OKULIMA OKULUNGI OKW'EBIRIME EBY'EMIZZI MU UGANDA





ENGERI DHE BYENGALO MUBY'OKULIMA EBISIMBE BYE EMMERE ATE NGA DHIKOLERA ILHA-LHA

Rotary

FOOD PLANT SOLUTIONS
ROTARY ACTION GROUP
Solutions to Malnutrition and Food Security

A project of the Rotary Club of Devonport North and District 9830

www.foodplantsolutions.org

Okulima okulungi okw’ebirime eby’emizzi mu Uganda

Rotary | FOOD PLANT SOLUTIONS ROTARY ACTION GROUP
Solutions to Malnutrition and Food Security

Food Plant Solutions ekola ebitabo ebyokusomesa abantu okutegeera omugaso gw’endya ennungi okusingila ilha-lha okulya ebirime byaife ebya wano, era eyamba okwongeza okumana n’okutegeera ku birime bino. Ebindhi ku birime bino bilekeilwa inho nga tibabilima ate nga ebisinga obungyi bisinga emmere yetussaka wabweru w’eiwanga.

Food Plant Solutions ekola ebitabo bino kubanga buli dhakiika eya buli lunaku, abaana batanu (5) abali wansi w’emyaaka etanu (5) baffa kulya endya embi.

Twaniliza era tukubiriza obuyambi bwaimwe.

Food Plant Solutions – Enteekateeka ya Rotary Club of Devonport North ni Rotary District 9830**.**

Akakatabo kano kesigaime ku bubaaka obuva mu iterekero lya Food Plants International (FPI) eyaakolebwa omusaayansa w'eby'obulimi okuva e Tasmania, Bruce French, AO.

Version 1, Aug 2026 (Lusoga)

Endya enungi nnangu inho muna!

Llima era olye ebirime ebilibwa bingi.
Awo, ekirungo wooba tokiffunye mu kirime kino,
oidha kisanga mukyindhi, bikole ekiwulo ekilimu
ebirungo byoonabyoona byewetagga.



Small-leaved white raisin



Embooli

Ebiwulo ebye endya ennungyi

Abantu boona boona okusingila ilhalha abaana, balina okulya namungyi webirime eby'emmere okusigala nga balamu bulungyi. Ebirime bino byetagga kuvva mu bibindha bye emeere bino wamanga, katugeze nga emere eizamu amaani, emere ezimba omubiri ni emere ekuma omubiri nga mulamu bulungyi. Awo, buli kilungo oba oidha kifuna mu mubiri gwo.

Emmere eizamu amaani



Muwemba

Emmere ekuma omubiri nga mulamu bulungyi



Mapeera

Emmere ekuzza omubiri



Soya

Emmere ekuzza omubiri

Kozzesa ebikka bye'birime bingi okufuna emere mubungyi

Flower-of-an-hour



Kubanga byawanno, byawona ilha endweile ni embeera embi.



Timpa

Byona-byona bilina engeri yaddho eyokuwona embeera ni ssizoni embi.



Boabab

Engeri ennungi edhokulima emmere

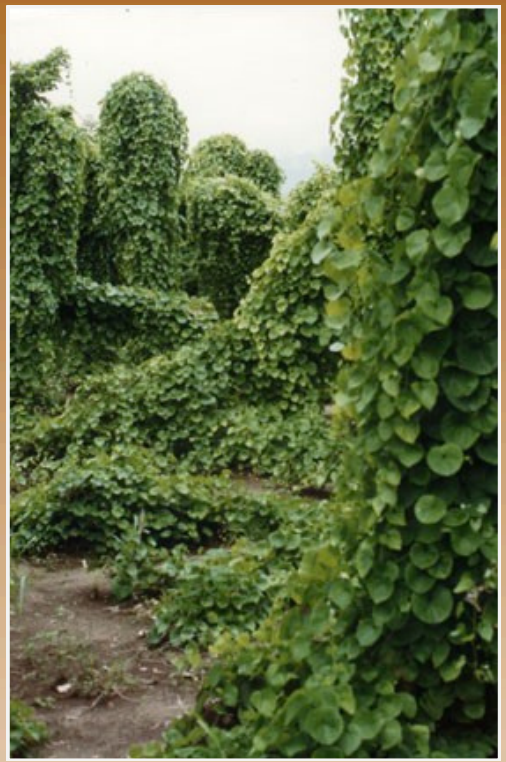
Engeri ennungi edhokulima dhiyamba okwewala ebiwuuka ni endwaile ebikossa Ebirime era dhayamba n'okukuza Ebirime bino nga bigyimu bulungi:

- **Simba Ebirime ebituffu mu itaka eituffu.**
- **Simba Ebirime byaife ebyawano.**
- **Bisimbe bulungi inho okusigala nga bilamu bulungi.**
- **Simba ebirime mu bugaite bwabyo.**
- **Wewale okusimba endokwa oba ensiggo endwaile.**
- **Gimusa eitaka nga okozesa manyuwa, ebilungo by'eitaka ni ebikaba bye'birime.**

Enima ennungyi – okukuzza ebirime mungeli yo’butonde bwabyo



Kirungi okukuza emmere mu nimiro entabule ne ebindhi kuba kiyamba inho okukendeza obuwuuka n’endwaile.



Enima ennungyi – engeri eyokukuzza ebirime mubutonde bwabyo

Ebirime tibikulira mu layini mubutonde bwabyo.

Okulima ekika kilala ekyekirime tibakukozesa mu butonde.

Bikka bingi ebikummibwa mubutonde.

Mubutonde, ekirime kikulila mu kiffo ekituufu.

Mubutonde, ekibala kikula buli sizzoni.

Ebirungo by'ebigyimusa byeyozaamu mubutonde.

Sisitiimu dhobutonde dhibaawo ebyandha ni ebyandha.

Mubutonde, eitaka lisigala nga ilhamu era nga lilimu ekyigyimusa.

Okulimila emmere awalala kyirungi inho



Ddoodo ni dhuuma babirimila walala.



Ebilla, amatooke ni eiva ly'amakoola byoona babilimila walala.

Ebirime ebibwiika enimiro



Okurwa



Bird's eye chilli



Embooli



Bilinganya

Ebirime ebyekunsalonsalo

Ebirime ebinene osobora okubirima kunsalonsalo.



Flower-of-an-hour



Soya



Ntuntunu



Timpa

Emitti gye ebibala ni obusiggo gyebalima kumpi na’makka

Ekibala kilina okulibwa buli muntu yeena yeena.

Ebindhi byetagisa okulimibwa nga byakuliibwa mu biseera byo’mumaiso.



Muyembe



Kashunati



Mapeera



Small-leaved white raisin

Ebirime byokuniinya ku bikomela

Ebirime ebisinga osobora okubisimba ku bikomela bye'numba ne'nimiro.



Python climber



Eiliibwa



Bottle gourd



Ekyangu

Amagezi ku byokulima



Deficiencies

Twena-twena twetagga okwegela walala ni okugabana byetwiidhi.



Okwewala okudhibuudha ensigo



Ebiwuuka ebikosa ebirime

Endwaile



Ebirime byo bilamu bulungyi?

Ebirime bilaga obubonero nga tibilikula bulungyi.

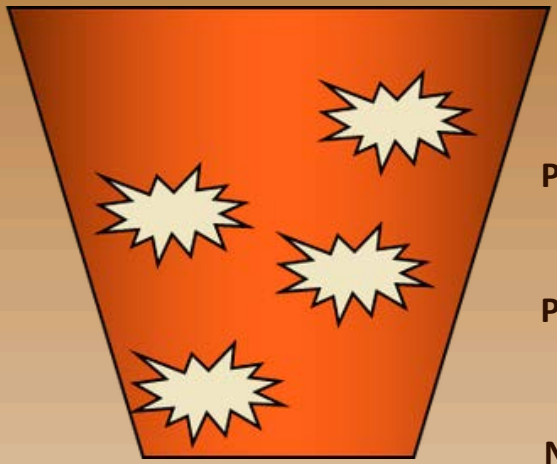
Eikoola lino elya dhuuma lilikulaga akabonero nti ekirime kiziramu kigyimusa kya nitrogen kimala bulungyi. Lilaga ekikola kya V wansi wa amakatti ga ebikoola ebikulu. Eisubu lyoona lilaga obubonero buno.

Ekigyimusa kya nitrogen kiri mu mpewo, aye ebirime tibisoboora kukyikozesa okutolaku nga mwi itaka mulimu kku bu bacteria obutono, era ku mizzi gya ebiddandali, bukyusa nitrogen ono bwamwiza mu kika ebirime byekyisobola okukozesa.



Akataasa ke’bigyimusa!

Bwetukubyaamu eitaka okuba nga akataasa k’ebigyimusa, kibba kyetagisa okukataamu ekituli wansi wakko (oba okwongeramu ekyigimusa ekilimu mubutono bwakyo) nga akataasa kakaali kusitula kintu kyindi kyeyongeraku.



Tusobola okweega okutegeera ebigyimusa ebiri mu butono bwabyo nga twetegeleiza bulungyi ekirime kyene.

Phosphorus

Potash

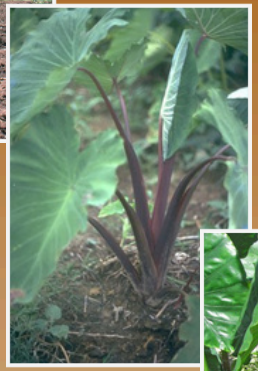
Nitrogen



Ebirime byendhawulo bikula mwitaka lya ndawulo



Ebilla gendha eitaka egyimu.



Amayuuni goona gendha eitaka eilungyi.

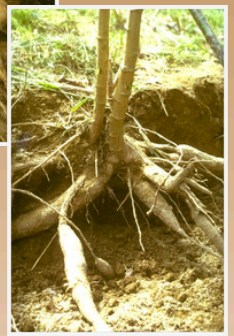


Ebitenge dhikulira ni mwitaka eibi.

Okukendeeza obugyimu bwe itaka.



Embooli dhisobola okukukulira mwitaka eisamu samu.



Muwogo ataaku ni kwitaka eibi.

Ebirime ebisinga eby'emizzi bibala emmere ningyi inho nga eitaka lilina potash. Eivu eliva mu bililo-lilo lilina potash ono.

Ekigyimusa kya nitrogen wekyiba kitono….



Enanansi dhifuuka dha red nga dhizila nitrogen ono.

Ekigyimusa kya Nitrogen kyamugaso inho mukukuza ebirime nga bilamu bulungyi inho.





Ebirime byeisubi bifuna emboneka ya ‘V’ mumakoola amakulu.



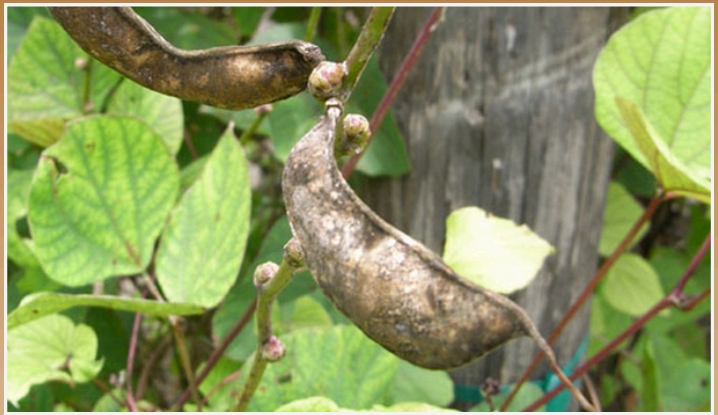
Amakoola amakulu gafuuka ga yellow mu kala.

Ebidhandali bikola ekigyimusa kya protein era byeiza eitaka butto

Ebidhandali bilina obuwuuka bwendawulo bu bacteria obubisobolessa okufuna nitrogen ono okuva mwibanga ela byamuta mwitaka okukozesebwa. Kino ekyigimusa kya bwerere, muna!



Enkoolimbo



Lablab bean

Ebidhandali ebiwalampa bikilizibwa okuniina ku dhuuma ela wasigala nga ofunamu okukungula kunene mubyombilili.

Okwokya yokya kumalamu ebijimusa era kwayonoona eitaka

Okwokya ngeri nangu inho ya kulongosa nimiro, aye wekiba kyisoboka, kilungi inho okuleka ebirime ebisigaile mu nimiro okuvundhila mwitaka.

Kino kiyambaku okuwa eitaka ebigyimusa ni bu bacteria okukula obulungyi. Bino byoona byamugaso inho okukuzza ebirime.

Eitaka elilimu ekivundhu kye ebikaba tilivamu kigyimusa nga amaadhi agamaani gatoonye.

Ebigimusa bya nitrogen ni sulphur bibulira mu mpewo nga oyokyiikya ebikaba. Ebindhi nga potash bisigala mwi ivu.



Okukola ebigyimusa mu bikaba ebivundhu



Toyokya bikaba – bivunze buvunze!



Ekigyimusa kino kyilungi inho mu nimiro dhewakka.

Engeri yokukola ebigyimusa mu bikaba ebivundhu

Edagililo eyokugobelera nga okola ebigyimusa mu bikaba ebivundhu:

- **Zimba olusenge ku kina ogobe ebisolo.**
- **Tamu ebikaba ebiri kuvundha.**
- **Tabulamu ebikoola ebibissi ni ebisimbe ebikalu.**
- **Ikiliza empewo okwingila mu bilikuvundha.**
- **Kuuma ekina nga kinoggoga inho.**
- **Yongolamu buli kibaileku kilamu.**
- **Bwekyiba kisoboka, tabulamu ku eibugumu lisobole okubivunza bulungi.**

The compost process

Bu bacteria obutono ni ebitonde ebindhi ebyomwitaka bimena mena ebisimbe ebivundhu byabifuula manyuwa.

Kubanga bacteria mulamu, yetagga empewo ni amaadhi ebitawaawo, ekiwulo kya ebikaba ebibisi ni ebikalu obutaffa.

Ebirime bilina ebirungo bye ebigyimusa mu balance enungyi eyokukuzza ebisimbe, nensonga lwaki manyuwa ono nasinga okuzza bulungi ebisimbe.

Okusigala nga ilhamu bulungi, eitaka lyetagga manyuwa ono okukola ebyamagero ebibaawo mwi itaka nga tutubibwoine.

Manyuwa ono alina okubugumamu okwitta ebiwuuka ebilya ebisimbe.

Air-layering

Air-layering is a special way of taking cuttings. A shallow cut is made around a small branch while it is still on the tree. Some soil and mulch is wrapped around this and covered with plastic. It soon forms roots. It can then be cut off and planted.



If a sweeter or preferred fruit or nut is found, it is best to grow it from cuttings, or air-layering, so the new tree is the same as the old.

Wetelekele ensiggo’yo mwene

Ebirime ebivva mu nsiggo etelekele wano bitela obutalwala lwala ndwaile kubanga binaliliile embeera ya wano.





Ebirime by,emizzi ni ensiggo mu Uganda



Karo

Ebirime bingyi eby,emizzi ni ensiggo ebiwangalira mu Uganda.

Emmere eno nebesaawo Uganda ela twetagga okujjitegeera bulungi inho.



Muwemba



Kkobe



Timpa



Obulo

Ebirime by,emizzi ni ensiggo bizaamu amaani mu mubiri

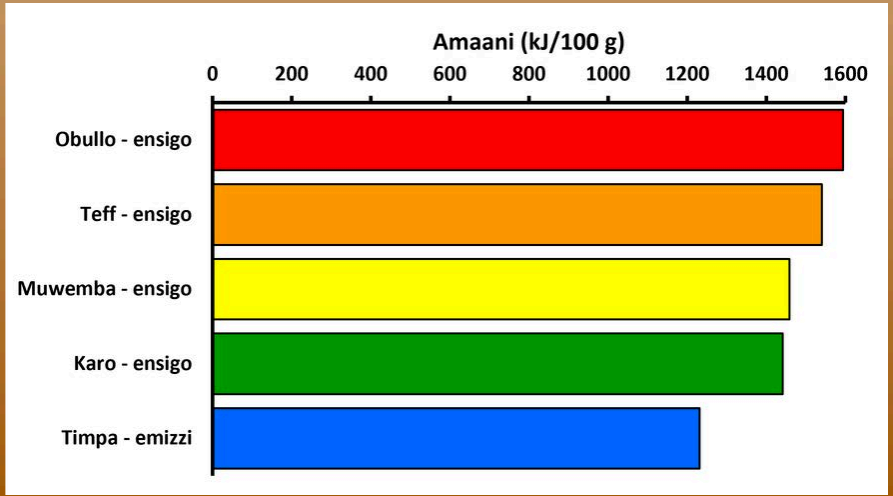


Muwemba



Teff

Ebirime by,emizzi ni ensiggo byamugasso inho okwizamu amaani mu mubiri



Obulo

- **Ensiggo badhikalanga oba badhissa obuwunga bwebakolamu buugyi oba omugaati.**
- **Amakoola goona bagalya ela gawooma.**

Eleusine coracana





Teff

- **Ensiggo badhissa obuwunga.**
- **Badhikozesa mu'iva n'okukola omugaati.**



Eragrostis tef





- **Ebikka ebyasooka bikulira mu nakku 90-120, ate ebikka ebiyaaka bikulira mu nakku 120-160.**
- **Ensiggo badhitelekera emyaka mingyi.**



Muwemba



- **Ensiggo badhilya nga obupwanki.**
- **Obuwunga babukolamu buugyi.**
- **Muwemba guzilamu gluten.**

Sorghum bicolor



Ensiggo dhimela kasita ekisimbe kikungulibwa bwepa, aye osobola odhiteleka okumala ekiseera kinene inho kasita odhikuuma nga nkalu era nga obuwuuka tibudhilumbye.



Karo

- **Ensiggo badhilya nga omutyeere.**
- **Osoboola odhisa wakola omugaati ni buugyi.**
- **Ensiggo ento osobola odhookya wadhilya nga dhuuma omwookye.**
- **Ebikka ebindhi bilina obutti obuwooma era nga buliibwa.**



Pennisetum glaucum





Golden timothy grass

- **Ensiggo osobola odhitogosa wamala wadhissa.**
- **Lisobora okukulira mu itaka eibolu ni ekalu.**

Setaria sphacelata







Okulima obuyuunhi obukupa





Ebitenge

- Obuyuunhi bukula bulungyi okuva ku nsinde enene.
- Busobora okukula mu mukookha oba mukisikilize.
- Obuyuunhi butwaala emyezzi nga mukagga ku mwendah okuliibwa.





Timpa

- Obuyuunhi obukupa bukula bulungyi inho mwitaka elitali ibolu inho.
- Kyetagisa emyezzi nga mwenda okuliibwa.
- Obuyuuni buno bwetagga ekisikilizze ekisamu samu.

Okulima embooli

Embooli dhetaaga:

- **Empewo mwitaka. Dhisimbe mubikatta eitaka bweliba ibolu oba nga lya itossi.**
- **Eitaka elilina ebirungo bye ebijimusa nga bingyi, okusingira ilha-lha potash.**
- **Ekiffo ekili mu musana buli kiseera.**







Waliyo ebikka bingyi eby'embooli. Ebindhi bikula mangu aye bitaaku emmere ntono inho. Lima emere entabule okufuula ekiwulo ekyomulembe.

Okulima muwogo

- **Muwogo kirime kya mizzi era kyangu inho kya kusimba, osoboora okukyikumira mwitaka. Asoboora okukula mwitaka eibi era yakula bulungi inho.**
- **Ssimba ebitundhu ebye ekirime ebiliku ebiwuudhu ku angle okuva ku itaka (nga centimetre ikumi na itaanu mu buwanvu).**
- **Eitaka bweliba tilyegema bulungyi, tikyetagisa kusooka kulikabala. Ebirime byenda kubikungula nga wabisewo eibanga lya myezzi ikumi ku ikumi ni enna okuva lwewabisimba. Muwogo attaaku kitono mwitaka elilimu acid ni mu kisikilize.**



- **Muwogo ayendha okufumbibwa bulungi ihno okutolamu obutwa (cyanide) obusobola okwesondera mu mubiri bwayonoona obusiwa bwo obwongo.**
- **Osobola okufumba ebikoola ela wabilya.**



Kkobe

- **Embooli enfumbe ni amakoola gadho buliibwa.**
- **Okukungula kusobola okutandika mu myezi esattu nga omazze okusimba, aye emboli ento dhilina ekiliisa kya starch kitono.**
- **Embooli edhili wansi mu itaka badhikungula nga amakoola gamazze okukala.**

Dioscorea bulbifera







Okwebaza abo betukozze nabbo

Tikyandisoboike nguli tiwaali obuyambi ni obwesige bwa abantu abeniggiila mu milimu gyino egyitasasulwa, nga bawaayo obwire ni amaani gaibwe ku eno pulojekiti.

Okulambulula ni okusunsula - Rick Campbell, Alexandra Lindsay ni John McPhee

Byavvunuliibwa - Emmanuel Maleka Simba, YouDo Initiative

Ku bisingaku awo, tutuke ku: info@foodplantsolutions.org, omutimbagano: www.foodplantsolutions.org

Food Plant Solutions ekolera ku ndhagiliro ni emitendela gya Rotary International, aye tekozesebya era tefugibya Rotary International.

Okweyanza abokoze ku bifananyi

Ebifananyi ebisinga mu katabo kano bivva mu iterekelo lya Food Plant Solutions. Okusiima kuweleibwa kulya ebifananyi by'ebirime ebiviile ku mutimbagano gwa internet.

Eliina lye ekisayaansa	Eliina elya buliidho	Wosoboola okwagaana ekifananyi
Cocculus hirsutus	Python climber	https://species.wikimedia.org/wiki/Cocculus_hirsutus
Grewia tenax	Small-leaved white raisin	http://www.southernafricanplants.net/photocollection/batch005/medium/G/TILLIACEAE_Grewia_tenax_Arandis_20090215_072_(1).jpg
Hibiscus trionum	Flower-of-an-hour	https://i.pinimg.com/originals/29/a5/c2/29a5c2c4457308d0fc36439ee5e26310.jpg
Mangifera indica	Muyembe	https://th.bing.com/th/id/OIP.cLiCvFcmgNvmY7OkE_7JAQHaFj?rs=1&pid=ImgDetMain
Setaria sphacelate	Setaria	https://noosasnativeplants.com.au/plant-details/?pId=714
Telfairia occidentalis	Eiliibwa	http://tropical.theferns.info/plantimages/1/7/179df45655f8ba2d0cf9ef4c29c97cf298f55729.jpg

Wandika wano obubaka bwo!



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