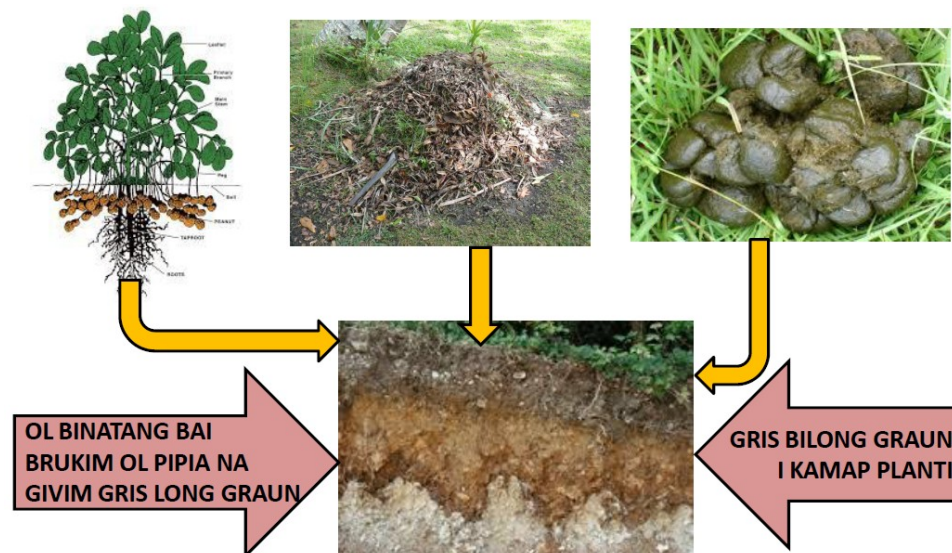


Lukautim graun

7 Planim banis raunim gaden bilong holim pas graun bai gris ino lus long wara (hedgerow)

Lukautim Gris bilong Graun



Sapos yu laik kisim moa save long lukautim graun na gris bilong graun, yu ken painim ol lain FPDA long:

- 1 Mt Hagen—Hapsait long Polis Stesen long taun
PO Box 1290
Mt Hagen, WHP Ph: 5424111, 75419824
- 2 Jiwaka—Insait long haus wantaim NDB opis
PO Box 1290
Mt Hagen, WHP

Graun bilong yumi

Yumi oltaim wokabaut, pilai, wokim haus, planim gaden na planti arapela samting antap long graun. Wanwan taim tasol yumi stap long wara. Dispela i soim olsem graun i nambawan halivim bilong yumi, olsem na yumi mas oltaim tingting long lukautim graun bilong yumi.

Igat kankain graun. Sampela hap i gat retpela graun. Sampela i gat bilakpela graun. Sampela hap i gat wesana graun, sampela hap i gat karanas graun, sampela tais graun na sampela das graun. Tasol olgeta dispela graun i gat diwai, bus, flawa na kaikai i kamap long em.

Na graun i kamap olsem wanem? Dispela askim yumi planti ino save bekim gut. Planti yumi tok God i wokim. Em tru, tasol nau yet nupela graun i wok long kamap. Sampela yumi wokim na sampela em yet kamap.

Yumi halivim long wokim graun taim yumi bungim pipia na larim em sting na kamapim nupela, bilakpela graun. Dispela yumi tok 'wokim kompos'. Taim planti kompos i stap, planti bilakpela graun bai kamap.

Sampela graun i kamap em yet. Taim ol bikpela ston i bruk bruk igo liklik tru, em i kamap wesana. Taim ol gras i kamap long dispela ples wesana, ol i bai dai na sting igo insait long wesana. Igo longpela taim nau bai dispela ples wesana bai i gat gutpela graun.

Lukautim gris bilong graun

6 Bekim gris long taim graun i malolo wantaim gras na bus bilong wokim gris (improved fallow)



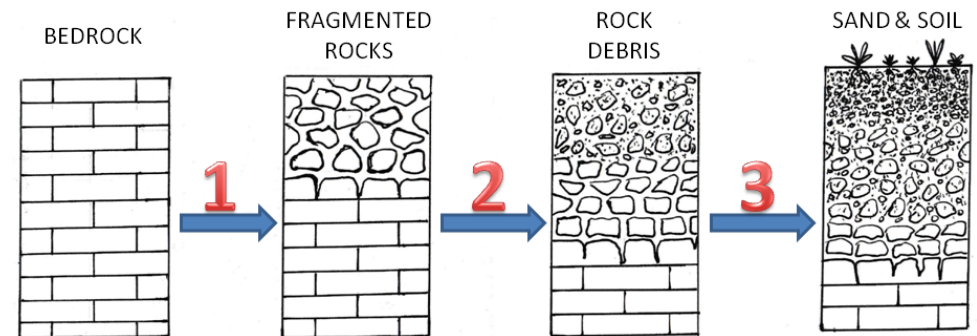
Lukautim gris bilong graun

5 Putim pekpek bilong pik, meme, kakaruk, kau na kopi skin long gaden (organic fertiliser)

Graun i kam long wea?

1 **Graun i kam long ston.** Dispela ston i stap aninit tru long graun olsem bet na em mama ston i kamapim graun. Yumi no inap long lukim tasol taim ol i katim ol nupela rot o graun i bruk, yumi lukim dispela ston i stap aninit tru i kamap ples klia.

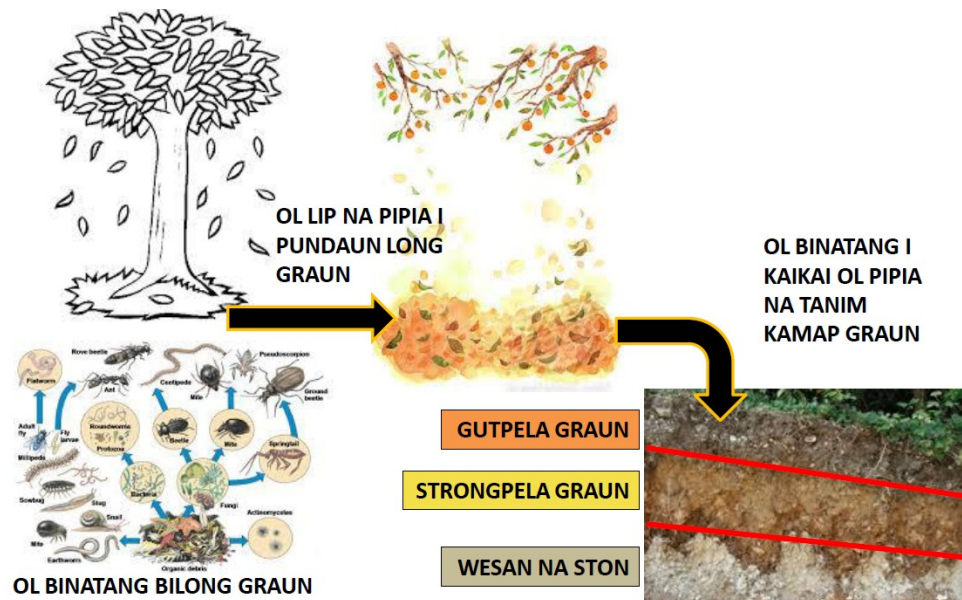
Dispela ston i bin stap ples klia bipo. San i kukim na brukim, na wara i save wokim rot igo insait long mama ston. Ston i bruk bruk moa yet. Dispela pasin bilong ston bruk bruk em 'physical weathering' (piksa 1).



Nau taim ston i bruk bruk, i gat ol sol insait long ston i tanim wantaim wara na kukim ol ston. Dispela pasin i brukim na wasim ston moa yet igo liklik. Nau yumi bungim 'physical' na 'chemical weathering' (piksa 2). Longpela taim nau bai ol liklik ston i bruk igo wesana liklik ol gras i kamap. Taim ol gras i dai na sting nau bai graun i kamap. Dispela em 'soil development' (piksa 3).

Graun i kam long wea?

2 Graun i kam long kompos. Kompos em ol kainkain pipia i sting na tanim kamap graun. Em ol lip na pipia bilong gras, bus na diwai. Ol kainkain binatang, animol na man yumi dai na sting igo kamap graun tu. Yumi ol samting i gat laip, yumi olgeta i kamap graun. Dispela pasin bilong sting na kamap graun long tok inglis em 'decomposition'. Ol kainkain binatang, demdem, anis na snek insait long graun i save kaikai ol pipia, na ol i pekpek. Em nau kompos kamap. Nau ol liklik binatang tru i save kaikai ol dispela kompos i kamap graun. Planti ol pipia i sting, planti nupela na gutpela graun i kamap. Gras, bus, diwai, flawa na gaden kaikai kamap long dispela gutpela graun i save bikipela hariap.



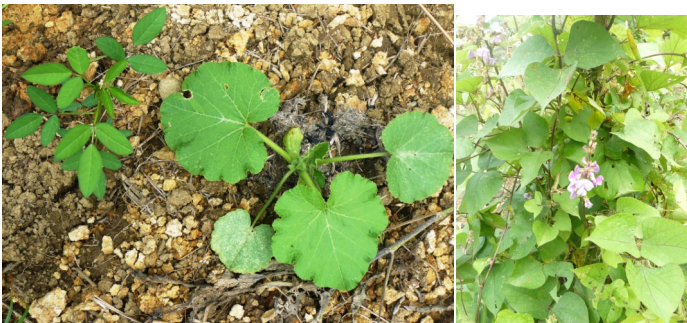
Lukautim gris bilong graun

4 Putim ol fetilaisa bilong stoa long gaden (inorganic fertiliser)

Lukautim gris bilong graun

3 Planim ol fetilaisa kaikai, gras na diwai insait long gaden wantaim ol arapela kaikai (intercropping)

Taim yumi planim kaikai olsem kaukau, yumi save planim bin na kon. Em i gutpela, tasol planti taim kon i save resis long kisim olgeta gutpela gris. Olsem na taim yumi planim kaukau, i moa gutpela long planim ol kainkain bin wantam kaukau. Taim yumi planim tapiok, planim sampela lablab bin o snek bin bai givim gris long tapiok na yumi kaikai bin inap taim tapiok i redi.



Gris bilong graun

Olgeta diwai, flawa, gras na gaden kaikai yumi planim long graun i save kisim gris long graun bilong kamapim lip, bun, flawa na frut. Dispela gris bilong graun i olsem sol i tanim wara na stap. As rop bilong kaikai, flawa na diwai yumi planim i save go insait long graun na kisim wara insait long graun. Dispela wara insait long graun igat ol gris (sol) wea i halivim olgeta diwai, bus, gras na flawa i kamap.

I gat kainkain ol dispela gris bilong graun. Sampela igat bikpela wok na sampela igat liklik wok bilong kamapim lip, bun, flawa na prut. Em ol nem i stap aninit.

Ol gris igat planti wok:

naitrojen (N)
fosferos (P)
potesiyum (K)
salfa (S)
kalsiyum (Ca)
magnisiyum (Mg)
sodiyum (Na)

Ol gris igat liklik wok:

ain (Fe)
mengenis (Mn)
kopa (Cu)
sink (Zn)
molibdenim (Mo)
boron (B)
klorin (Cl)
silicon (Si)
kobolt (Co)

Gris long graun i kam long wea?

Gris bilong graun i kam long **ston**, ol **pipia i sting**, na ol **sampela binatang** i stap insait long graun i save wokim ol kain gris olsem naitrojen (N) na salfa (S).

I STON: Taim ol ston i bruk bruk na wara i wasim ol, i gat ol kinkain sol i stap insait long ston wea wara i karim igo. Dispela ol sol igo insait long graun na i stap bilong ol diwai, gras, bus, flawa na kaikai yumi planim i kisim. Sampela piksa bilong ol dispela kain ston i stap aninit wantaim nem bilong ol sol i stap insait long ol.

FELDSPAR

Potesiyum (K)



MICA

Potesiyum (K)



SERPENTINE

Megnisiyum



DOLOMITE

Kalsiyum (Ca)

Megnisiyum (Mg)



Lukautim gris bilong graun

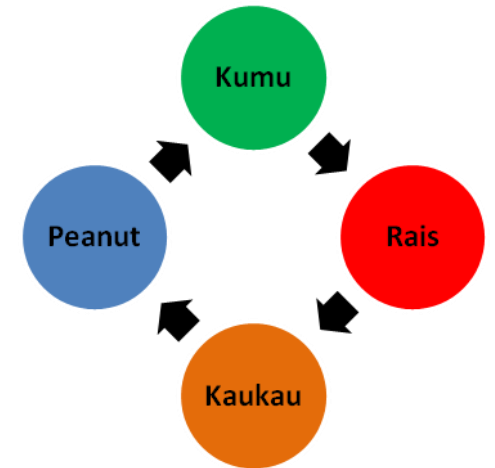
2 Bekim gris bilong graun long kaikai yu planim (crop rotation)

Bipo tumbuna lain bilong yumi save planim kaukau, rausim na planim pinat, na bihain go bek long kaukau. Taim ol i wokim gaden, ol i save planim planti kinkain kaikai wantaim. Dispela em gutpela pasin bilong halivim graun bilong yumi long givim gut gris.

Nau yumi wokim gaden, yumi planim wanpela kain kaikai tasol. Planti taim yumi ino planim kain kaikai olsem pinat na as bin.

Long bekim gris bilong graun wea kaikai i rausim, yumi mas planim pinat, as pin o ol kinkain bin.

Kain olsem: Taim yumi rausim **kaukau**, yumi mas planim **pinat, as bin** o ol **arapela bin**. Taim yumi rausim pinat o bin, yumi mas planim ol kumu kaikai olsem **anian, kerot** o **kebis**. Bihain, planim kaikai olsem **kon** o **rais**. Nau go bek long kaukau. (Lukim piksa). Sapos yu laik abrusim kon o rais, planim kaukau na bihain pinat. Dispela bai bekim gris bilong graun na daunim ol sik.





Lukautim gris bilong graun

I Wokim kompos



Gris long graun i kam long wea?

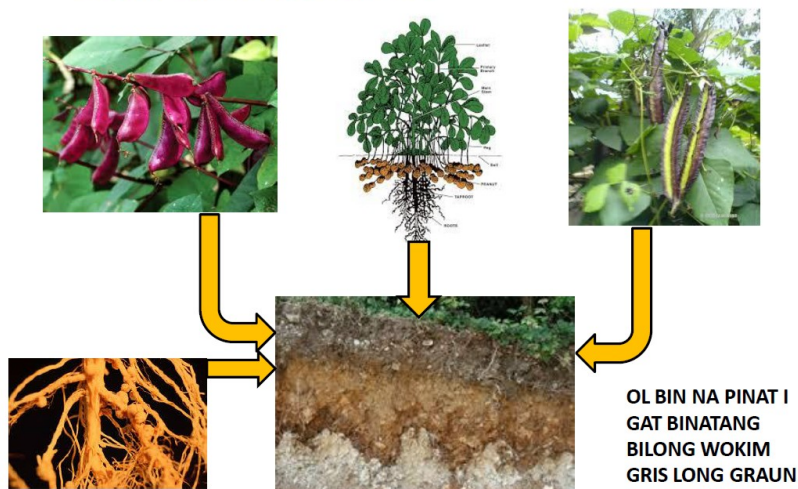
2 KOMPOS: Taim ol pipia olsem lip, gras na bus, wantaim ol kainkain animol na binatang i dai na sting, ol i save putim gris igo bek long graun. Planti moa gris bilong graun i save kamap long dispela rot, bilong wanem, i gat planti pipia insait long gaden bilong kamap kompos.



Gris long graun i kam long wea?

3 BINATANG: Igat sampela binatang i save wokim ol gris bilong graun. Sampela ol dispela binatang i save stap insait long graun, na sampela i stap insait long ol bus na diwai. Ol dispela i stap insait long graun, ol i save wokim dispela gris salfa (S). Ol i pulim salfa long win na tanim kamap gris bilong graun bai kaikai yumi planim i kisim. Sampela binatang i save stap insait long ol bukuk i stap long as rop (ruts) bilong ol pinat, bin, yar, marmar, landro, na ol sampla bus na gras. Dispela ol binatang i pulim naitrojen (N) long win na tanim kamap gris insait long ol dispela bukuk (fektori bilong N). Taim ol dispela bus, diwai na kaikai i dai na sting, ol i putim gris naitrojen (N) insait long graun.

PINAT NA OL BIN OLSEM AS BIN, SOI BIN NA PI I GIVIM GRIS LONG GRAUN



Gris bilong graun igat kainkain wok

Ol gris long graun i gat kainkain wok bilong kamapim ol bun, lip, flawa na prut. Dispela ol wok bai yumi stori liklik nau.

GRIS	WOK	LONG WEA
Naitrojen (N)	*Kamapim planti lip na kru *Kamapim grin kala long lip *Halivim long bikpela hariap	*Lip, kru na yangpela bun
Fosferos (P)	*Kamap strong na bikpela *Kamapim nupela kru na ruts *Kamapim gutpla flawa, prut na sid	*Blut *Kru na ruts *Kru, flawa na prut
Potesiyum (K)	*Strongim bun na lip *Karim wara, gris na kaikai igo long bun, lip, prut na ruts *Kamapim bikpela prut na sid	*Bun na lip *Bun, lip, ruts, prut *Lip, prut/sid
Salfa (S)	*Halivim long bikpela hariap *Kamapim bukuk/fektori bilong wokim naitrojen (N) *Daunim sik	*Lip na bun *Ruts
Kalsiyum (Ca)	*Kamapim gutpela ruts *Strongim lip	*Ruts *Lip
Megnisiyum (Mg)	*Kamapim grin kala long lip	*Lip
Sodiyum (Na)	Strongim lip	*Lip