization techniques and other strategies to improve the quality of Herbia's arugula and other herbs, to ensure that the products would be "export ready".

Williams returned to Georgia in the spring of 2010 to train Herbia in seedless watermelon production. Due to its work with the FtF Program, Herbia will be the first company in Georgia to produce seedless watermelons. That same spring, FtF volunteer Mr. Judson Reid, an extension agent from New York state, also traveled to Georgia and worked with Herbia to improve the company's greenhouse productivity. Reid provided training on the proper use of plant protection inputs and disease management, as well as addressing plant grafting techniques. As a result of Reid's assignment, Herbia was able to improve its production and expand its client network. The company now supplies large supermarket chains in Georgia with herb and vegetable products and has continued to expand its exports to former Soviet and European markets as well.

A third FtF volunteer, Mr. Kirk Schmidt, followed up on the work of Williams and Reid, training company staff in product storage, packaging and air and refrigerated transportation, critical for improved export quality. Schmidt's assistance enabled Herbia to improve the shelf life of their herbs, limiting spoilage and increasing the value of their products.

CNFA's work with Herbia has been very successful. As a result of volunteer recommendations, Herbia has improved both its operational and financial performance. Most notably, the company has realized a 15% increase in sales, both due to increased production, as well as increased sales volume and value. Herbia has also increased employment by over 200%. In addition, the company's arugula has become a major export and can now be found in Georgian, Ukrainian, Polish, German and Dutch markets.

# „FOSFOMOCEVINA”

axal i mwerval i agroqimiaSi!  
yvel aze maRai koncentrirebui azotovani mineraluri sasuqi  
Sei cavs:  
azots-40-44%  
fosfors-3.5-7%  
„FosfomoCevina” gamoi yeneba rogorc gamosakvebad, i se Tesvi sa da Ziri Tadi xvni si wi n.  
i gi saukeTeso sasuqi a saSemodgomo marcvl ovani kul turebis, simindis, xexilis, ci trusebi sTvi s;  
Seucvl el ia kartofilis, bostneul i da baRCeul i kul turebi saTvi s.

## „FosfomoCevina” yvel aze koncentrirebui da efeqturi azotovani mineraluri sasuqi

sasofi o-sameurneo kul turebis mosavl i anobis gazarDaSi azots wamyvani rol i uWi ravs. rogorc gamoCenil i mecnieri d. n. priani Sni kovi aRni Snavda: \_ mosavl i anobis saSual o donis ganmsazRvreli i mTavari piroba sasofi o-sameurneo kul turebis azotiT xarisxi anad momaragebaa, rac ganpi robebul ia mcenaris zrdaganvi TarebaSi azotis gansakuTrebui rol iT. i gi Sedis cil ebi s, ci topi azmis, uj redis bir-Tvi s, nukl ei nis mJavebi s, qI orofilis, fermentebi s, vi tami nebis da sxva organul i naerTebis Semadgeni obaSi, romi ebsac gadamwyeti mni S-vnel oba eni Weba mcenaris ni vTerebaTa cvl i s procesSi.

aranakl eb mni Svnel ovani a fosforis rol i mcenaris iTvi s, i gi dadebi Tad moqmedebs sayaville kvirtebis Camoyal i bebaze, fesvTa sistemi s zrdaze, mi si saSual ebi T mcenaris uj redi Si uffro kargad Cerdeba wyal i, rac aZI ierebs mcenaris mdgradobas dabai temperaturisa da gval vebi sadmi, amarI ebs mcenareSi Saqrts Semcvel obas, monawil eobs mcenaris uj redis bi rTvi s da axal i organoebis warmoqmnis procecebSi. fosfori mni Svnel ovan rol s asrul ebs nayofis damwi febaSi.

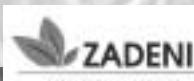
„FosfomoCevinas” azotovan sasuebSi anal ogi ar aqvs. i gi maRai koncentrirebui azotovani mineraluri sasuqi a. sxva azotovan, maT

Soris amoni umi s gvarji asTan Sedarebi T, i gi di di raodenobi T - 40-44%-s azots Sei cavs, rac gansazRvravs mi si gamoyenebi s mi zanSewoni i obas da upi ratesobas, rogorc sameurneo, i se ekonomi urobi s Tval sazri si T.

„FosfomoCevina” yvel aze saukeTeso azotovan sasueqad iTvi eba, romel i c gamdi drebul ia mcenaris iTvi s aranakl eb aucil ebel i el ementiT - fosforiT. i gi gamoi yeneba yvel a tipis ni adagebze, yvel a kul turaSi rogorc gamokvebaSi, i se Tesvasa da Ziri Tadi ganoyi erebis dros.

„FosfomoCevina” kargad i xsneba wyal Si, mi si gamoyeneba rekomenDebul ia agreTve fesvgare-Se (foTI ebze Sesxurebi T) gamokvebaSi c saSemodgomo TavTavi an kul turebSi, simindis, xexilis da bostneul Si. foTI ovan gamokvebaSi i gi ar i wevs fi totoqsi kurobas 5%-ze maRai i koncentraciT gamoyenebi s SemTxvevaSi c ki.

„FosfomoCevina” - es aris koncentrirebui, ubal asto mineraluri sasuqi, romel sac advi l ad i Tvi sebs mcenare, sxva azotovan sasuebTan Sedarebi T aqvs aSkara upi ratesoba, Sei cavs met azots, ar aris feTqebadi, nel a i recxeba ni adagi dan, nakl ebad hi groskopi ul i da ar i bel teba.



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Sm: +995 599 580 487  
+995 599 141 777

**MASCHIO**

**GASPARD**



gTavazobT  
maRaL teqnol ogiur  
damqucmacebel aggregatebs:

**BIRBA - FURBA**  
**BARBI - BRAVA**  
**VITA - BELLA**  
**CORAZZA - TIGRE**  
**BISONTE - CHIARA**  
**TORNADO - GRIFONE**  
**LEOPARD - GEMELLA**





# ***AgroVitae***

**ჰუმინურ-ორგანული  
სასუქი**

**ეკოლოგიურად სუფთა,  
მაღალი მოსავლის**

**საწინდარი**



ყველა სახის სასოფლო-სამეურნეო კულტურისათვის  
ნებისმიერი ნიადაგისა და კლიმატური ზონისათვის