

Hao blong Yusum Tri mo Garen blong Kontrollem Big Lif Rop

Buk blong Komiuniti



LIVE&LEARN
Environmental Education

Hao blong Yusum Tri mo Garen blong Kontrolem **Big Lif Rop** Buk blong Komuniti



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Environmental Education

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LONG SAED BLONG BUK IA

Buk ia hemi tokbaot hao yu save yusum ol tri mo garen tugeta blong tekem bak graon we Big Lif Rop hemi bin kavremap.

Fasin blong wok olsem hemi gat plante gudfala samting we yu save profite from. Hemi minim se yu save yusum wan graon we sapos yu no yusum hemi stap olsem rabis graon, mo yu save tanem graon ia i kam wan rij garen we i save prodiusim plante samting. Ol teknik long buk ia hemi soemaot olgeta fasin blong wok we hemi save help blong mekem haomas kakae yu save gruem i kam antap mo sem taem haomas mani yu save winim, blong givhan long yu wetem famli blong yu. Hemi save givhan long yu blong mekem haomas difren kaen krop yu save gruem i kam antap, mo givim plante janis long fiuja blong salem timba from ol tri.

Sem taem, ol tri mo animol we plante taem Big Lif Rop i spoelem olgeta nao i gat janis blong gru bakegen. Fasin ia i save putum bak rij baeodaevesiti (we hemi hae namba blong ol difren kaen plant mo anamol) long Vanuatu. Sapos yu yusum teknik ia, olgeta had wok we yu gohed blong mekem blong lukaotem garen blong yu mo blong blokem Big Lif bae i go daon, minim se i isi tu blong kipim garen blong yu wetem ol eria raon long hem i helti mo prodaktif.

Mifala i gat strong tingting se sapos yu folem fasin ia bae yu luk ol gudfala samting long komiuniti blong yu, long envaeromen blong yu mo antap long hem maet yu luk se mani blong yu i go antap tu. Buk ia i soem wanwan step blong givhan long yu blong setemap wan "garen blong agroforestri" blong yu, sapos yu nomo i wokem o sapos maet olsem wan komiuniti.



Waetwud wetem kumala i stap gru long wan ples we oli testem long Santo



LIVE & LEARN VANUATU MO PROJEK BLONG RABIS GRAS MO ANAMOL

Live & Learn Vanuatu (LLV) hemi wan oganaesesen we hemi no pat blong wan gavman mo we hemi no wok blong winim mani be hemi traem blong enkarejem gudfala save mo aksen long saed blong mentenem situesen we hemi stap nao-ia long saed blong envaeromen mo ol man we oli stap insaed long hem tru long edukesen, komunikesen mo wok tugeta.

Wetem help blong European Union (EU), LLV hem i wok long wan projek, nem blong hem "Testing and modelling preventive measures to limit the spread and ecological impact of invasive species in Small Islands Developing States (SIDS)". Men papos blong projek hemi blong katemdaon fasin we ol rabis gras mo anamol oli seraot long Vanuatu mo blong gat gudfala ifek long ol kaen plant mo anamol insaed long envaeromen, long ol komiuniti mo long fasin blong mekem sua se i gat inaf kakae long fiuja.

Tru long projek ia LLV hemi bin wok blong developem wan fasin blong yusum difren kaen fasin tugeta blong kontrolem Merremia peltata, Big Lif Rop, mo blokem rop ia blong no go insaed long ol eria blong garen blong wan komuniti. Ol man blong LLV oli setemap tri ples blong testem fasin ia long Santo, Tanna mo Erromango. Oli jusum olgeta ples ia from olgeta i trabol bigwan from fasin we Big Lif Rop i stap gru plante long eria blong olgeta.

Big Lif Rop hemi wan denja truaot long Pasifik. Sam nara kaontri mo sam

komuniti insaed long Vanuatu oli bin traelem mo testem plante difren kaen teknik blong katemdaon ifek blong rabis rop ia we hemi go olbaot. Olgeta teknik we oli yusum hemi inkludim fasin blong yusum narafala laef samting, olsem wan sik o wan bebet, blong kontrolem rabis rop ia, fasin blong yusum wan posen blong kilim plant ia mo fasin blong wok had blong tekemaot plant ia. Be fasin we mifala i bin developem hemi difren olgeta long ol fasin ia. Maet hemi no givim wan ansa we hemi kilimaot evri rabis plant ia olgeta, be yet hem i givim wan fasin we i no sas mo hemi praktikol blong tekem bak graon we Big Lif Rop hemi bin kavremap. Mifala i soemaot wan wei we i save givhan long ol komiuniti mo fama blong protektem envaeromen mo garen blong olgeta from denja blong Big Lif Rop. Wei ia hem i yusum ol besik teknik blong agroforestri (hemia i fasin blong plantem kakae andanit long ol wud).

WANEM NAO OL KAEN RABIS GRAS MO ANAMOL?

Ol kaen rabis gras mo anamol olgeta i ol plant mo anamol (we i inkludim ol pidgin, ol bebet mo ol anamol long solwota) we nao oli damejem envaeromen o spoelem fasin blong mentenem laef blong wan komiuniti. Oli pusumaot ol plant mo animol we i ol stret wan blong ples ia mo oli tekem ova ples blong olgeta.

I gat plante kaen rabis gras mo anamol truaot long Vanuatu. Sako, Afriken Snel, Piko mo Big Lif Rop olgeta i eksampol blong rabis gras mo anamol we yumi save faenem olbaot long ol aelan blong yumi. Long wan wan komiuniti ol man oli save faenem sam difren plant o anamol we oli luk se i ol rabis wan tu.

Olgeta rabis plant mo anamol oli gat ol difren nem long wan wan ples. Long Tanna, Big Lif Rop nem blong hem i Nul Asul. Long Santo nem blong hem i New'le, mo long Erromango nem blong hem i Nos Ovillau. Nem we ol man blong saens i givim long hem hem i Merremia peltata. Long buk ia yumi yusum nem Big Lif Rop.

PROBLEM WETEM BIG LIF ROP

Big Lif Rop hem i wan problem truaot long Vanuatu mo tu long plante kaontri blong Pasifik. Hemi wan rop we i save gru kwiktaem mo kavremap ol ples kwiktaem. Hemi save kavremap isi nomo ol eria blong rabis graon, olsem ol ples we oli bin katem daon ol tri. Be Big Lif Rop hemi save gru tu i go antap mo kavremap ol tri, mo sem taem kilim evri samting we i stap anda long olgeta.

Big Lif Rop hemi kilim i ded ol stret tri mo plant blong wan ples. Hemi kavremap mo kilim sloslo ol samting we i stap gru long rod blong hem. Taem Big Lif Rop hemi tekem ova wan ples, hemi had tumas blong yusum land ia. Ol tri blong frut mo blong nat oli no save gru, ol tri blong wud oli ded mo rop ia i kavremap garen kwiktaem.

Ol anamol we oli stret anamol blong ples ia, mo speseli olgeta pidgin, oli lusum ples we oli stap long hem mo olgeta i mas muv i go long ol niu ples blong laev long hem. Hemia i gat wan big efek long rij baeodaevesiti blong Vanuatu.

I gat wan gud samting long saed blong Big Lif Rop. Hemia i wei we olgeta lif blong hem oli kavremap graon mo anda long olgeta lif ia graon i stap rij mo gud blong gruem ol samting long hem. Be sapos yu wantem yusum gud samting ia yu mas mekem wan plan we i gohed long taem. Fasin blong mifala blong agroforestri i save helpem yu blong benefite blong ol gudfala kakae long rij graon ia, mo sem taem blong aotem ol jalenj blong wok blong klinim mo mentenem we yu nid blong gohed blong mekem long ol eria we Big Lif Rop i kavremap olgeta.



Pikini blo Big Lif Rop



Rop blo Big Lif Rop



Big Lif Rop



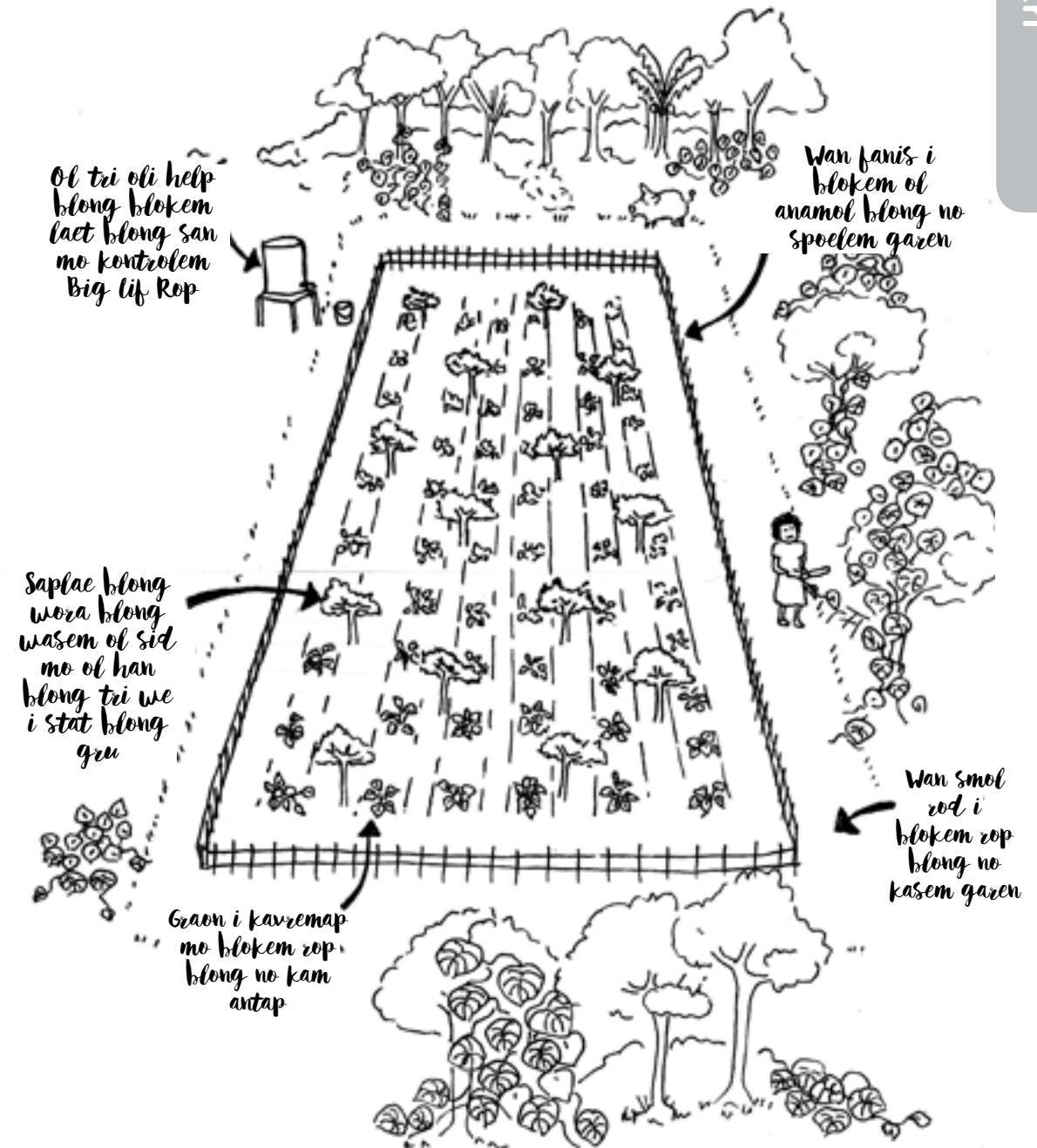
WAN PRAKTIKOL ANSA: OL GAREN WETEM TRI

Tugeta wetem ol komiuniti, mifala i bin putum tugeta ol praktis blong agrikalja mo forestri, we nem blong hem i agroforestri, blong manejem Big Lif Rop. Big Lif Rop hemi nidim laet blong gru. Insaed long gudfala dak bus, i no gat inaf laet blong letem ol sid i gru, minim se rop ia i no save seremaot hem olbaot. From samting ia, i gat tingting blong bildim bakegen ol dak bus tru long fasin blong plantem ol tri we oli save mekem bigfala branis antap. (Yumi givim nem "kanopi" long top blong ol tri.) Sapos yu mekem olsem, ol niu sid i no save gru, mo Big Lif Rop i no save gohed blong gru mo seremaot hem olbaot.

Blong wokem hemia, yumi nid blong plantem ol niu tri. Be ol bigfala tri oli tekem long taem blong gru. Sapos yumi no kavremap graon anda long olgeta taem oli stap smol yet, Big Lif Rop i save kasem inaf laet blong san blong gru. So yumi save mekem wanem?

Yumi save plantem olgeta kakae, olsem kumala, we oli save kavremap graon olsem wan tik mat, mo blokem laet. Sapos yu mekem olsem, ol sid blong Big Lif Rop i no save gru taem ol tri i smol yet. Taem fiu yia i pas, taem ol tri i kam big, sed blong olgeta nomo i save blokem Big Lif Rop.

Yumi save jenisim sloslo ol kakae we yumi stap yusum, maet yumi plantem ol wael yam we oli no nidim tumas laet, taem ol tri i stap kam bigwan. Long fasin ia yumi gat wan helti garen we i givim plante kakae mo we yu no gat nid blong wok had tumas blong lukaotem hem mo blong kipim Big Lif Rop aot long hem.



WANEM NAO AGROFORESTRI?

Agroforestri hemi wan olfala praktis long saed blong agrikalja we ol man Vanuatu oli yusum long taem i pas finis. Agroforestri hem i minim se yu groem ol kakae mo ol tri long sem eria. Olget tri i givim sed, mo timba mo frut mo nat blong long taem afta we men saekol blong kakae long garen i finis.

I gat plante gudfala samting long saed blong agroforestri. Mos impoten samting, hemi wan praktikol fasin blong groem bakegen wael bus olsem i stap bifo. Hem i prodaksen blong forest (hemia fasin blong groem ol tri) we hem i save holdem taet kabon mo givhan blong sloem daon klaemet jenis. Long fasin ia, olgeta graon we Big Lif Rop i kavremap hem hemi givim wan opotiuniti blong Vanuatu i kontribut long jalenj we wol i luk long hem long saed blong klaemet jenis, tru long wan isi wei blong plantem ol forest bakegen. Long sem taem, agroforestri i help blong mekem i kam antap hao mas mo wanem



difren kaen blong kakae ol man i save gruem long garen blong hem mo hemi help blong divelopem wan wei we hemi save winim mani ova wan long taem aot long garen ia. Taem hemi stat blong yusum teknik ia, ol man i save havestem olgeta krop olsem kumala, mo, afta fiu yia nomo, hemi save havestem ol frut mo nat mo pos blong fanis, mo, afta plante yia, hemi save havestem olgeta timba blong bildim haos.

Long wan agroforestri garen we hemi stap gudwan, ol stret pidgin blong ples ia oli stap kam kakae, ol wael yam oli stap gru mo ol krop blong tri olsem Nangai mo Navel oli stap, we wanwan blong olgeta i givim wan gud saplae blong kakae long ol taem we fud i sot. Agroforestri hemi givhan blong divelopem wan helti graon we i stap rij taem. Ol tri oli pulum aot long graon ol nutrien (ol samting we i givim kakae) we i stap long ol ples daon insaed long graon mo tekem olgeta i kam antap we ol kakae blong garen i save yusum olgeta bakegen.

Agroforestri hemi wan teknik blong go bakegen long fasin we ol man oli stap mekem garen long ol taem bifo, wetem ol tri, nat, frut mo kakae oli kamaot long wan ples nomo. Be antap long hem i gat wan nara gudfala samting, hemi save givhan long yumi blong kontrolem Big Lif Rop!

FROM WANEM YUMI MEKEM?

I gat fo men rison from wanem yumi setemap wan agroforestri garen long ol eria we oli gat plante Big Lif Rop long hem:

1. Graon we Big Lif Rop i bin kavremap hem plante taem hemi gud tumas blong gruem ol samting, minim se hemi wan gud ples blong mekem wan garen.
2. Long sam pat blong Vanuatu namba blong ol man i go antap bigwan mo oli nidim graon blong mekem garen. I impoten tumas blong yu no katem daon ol tri blong mekem wan niu garen. I mo gud sipos yumi faenem wan wei blong yusum ol rabis graon we Big Lif Rop hemi bin kavremap hem.
3. Long ol Agroforestri plot (ol eria we oli putum ol garen) we LLV i bin traelem, oli yusum fanis blong blokem ol garen blong ol anamol we i tem o i wael blong no kam insaed long garen mo spoelem hem. Hemia i mekem sikiuriti blong kakae blong komiuniti i go antap.
4. Taem oli yusum ol teknik i helpem ol komiuniti blong mekem mani we oli winim aot long garen blong olgeta i go antap.



PREPERESEN

BLONG JUSUM WAN PLOT

Taem yu disaed finis se i stret se yu wan yu mekem wan agroforestri garen, yu mas stap tingbaot sam samting. Fastaem, yu mas faenem wan pis graon we Big Lif Rop hemi kavremap hem. Mifala i ting se yu nidim wan we ples we saes blong hem i 2 ha igo antap.

Sapos graon we yu jusum hem i no blong yu, i gud yu sidaon mo tokbaot ol plan blong yu wetem man we graon i blong hem. Talemaot wanem yu hop blong mekem mo from wanem. No foget blong talem se graon i no save prodiusim wan samting taem Big Lif Rop i kavremap hem. Sapos yu mekem graon i gud bakegen tru long agroforestri, bae yu mekem i kam gud graon ia, wanem hemi stap gru long hem mo envaeromen we i stap raon long hem. Yumi talem long Inglis se hemi wan "win-win" sitiuesen blong evriwan, minim se ol man we involv long hem, yu we yu mekem agroforestri garen mo hem we i graon blong hem, i save gat benefit from samting ia.

Agroforestri hemi wan samting we yu komitim yu blong mekem ova long wan long taem. Yu save lukim ol profit blong ol krop naoia nomo, be yu mas stap wet maet 10 go kasem 15 yia bifo yu save havestem ol tri from timba blong olgeta. Hem i gud blong tokbaot ol benefit blong ol niu tri mo hao yutufala i save serem ol profit long fiuja. Nao ia yu save registrem yu olsem wan man we tri i blong hem no mata we graon we oli gru long hem i no blong yu. Tok wetem wan man blong agrikalja o forestri we i stap klosap long yu long saed ia. Luk long ol namba blong fon long en blong buk ia.

Hao blong wok olsem wan komiuniti

Long ol komiuniti we mifala i bin wok wetem, i gat plante intres blong tekem wan plot blong mekem wan garen taem olgeta i luksave se oli save winim mo mani taem oli plantem ol krop insaed long wan gudfala fanis.

Sapos wan man nomo hemi statem wan agroforestri garen hemi mas spendem plante vatu. No mata we yu save setemap wan garen olsem yu wan, i gat plante benefit sapos yu serem risponsibiliti blong hem. Taem yu joen wetem sam nara komiuniti memba, yu save agri blong putum ol garen blong yufala wan ples. Long fasin ia yu save serem ol expens blong pem fanis, mo tul mo ol smolsmol pikinini blong tri, mo yu save wok tugeta blong klinim mo lukaotem plot ia.

Hemi impoten tumas se yufala i stap tok wan ples long saed long ol tri we yu plan blong gru. Hu bae i plantem ol pikinini blong tri? Hao bae yu serem ol benefit blong ol tri ia long fiuja? Olgeta tri long wan garen bae i blong fama we oli stap long graon blong hem, o olgeta tri i blong komiuniti tugeta? Hao nao yu mekem tingting blong yu blong katem daon ol tri, yu salem olgeta blong haomas vatu, mo hao nao yu save divaedem ol profit?

Sapos yu save agri long evri samting fastaem bifo yu statem wok, maet yu no gat tumas problem taem garen i gohed blong gru.



Wan hil long Erromango we Big Lif Rop hemi kavremap hem olgeta

BLONG FAENEM MANI BLONG SETEMAP PLOT BLONG YU

Afta we yu bin jusum wan plot we i stret blong mekem agroforestri long hem, yu mas tingbaot hao yu save faenem mani blong hem. Ol samting we yu mas tingbaot hemi fanis, tul, ol smolsmol pikinini blong tri mo wan wota saplae. Mifala i givim wan tingting long saed long kos blong hem, mani we yu save winim mo mani we i profit long wan seksen blong buk ia we i kam afta.

Yu wan nomo yu save kolektem ol sid mo gruem ol smol smol pikinini blong tri mo, sapos yu mekem olsem, sas blong hem i no hae tumas. Sapos no, yu save pemaot ol pikinini blong tri long wan neseri. Bakegen yu mas tingbaot hao blong wasem ol niu plant blong yu. Long sam long ol plot we mifala i bin setemap mifala i bin putum wan tang blong wota o wan paep we wota i save stap ron aot long hem. Maet i no gat nid blong mekem olsem, sapos yu plant long stret taem, be maet i save helpem yu taem yu plantem ol niu pikinini blong tri mo ol han blong wud.

Kontaktem ol man mo stoa we oli save salem long yu ol samting we yu nidim. Dipatmen blong Forestri i save talem long yu wiswan neseri i save salem long yu ol pikinini blong tri long ol praes we yu save pem.



Hao blong wok olsem wan komiuniti

Pem olgeta samting we yu nidim aot long wan akaon we i blong komiuniti hem wan.

Mekem rere ol pos blong fanis.

Wiswan tul yu save serem?

Mekem wan tim blong klinim graon mo bildim fanis.

OL SAMTING WE YU NIDIM



Blong klinim graon: busnaef, ho, maet akis o jenso, fael, wilbara



Blong mekem fanis: waea blong fanis, stepol, hama, kruba o pik, sped, plaee, pinsba, tul blong pulum waea i taet, wilbara, mita



Blong plantem: Tree seedlings, kumala cuttings, spade, bush pegs to mark out lines, tape measure.

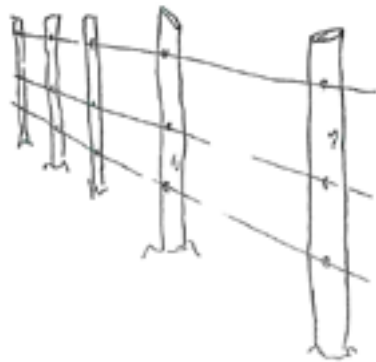
BLONG SETEMAP PLOT IA

Taem evri samting i rere, i gud blong yu folem ol fofala step blong setemap plot.

Kilnim graon mo aotem Big Lif Rop mo ol nara kaen rabis gras mo smol smol tri. Be no katemdaon eni hadwud tri.



Klinim



Bildim fanis

Bildim wan fanis blong blokem ol pig mo buluk i no kam insaed, blong protektem ol kakae mo tri. Kipim wan smol rod blong wokbaot long hem long insaed blong fanis mo aotsaed blong hem we bigfala blong hem i 1 mita. Hemia I help blong mekem sua se ol niu rop i no kam insaed long plot.



Plantem o tri

Plantem ol difren kaen tri we bambae oli gruem wan tik kanopi. Inkludim sam tri we i save gru kwiktaem.



Plantem krop blong kavremap graon

Plantem wan krop we i save kavremap graon blong blokem laet blong i no kasem ol sid blong rabis gras. Mifala i ting se kumala hemi wan gud krop blong statem.



No foget! Sapos yu no gat wan isi wei blong tekem wota, traem blong plantem ol pikinini blong tri long rentuem.

BLONG KLINIM PLOT BLONG YU

Taem evri samting i rere, klinim laen blong fanis mo plot we i insaed long hem.

Yu save mekem samting ia long tu kaen fasin. Long ol ples we mifala i testem teknik ia, mifala i klinim ful eria blong garen long sem taem. Hemia i plante wok be taem yu finis ful eria i rere blong yu save gohed blong plant. I gat wan problem wetem hem: maet graon i kam drae olgeta, minim se yu mas rere blong plant kwiktaem.

Wan nara kaen fasin hemi blong yu stat fastaem blong klinim laen blong fanis, mo ol pis graon we yu plan blong plantem ol laen blong tri. Afta we yu plantem ol laen blong pikinini blong tri, yu save gohed blong klinim ol eria bitwin long ol laen we tri i stap long hem, we hemi eria we yu mekem garen blong kumala. Be i gat wan kaen problem wetem fasin ia. Maet Big Lif Rop i stap gru ova long ol yang tri mo spoelem olgeta. Yu mas stap klinim ol laen blong tri evri taem.



Mifala i enkarejem yu blong no bonem bus taem yu stap klinim eria, from long fasin ia yu lusum ol nutrien from oli stap go antap wetem smok. Yu no bonem ol rabis be hipimap olgeta we yu tekemaot long sam big hip raon long eria blong yu. Afta long sam manis, ol rabis long hip ia i kam wan rij kakae blong kompos, we sloslo ol nutrien blong hem i go bak long krop blong yu.

Yu no foget tu se taem yu stap klinim graon yu no nid blong tekemaot eni hadwud tri we i stap. Hemi gud tumas sapos yu gat ol bigfala tri finis long agroforestri garen blong yu. Mekem gud yus long olgeta!

BILDIM FANIS BLONG YU

Taem plot blong yu i klin hemi taem blong bildim fanis blong yu.

No mata we fanis hemi sas antap long ol nara pat blong projek, hem i gat bigfala yus tu bitim ol nara samting. Hem i mekem i isi blong kipimaot ol Big Lif Rop, mo sem taem hemi blokem ol anamol mo ol nara bebet blong no kam insaed long garen. Fanis ia i save mekem krop mo profit blong yu i go antap bigwan.

Long ol eria blong projek blong mifala, mifala i yusum ol lokol timba blong mekem pos mo mifala i pem ol man blong bildim fanis. I tekem 10 man long 10 dei blong bildim fanis raon long wan garen blong 2 ha. Mifala i yusum 5 laen babwaea, mekem 3000 mita blong waea we kwaliti blong hem i gud. Long yia 2016 praes blong hem i 94,500 vatu.

Mifala i ting se ful kos blong fanis i 18,000 vatu. Hemia i inkludim praes blong waea, mo bakegen praes blong katem pos mo transpot. Maet komiuniti blong yu i save daonem praes blong hem, sapos yufala nomo yu katem pos blong fanis mo yu no askem pei from wok ia.

Sapos yu no gat inaf mani blong pem fanis fastaem, mekem sua se yu klinim wan graon we bigfala blong hem i 2 mita mo hemi raonem ful garen blong yu, mo kipim hem i klin oltaem. Yu save sevem mani aot long ol fas krop blong yu blong bildim wan fanis long fiuja.



Hao blong wok olsem wan komiuniti

Sapos yu putum evri garen blong yufala insaed long wan fanis hemi help blong serem kos blong hem, be i save had tu. Hemi tekem taem blong ol man i save agri long wanem i stret blong wanwan man i mas pem.

I gud yu gat wan plan blong hao blong kipim sam mani rere blong fiksim fanis o bildim wan niu wan bakegen long fiuja, i no gud yu spendem evriwan fastaem.

(caption) Wan man hemi stap makem ol laen blong plantem tri rere blong klinim. Nara man hemi stap plantem ol pikinini blong waetwud.



Wan man hemi stap makem ol laen blong plantem tri rere blong klinim. Nara man hemi stap plantem ol pikinini blong waetwud.

PLANTEM TRI

Nekis step hemi blong plantem ol tri blong yu. Jusum stret taem blong yia, taem yu save se i mas gat ren. Hemia i save mekem wan big difrens blong kipim ol tri i stap laef mo hemi minim se yu no gat nid blong wasem ol yangfala pikinini blong tri.

Wanem kaen tri yumi sud plantem?

Eni lokol hadwud hemi save wok gudwan. Sapos yu stap resem ol pikinini blong tri, Mahogoni, Waetwud, Natapoa mo Namamau olgeta i mekem wan gud miks. Sandelwud hemi gud sapos graon hemi gat dulap ston long hem. Ol tri we i gru sloslo olsem Nangai i gud tu, be yu mas mekem sua se yu miksim wetem ol nara tri we i gru kwiktaem. Hemia i save mekem sua se yu gat inaf sed blong protektem eria from Big Lif Rop long taem i go long fiuja.



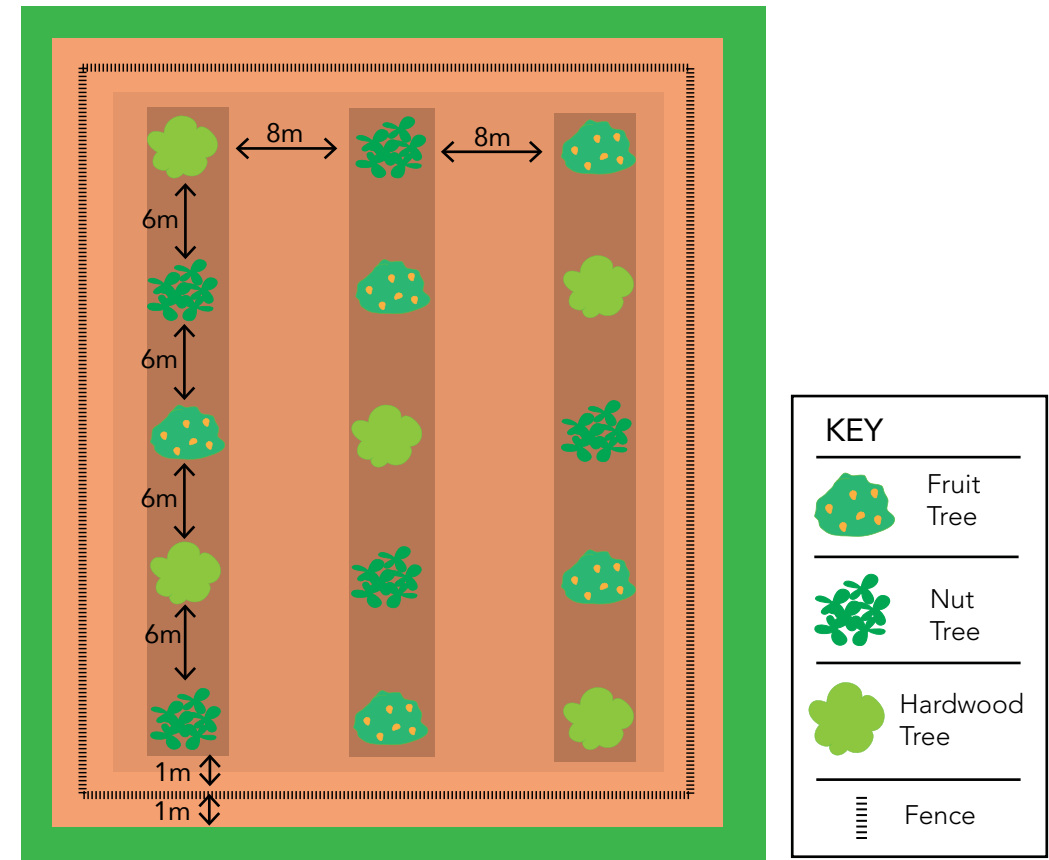
Waetwud, Namamau mo Natapoa long Lorum projek plot long Santo

Haomas spes i gud blong yumi livim bitwin long ol tri?

Spes hemi dipen long wanem yu plan blong mekem wetem agroforestri garen blong yu. Yu yu plan blong salem ol tri olsem timba? O yu hop blong mekem bakegen wan najorel forest?

Long ol trael saet blong mifala, mifala i bin traem ol difren spes bitwin ol tri blong alaoem gudfala kava blong kanopi blong gru mo andanit long hem gudfala spes blong plantem ol krop. Mifala i ting se i gud se yu plantem ol laen blong tri we i gat 8 mita bitwin evri wanwan laen.

Sapos yu plan blong salem ol tri from timba blong olgeta, i gud yu plantem olgeta klosap mo. Sapos yu mekem olsem, ol tri i save gru stret



mo tol. Bihaen, yu save jusum olgeta gud wan blong kipim olgeta. Mifala i ting se i gud yu plantem ol tri we i gat spes blong 3 mita bitwin long olgeta mo yu save tekemaot sam blong ol tri taem oli stap gru.

Sapos yu plan blong livim ol tri blong gru bakegen blong kam wan tik helti forest mifala i ting se i gud yu plantem olgeta wetem 6 mita bitwin long ol tri. Long wei ia ol tri i gat inaf spes blong gru mo i no gat nid blong tekemaot eni blong olgeta.

Sapos yu yusum spes we i 8m X 6m, bae yu nidim 208 tri blong wan hekta. Sapos yu yusum spes we i 8m X 3m bae yu nidim 316 blong wan hekta.

Taem yu plantem ol difren kaen tri long garen blong yu, yu save gat ol difren kaen benefit. Mifala i ting se i gud yu mekem evri nambatri tri wan Waetwud o wan Nananara. Bitwin long olgeta yu save putum wan Namamau o wan lokol nat o frut tri, olsem Natapoa o Nangai. Sapos yu mekem olsem, yu gat wan gud miks blong timba, frut mo nat long fiuja. Sapos yu wantem, maet yu save jusum ol netiv tri blong bus we hemi stret tri blong ples blong yu, long fasin olsem yu save mekem bakegen stret najorel forest long fiuja.



KAVREMAP GRAON

Afta we yu klinim garen blong yu, yu mas kavremap graon blong yu kwiktaem nomo. Yu no gat nid blong wet go kasem taem we yu klinim ful garen bifo yu stat blong kavremap graon wetem ol plant. Papos blong yu hemi blong gat wan gud tik graon kava taem ol tri oli smol yet.

Wiswan krop i gud blong yusum fastaem?

Wanem yu jus blong plantem olsem graon kava blong yu hemi dipen long wanem kaen graon mo klaemet yu gat long eria blong yu. Long ol saet we LLV i traelem teknik ia, oli yusum kumala, maniok, pinat mo poteto olsem ol men krop. Hemia i from oli save gru kwiktaem mo kavremap graon gudwan blong blokem eni sid blong Big Lif Rop bifo i gat janis blong gru. Bakegen ol krop ia oli save prodiusim plante kakae mo mekem wan gud profit taem yu salem olgeta long maket.

Wanem kaen spes i gud blong yusum?

Long ol test saet mifala i luk long ol difren spes blong plantem graon kava. Long kumala, mifala i testem ol spes blong 30cm, 50cm mo 100cm. Mifala i faenem se spes blong 100cm hemi kavremap graon kwiktaem inaf. Taem spes i mo smol, ol kumala oli faet from graon mo ol frut blong hem i smol tumas.

Hao blong wok olsem wan komiuniti

Hu bae i klinim raon long fanis long wanwan wik? Hao bae ol man i serem wok ia? Yu tink se yu nidim wan man blong oganaesem yufala?

Wiswan krop yumi save yusum long namba tu saekol?

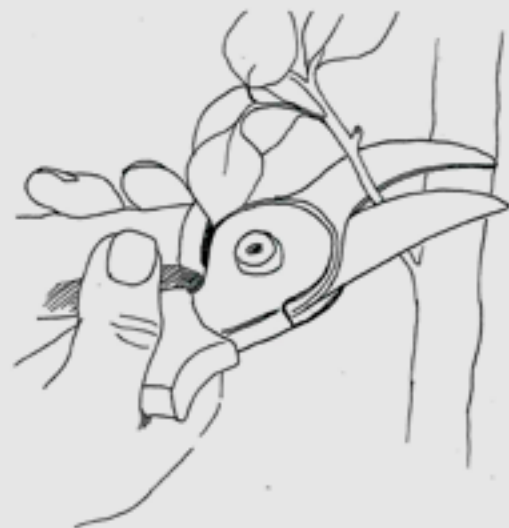
Afta we yu plantem mo havestem fas raon blong graon kava, yu save stat blong jenisim ol krop we yu plantem. Taem ol yia i stap ron, ol tri i stat blong kam longfala, minim se yu mas jusum ol krop we hemi dipen long hao mas laet i stap. Yu save plan blong jenisim ol krop long wan saekol (rotetem olgeta), blong impruvum kwaliti blong graon. Yu save yusum pinat o mukuna (wan plant we plante man oli save hem olsem gras blong agrikalja) we i save putum naetrojen i gobak long graon.

Long ol fas yia, ol tri bae oli smol mo oli no save impak long olgeta krop blong yu. Long taem ia nao i gud blong jusum ol krop we oli laekem plante laet blong san. Long ol projek saet blong mifala i gat plante difren krop we oli wan saksas, olsem kumala, kon, bin, tomato, anian, melen mo maniok. Mifala i gat saksas tu blong rotetem ol krop, stat wetem kumala, afta go long pinat, afta go bakegen long kumala.

Taem ol tri i stat blong gru, haomas laet blong san we ol krop i save yusum hemi stat blong go daon. Taem i gat mo sed, ol krop olsem taro oli gat mo saksas. Long en, taem ol tri i finis blong gru mo oli provaedem wan ful kanopi ova long garen blong yu, ol krop olsem wael yam mo navia bae oli gru gudwan.



Pinat, namba tu krop we sam fama blong Tanna oli gruem long Port Resolution. Pinat i gud blong bildimap graon bakegen.



HAO BLONG GOHED BLONG MENTENEM PLOT

MENTENEM BAONDRI

Big Lif Rop i save kam insaed long garen taem hemi gru ova long baondri blong hem. Yu mas wokbaot raon long baondri mo katem bak Big Lif Rop (mo eni nara rabis plant). Traem mekem samting ia wan taem long wan wik, sapos no, sam mo taem.

Prunem:

Taem yu prunem wan tri hemi minim se yu tekem olgeta branis aot long men stampa blong tri. Sipos yu prunem sam kaen tri, yu save mekem valiu blong hem i go antap. Hemia i mekem wan stampa we hemi gat ol joen long medel blong hem nomo, we i minim se timba ia i gat mo valiu.

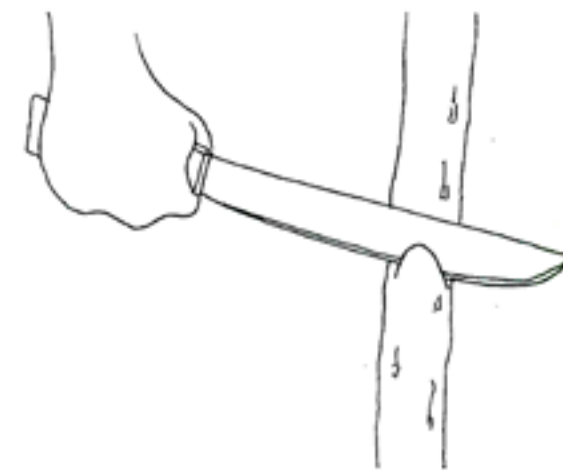
Tinim:

Afta 3 - 8 yia, maet yu nid blong katem daon sam blong ol tri, blong givim mo spes blong ol gudfala tri blong gru. Tekemaot eni tri we stampa blong hem i no stret mo olgeta we oli smol tumas. Teknik ia yu talem se i "thinning" olsem mekem laen blong tri i kam tin.

Blong tekem wan eksampol, afta 3 - 8 yia yu save tinim Namamau, mo ol tri we yu tekemaot yu save yusum blong blong bildim wan samting o blong mekem fanis.

Yu save tinim waetwud mo yusum olgeta we yu tekem aot olsem pos blong fanis afta 4 - 6 yia, be yu mas tritem hem fastaem. Yu save katem waetwud blong mekem timba wetem hem afta long 15 yia.

Yu no mas tinim sentawud. Hemi tekem 25 yia o mo blong finisim blong gru mo blong developem natora we hemi givim sandelwud oel we hemi gat bigfala valiu.



HAVESTEM MO PLANTEM BAKEGEN



Saekol blong plantem bakegen bae hemi jenis wetem evi fama mo evri taem blong yia. Mifala i soem wan eksampol long ol pej we i kam. Men samting we yu no mas fogetem hemi blong:

- » Mentenem graon kava mo gohed blong sedem aot Big Lif Rop
- » Rotetem ol krop blong mentenem rij graon
- » Manejem blong spesem gudwan ol plant mo mekem sua se oli no stap klosap tumas taem ol tri i kam mo big mo oli stat blong putum sed mo long garen



Bifo Big Lif i bin kavaremap plot mo kilim ol tri

YIA 1

- Mekem plan blong agroforesti garen blong yu.
- Jusum ples blong hem, klinim graon mo bildim wan fanis.
- Plantem ol pikinini blong tri. No foget blong luk bakegen long ol kaen tri mo ol spes we mifala i talemaot long yu.
- Plantem fas kava krop. Mifala i talem se i gud blong yu yusum kumala fastaem.



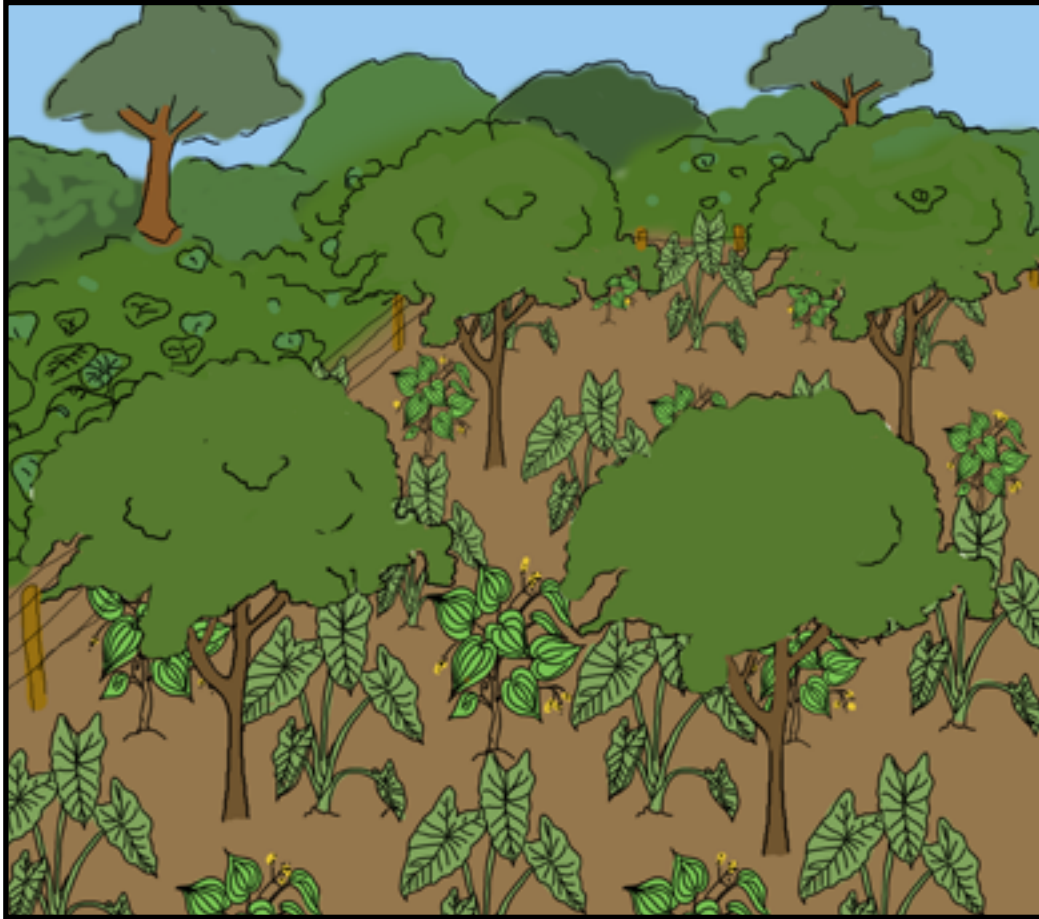
Naoia i gat ol smol tri wetem Kumala olsem graon kava

YIA 2 GO KASEM YIA 4

- Havestem kumala. No foget blong kipim long wan saed sam blong ol profit blong mendem fanis mo pem ol niu pikinini blong plant.
- Ol tri i stap smol yet, minim se yu gat plante san blong ol niu krop.
- Afta we yu havestem fas krop yu yu rere blong plant bakegen. I gud blong plantem bin, mukuna o pinat from oli save mekem graon i kam rij bakegen. Sapos evri samting i gohed gudwan, yu save gat 2 krop long wan yia.
- Taem ol saekol blong krop i gohed yu save traem sam niu kaen krop olsem melen o kava, o go bak long wanem i bin wok gudwan fastaem olsem kumala.

YIA 5 GO KASEM YIA 10

- Ol tri oli stap gru mo sed we i kavremap ol kakae long graon hemi kam big wan.
- Nao hemi taem blong plantem krop olsem taro, wael yam mo navia from olgeta i laekem sed.
- Sapos yu bin plantem ol tri i klosap, nao hemi taem blong stat blong tinim olgeta. Sam tri i rere blong katem daon blong yusum olsem pos blong fanis.



Ol tri i gru bigwan mo ol branj i gru ova long ol krop olsem Taro mo Wael Yam mo givim shed long olgeta

YIA 11 GO KASEM YIA 15

- Yu save stat blong havestem ol frut mo nat from ol tri i kam big wan finis.

YIA 25 +

- Yu save havestem ol hadwud tri from timba blong olgeta. No foget blong plantem sam mo pikinini blong tri blong tekem ples blong olgeta we yu bin katem daon.

Taem we ol tri blong yu i big inaf blong sed i blokem Big Lif Rop olgeta, yu save luk blong statem wan niu garen mo statem evri samting bakegen. Long fasin ia yu save stat blong inkrisimeria blong graon we i prodiusim ol krop, mo takem i kambak ol graon we Big Lif Rop hemi bin yusum. Sapos yu mekem olsem, bae yu gat plante difren krop mo tri i stap gru mo olgeta i rere blong havestem long sem taem.



OL NARA SAMTING BLONG TINGBAOT

Ol rat oli stilim plante kakae aot long garen blong yu. Maet yu wantem tingbaot blong yusum ol teknik blong kontrolem olgeta tu, from i tru se yu bin mekem wan efot blong blokem ol pig mo buluk finis. I save help sapos yu plantem plante anian from ol rat oli no laekem harem smel blong olgeta. Yu save mekem wan bet wetem ol lokol materiel. Ol fil woka blong LLV oli talem se yu save mekem wan namba wan bet wetem kokonat we yu rasasem mo sid blong fisposentri. Be sapos yu mekem bet ia, yu mas kipim hem aot long rod blong ol pikinini mo anamol.

Wan nara jalenj long ol trael plot blong olgeta hemi ol faea anis. Olgeta i wan komon rabis anamol we yu save faenem long fulap aelan blong Vanuatu. Ol rabis anis oli had blong kontrolem be i gat sam wei we yu save mekem. Blong yusum wan bet hemi wan gud wei, be i mo gud sapos yu tokbaot wanem blong mekem fastaem wetem lokol man blong kwarantini.

Blong wok olsem wan komiuniti

Mifala i enkarejem ol komiuniti blong mekem sam fanresing oltaem blong sapotem garen. Maet yu save jajem wan smol fi blong kam wan memba blong projek blong yu blong wan yia o askem ol man blong givim wan pat blong profit blong olgeta we oli winim long maket mo putum hem tugeta long wan sef ples. Yu save putum mani ia long wan akaon blong komiuniti mo yusum blong mentenem o ekstendem fanis, pem ol niu pininini blong tri, o kavremap kos blong tekem ol krop igo long maket.



STORI BLONG MANI

Ol man Vanuatu oli gud tumas long mekem ol garen, be maet i had blong mekem mani aot long garen mo sem taem fidim famli blong yu.

Wan gud samting long saed blong agroforestri hemi from i save tekembak graon we Big Lif Rop i kavremap hem mo mekem graon ia i kam prodaktif. Bakegen i save help blong gruem inaf kakae blong fidim famli mo salem long maket. Be blong produsim plante krop blong kakae mo blong salem long maket i nidim se yu mas putum plante mani i go long hem.

Bokis long saed ia i givim wan eksampol blong kaen tingting we yu mas mekem blong estimetem INKAM blong yu (hao mas mani yu winim), EKSPENS (hao mas mani yu mas spendem) SEVING (haomas mani yu mas putum long wan saed rere blong ol fiuja ekpens) mo PROFIT (haomas yu winim).

Yu mas spendem mani fastaem blong setemap mo mentenem garen blong yu, be sem taem bae yu nid blong inkludim ol kos blong sip mo transpot blong tekem ol kakae i go long maket.

Eksampol 1: kumala long Lorum

INKAM

- Plant 266 han blong kumala long wan plot blong 20 X 40 m (1.5 X 1.5 spes)
- Wanwan krop hemi givim maet 5kg we man i havestem ova long 3 – 6 manis
- Wan total blong 1133 kg
- Ol rat i tekem maet 50% = 667 kg
- Blong haos mo serem 33% = 220 kg
- Salem 447 kg long 50 Vt/kg = 22,350 Vt

EKSPENS

- Tekemaot kos blong transpot (5,000 vt)
- Hemi 17,350 Vt

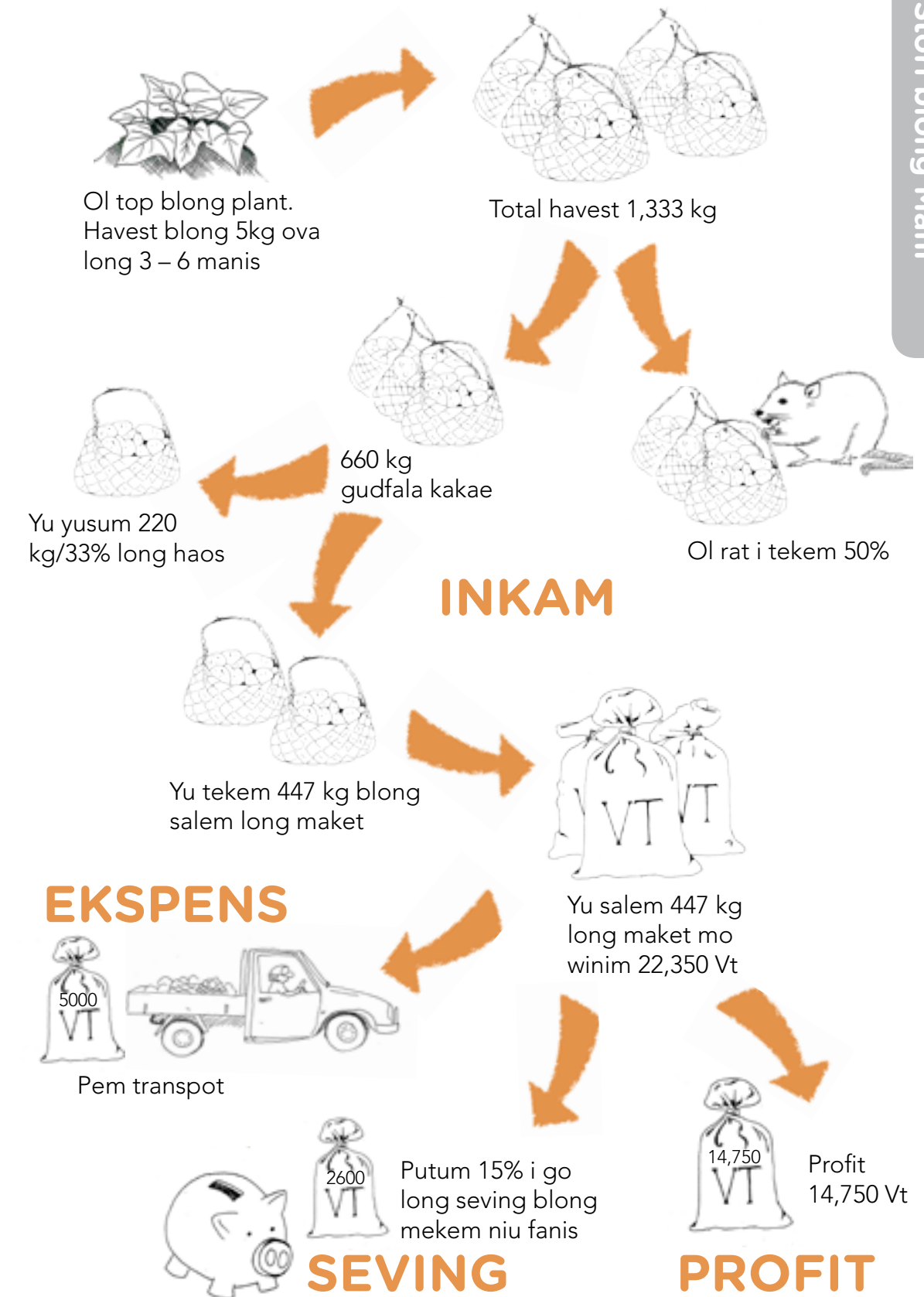
SEVING

- Putum 15% (2,600 Vt) long wan saed blong niu fanis long fiuja

PROFIT

- Tekem EKSPENS mo SEVING aot long INKAM blong estimetem PROFIT
- Net profit = 14,750 Vt.

STORI BLONG MANI



FAENANS BLONG KOMIUNITI

Live & Learn hemi bin traelem teknik ia long 3 saet long Tanna, Erromango mo Santo. Wanwan saet hemi 2 ha, we mifala i divaodem hem bakegen long 20 pis graon. Hemia i provaodem 20 garen we 20 memba blong komiuniti i save yusum.

Mifala i provaodem ol tebol (daon) olsem wan gaed, we mifala i wokemaot folem fasin blong wok blong mifala mo wanem mifala i faenem aot. Hemi soem ol kos we yu olsem wan fama i save ekspektem taem yu wok insaed long wan plot we yu serem wetem ol nara memba blong komiuniti. Ol estimet ia mifala i wokem folem projek blong mifala we mifala i lukim ol fama oli serem kos blong fanis mo pikinini blong plant.

Yu save yusum olgeta tebol blong helpem yu blong mekem plan long saed long ol kos mo profit blong yu.

Maet yu gat nid blong inkludim wan kos antap long hem we i blong transpot. Hemia i dipen long wea ples yu stap long hem mo wea ples yu plan blong salem kakae blong yu. Sapos yu plan blong sanem kakae blong yu long ol men taon blong salem yu mas inkludim kos blong trak mo sip.

No foget, sapos yu plan blong mekem wan agroforestri garen yu wan, yu gat ol kos blong statem we i go antap. Yu no save serem ol kos blong fanis mo pikinini blong tri. Yu mas plan fastaem blong mekem sua se yu save mitim ol ekpens ia.

Fas kos blong setemap wan komiuniti plot blong 2ha

aetem	Vt	kwantiti	haomas VT	Ol Not
Waea blong fanis	31.50 per m	3000m	94,500	5 laen blong waea
Stepol	500 per 500g	30	15,000	maet kwantiti i difren
Pos blong fanis			85,500	maet komiuniti i save provaodem fri
Pikinini blong tri	50	832	41,600	blong wan plot blong 2ha 416 pikinini blong 1ha
Tul *sped, hama, akis, busnaef)	2000	4	8000	maet yu gat ol samting ia finis!!
TOTAL			244,600	Sapos evri materioli ia oli bin pem long stoa

WAN EKSAMPOL WE I SOEM GUD PROFIT

Tebol ia hemi soem ol kos mo inkam blong wan fama (insaed long 2ha plot) long Tanna long fas yia. Hemi sanem ol kakae long Vila blong salem.

Yia hemi divaedi go long 4 kwota (wan kwota hemi 3 manis). Bae yu nidim pem ol samting long ol difren taem blong yia

KOS	Fas kwota	Namba 2 kwota	Namba 3 kwota	Namba 4 kwota	Total (Vt)
Pikinini blong pinat			1000		1000
Top blong kumala	800				800
Transpot		6000		6000	12000
Sip		6000		6000	12000
Fi blong kam memba blong Asosiesen			3000		3000
Kos blong komiuniket long wan manis	500	500	500	500	2000
Sea blong fanis	9000				9000
Sea blong tri	2080				2080
Total Kos	12380	12500	4500	12500	41880
INKAM					
Kumala		22350			22350
Pinat (5 bag)				50000	50000
Total Inkam	0	22350	0	50000	72350
PROFIT	-12380	9850	-4500	37500	30470

SAMARI

Wan agroforestri garen hemi wan praktikol fasin we i no sas tumas blong impruvum graon we Big Lif Rop hemi bin spoelem.

Taem yu yusum ol kakae we i gru kwiktaem mo ol tri tugeta long wan ples yu save sedemaot Big Lif Rop long wan eria nomo. Teknik ia wan man o wan komiuniti i save wokem, mo hemi no nidim tumas risos o ikwipmen.

Taem yu klirim graon we Big Lif Rop i bin stap long hem yu save faenem se graon i rij mo hemi save sapotem wan helti garen. Taem ol tri i gru, yu save gat wan nara kaen inkam long fiuja, mo sem taem oli sapotem najoral envaeromen. Aot long garen blong yu bae yu gat ol difen kaen krop we i givim kakae blong help blong fidim famli blong yu. Antap long hemia, bae yu faenem ol opotiuniti blong mekem wan profit aot long ol krop mo long fiuja aot long ol tri blong yu tu.

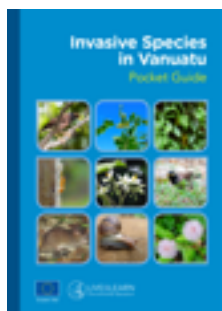
Mifala i no talemaot se teknik ia i save tekem olgeta Big Lif Rop aot olgeta long Vanuatu. Be mifala i ting strong se hem i wan niu kaen fasin blong tekembak graon. Taem yu yusum fasin ia, mifala i tink se ol komiuniti i save lukim benefit long envaeromen, long saplae blong kakae mo long faenans blong olgeta.

Yumi I save wok wanples blong bitim rabis rop ia – wan garen long wan taem!



SAPOT MATERIEL

Live & Learn Vanuatu (2016) Invasive Species in Vanuatu, Media Guide. Accessed online at <http://www.livelearn.org/sites/default/files/docs/Invasive-species-vanuatu-mediaguide.pdf>



Live & Learn Vanuatu (2016) Invasive Species in Vanuatu, Pocket Guide. Accessed online at <http://www.livelearn.org/sites/default/files/docs/Invasive-species-vanuatu-pocketguide.pdf>

Live & Learn Vanuatu (2016) Invasive Species in Vanuatu, Community Flipchart. Accessed online at <http://www.livelearn.org/sites/default/files/docs/Invasive-species-vanuatu-flipchart.pdf>



Live & Learn Vanuatu (2016). DVD, Invasive Species in Vanuatu. Accessed online at <https://www.youtube.com/watch?v=3va7m8BNhzA>

Live & Learn Vanuatu (2016). DVD, Control Methods for Big Leaf Rope. Accessed online at <http://www.livelearn.org/live-learn-multimedia>



NARA RISEJ

'Breakthrough in controlling an Invasive Vine in the Pacific,' Forrest and Bird New Zealand. Accessed September 2016 at <http://www.forestandbird.org.nz/what-we-do/news/break-through-in-controlling-invasive-vine-in-the-pacific>

'Merremia Peltata Profile', Global Invasive Species Database, Accessed September 2016 at <http://www.iucngisd.org/gisd/species.php?sc=163>

'Kilim Big Lif; a film about control methods used in Vathe Conservation Area, using injection with herbicides'. Forest & Bird New Zealand

Kirkham, S.(2004) Situating the Merremia Peltata Invasion in Samoa, The Geographical Review 94 (2): 218-228 Accessed September 2016 at <https://www.questia.com/library/journal/1G1-135164204/situating-the-merremia-peltata-invasion-in-samoa>

Neil PE, (1982d) Application techniques when using herbicides for Merremia. Forest Research Note, Forestry Division, Solomon Islands, No. 2/82:8 pp.

Neil PE, (1982e) Herbicides and Merremia species control. Forest Research Note, Forestry Division, Solomon Islands, No. 1/82:8 pp.

Ol toktok blong saens

Big Lif Rop:	<i>Merremia peltata</i>
Sako :	<i>Acridotheres tristis</i>
Afriken Snel:	<i>Achatina fulica</i>
Mahogani:	<i>Swietenia macrophylla</i>
Namamau:	<i>Flueggia flexuosa</i>
Nangai:	<i>Canarium indicum</i>
Natapoa:	<i>Terminalia catappa</i>
Navel:	<i>Barringtonia</i> spp.
Pico:	<i>Solanum torvum</i>
Posenfis Tri:	<i>Barringtonia asiatica</i>
Waetwud:	<i>Endospermum medullosum</i>

Pleas blong raetem ol not

Who can help:

Efate:

Live & Learn
Tel: 27455
Department of Forestry
Tel: 33750 / 23171
Department of Agriculture
& Rural Development
Tel: 33550 / 22525

Santo:

Live & Learn
Tel: 35078
Department of Forestry
Tel: 36519 / 33810
Department of Agriculture
& Rural Development
Tel: 36275 / 48420

Tanna:

Department of Forestry
Tel: 7304173
Department of Agriculture
& Rural Development
Tel: 5955886

Erromango:

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Tel: 7761390
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