

कृषि सूचना तथा संचार केन्द्र

रेडियो र टेलिभिजनमा कृषि कार्यक्रम

रेडियो नेपाल र नेपाल टेलिभिजनबाट दैनिक साँझ ६:४० देखि ६:५५ बजेसम्म विभिन्न विषयहरूमा कृषि प्रविधिबारे जानकारी लिन नियमित सुन्ने/हेर्ने गरौं ।

दिन/बार	रेडियो नेपाल	नेपाल टेलिभिजन
आइतबार	पत्रपत्रिकामा कृषि, कृषि गतिविधि	कृषि वार्ता
सोमबार	सफलताको कथा	सफलताको कथा
मंगलबार	छलफल (सहकारी र पोषण)	कृषकको जिज्ञासा-विज्ञको जवाफ
बुधबार	अन्तरवार्ता (कृषक/कृषि विज्ञ)	कृषि वृत्तचित्र (प्रविधि र सिँचाई)
विहीबार	कृषि प्रविधि/सिँचाई	कृषकको सरोकार
शुक्रवार	जेटिए र बुद्धीआमा	कृषि गतिविधि
शनिबार	रेडियो पत्रिका (विविध)	कृषि टेलिसिरियल ("कृषक हौं हामी")

रेडियो नेपाल र नेपाल टेलिभिजनबाट कृषि समाचार

रेडियो नेपाल र नेपाल टेलिभिजनबाट साँझ ७:०० बजेको समाचारमा कृषि समाचार प्रसारण भइरहेकोले सो कार्यक्रम हेरी/सुनी कृषि सम्बन्धी जानकारी लिउं ।

क्षेत्रीय प्रसारण (साप्ताहिक)

पूर्वाञ्चल, मध्य पश्चिमाञ्चल, सुदूर पश्चिमाञ्चलमा बुधबार साँझ ५:३५ बजेदेखि ५:५० बजेसम्म र मध्यमाञ्चल, पश्चिमाञ्चलमा बिहीबार साँझ ५:३५ बजेदेखि ५:५० बजेसम्म कृषि कार्यक्रम प्रसारण भइरहेको छ ।

FM हरूबाट कृषि कार्यक्रम

कृषि सूचना तथा संचार केन्द्र र कृषि निकायहरूको सहकार्यमा देशका विभिन्न १०० वटा FM हरू मार्फत कृषि कार्यक्रम प्रसारण भइरहेको हुँदा सो सेवाबाट लाभ लिनुहोस् ।

इन्टरनेटमा कृषि सेवा

कृषि द्वैमासिक पत्रिका सबै अंकहरू, अन्य पुस्तिका तथा फोल्डरहरू कृषि सूचना तथा संचार केन्द्रको वेबसाइट : www.aicc.gov.np मा पढ्न सकिनेछ ।



प्रकाशन तथा मुद्रण

कृषि विकास मन्त्रालय

कृषि सूचना तथा संचार केन्द्रद्वारा प्रकाशित

प्रकाशन प्रति : ६०००

हरिहरभवन, ललितपुर, फोन : +९७७-१-५५२५६१७, ५५२२४८

फ्याक्स : +९७७-१-५५२२४८, ईमेल: agroinfo@wlink.com

वेब: www.aicc.gov.np

द्वैमासिक कृषि

वर्ष ४५ भाद्र-आश्विन २०६५ अङ्क ३



- ◆ कृषि उत्पादन वृद्धिमा गुणस्तर बीउ
- ◆ मासु भण्डारण गर्दा ...
- ◆ सफलताको कथा
- ◆ कफिमा लाग्ने कीराहरू
- ◆ बहुउपयोगी इस्कुस



कृषि सूचना तथा संचार केन्द्रद्वारा प्रकाशित



लेखकहरूको प्रकार र पारीश्रमीक

१. मौलिक अध्ययन र अनुसन्धानको नतिजा र खोजेको आधारमा कृषि विकासको विभिन्न पक्षमा सहयोग पुऱ्याउने लेख	रु.१२००-१६००
२. सन्दर्भको आधारमा तयार पारिएको लेख	रु.१०००-१२००
३. अनुभव एवं सफलताको आधारमा तयार पारिएको लेख	रु.८००-१०००
४. जे.टि.ए. र बुढी आमा	रु.५००-६००
५. कविता, के तपाईंलाई थाहा छ ? कृषि गतिविधि र अन्य छोटो लेखहरु	रु.३००-४००
पुस्तिका	रु.१५००-२०००
फोल्डर	रु.८००-१०००
पर्चा	रु.४००-५००

कृषि द्वैमासिक पत्रिकाको ग्राहक बन्नको लागि

कृषि द्वैमासिक पत्रिकाको ग्राहक बन्न चाहने व्यक्ति वा संस्थाले कृषि सूचना तथा संचार केन्द्र हरिहरभवनमा वा जिल्ला स्थित कृषि विकास कार्यालय वा पशु सेवा कार्यालय मार्फत ग्राहक बन्न सकिने व्यहोरा जानकारी गराईन्छ ।

द्वैमासिक कृषि

; Dkfs d08n

; #fs
ho dšb vgn

k\fg ; Dkfs
lj i0f k; fb coff

j/l/i7 ; Dkfs
j}07 clwsf/L

; Dkfs
; ug zdf{kl08t
; idf /; f0nL
; /ltf uftd
; kgf af: tffh

sD66/
dgfh :df6{18hf0g

krffj
cgk zdf{krffh
bj/fh ufnL

5kf0f lj t/0f
; idf /; f0nL
efhfgfy kffh
zDe'yfkf

; Dkfslo

ebf}/ c; fh dlxgdf klg gkfnL ls; fgx?
v}lktLsf]sdfdf lgs}Jo:t /xG5g\ b}zsf]
kdv v}fGg afnLwgsf]uf\$dh ug]sfd klg
ebf}dlxgdf ul/G . o; sf ; fy}wfg v}tdf 6k
8k È ug] cfjZos dfqdf l; Ff0\$]kagw
ldnfpq]sdfdf klg ls; fgx? Jo:t /xG5g\
t/ of]k6s wfg /fg]; dodf kofft jiff}gx}f
sltko v}l0fb pj{eld afen/x\$]5 . ebf}sf]
dlxgdf g}b}zsf]kxf8L e}udf kvf]af/ldf
nuf]sf]ds}eff] kvf]af/ldf lj leG hftsf
t/sf/Lnufpg]ul/G . of]; dodf ls; fgx? fo"
l; dL, af\$], dhf, /fof]h:tf t/sf/lx? nufpgdf
Jo:t blvG5g\ xdfnLe}udf of]; dodf :ofpsf]
ejfbf/ nfxLsL/fsf]lgoG0fsf nflu sfd ug]
cfjZos xG5 eg]tNf]kxf8Le}udf adf} dL
k}hnsf]ufgf p}kfbg ug{k}hnsf dl; gf bfgf
-; G_ /fg]ul/G . ls; fgn]af/ldf cut}hftsf
sfpnL/ aGbsf lj?jf of]; do; Dd ; f/L; Sb5g\
eg]8Da/; f0{hftsf]cn}L klg olx dlxgdf
l6lkG5 .

dW kxf8sf ls; fgn] of] dlxgdf ; nud,
:jL; rf8{ knE} s]/fp, rD, /, n; g cfb
nufp}5g\ of]; dodf xfdn]ls; fgsf]v}af/ldf
k}k}m / t/sf/Lsf]cf}f lgoG0f ug{k}m}d}g
60ksf]koffu u/\$f]klg blvG5 . z/bsfnlg
pv}sf]nflu klg h}ufs]tof/LoxL; dodf g}
ul/G . c; fh dlxgfsf]cG0af6 t/f0{/ leqL
dwzdf cfn'/fg]sfd z? ul/G . of]; dodf
xl/of]3f}sf]kofft pknAw}fn]ubf]ls; fgx?n]
bwsf]w}p}kfbg u/} cfbfgLng]ub}5g\eg]
kz}sf]nflu cfjZos 3fFx? h:t}ss; krf,
Xj f06Snf/ cfb klg oxL dlxgdf 5b5g\
hgzlst cej s}if If}df Ps kdV ; d:ofsf]
?kdf byf k/\$f]5 . s}if oGx? v}/b u/} koffu
ug]cj:ydf ; a}gkfnLls; fgx? gePsf]ckn\$]
cj:ydf ; /sf/L :t/af6 o:tf]dlzgx? C0f
cgbfgdf pknAw ePdf tL ; fwgsf]koffun]
Psftk}ns}if p}kfbg a95 eg]csf]tkn}ul/aL
lgj/f0df klg 6j}f klG]blvG5 .

lj ifo; lr

slij p'kfbg j'4df u0f:t/ alp

!
↳ nfn k; fb cfrfo{

hjs lj lw4f/f zqhJj Joj:yfkg / o; sf]dxTj

%
↳ xfl /fh lji6

df; 'e08f/0f ubf{Wfg lbg'kg{s/fx?

(
↳ 8f= s?0ff zdf{

8afg ; xg ; Sg]wfgsf]hft Mj 0f; a-

!!
↳ ds0 e; fn

d; f Joj:yfkg

!#
↳ ; Gff /; f0nL

hij fof (Bacteria) / bW cd]b]v 3fts /fh; Dd

!%
↳ dgfn ; j]L

; kmtfsf]syf

↳ bj /fh uf]L

df} d cg; f/sf]df]Lufhf Joj:yfkg / df]sf]j flif\$ hJj grof{

!(
↳ ; df6 tDafx^akn

slkndf nfg]dVo dVo sL/fx? / ltgsf]lgoGqOf

@\$
↳ /z]f l; dv8f

a} f/ -xbL, jx'pkof]Lgub]fnL

@&
↳ r]gfy kf]/h

axpkof]L0:s; sf]dxTj / pGt v]L

@(
↳ c?0f vgn

l6d/ v]L

#\$
↳ dbg sdf/ ;j]L

slif pTkfbg j J4df u0f:t/ alp

☞ nfn kj fb cfrfo

kl7eld

u0f:t/oQmalpsf]pknAwtf:-k0f]n]slif
lj sf; df dxTj k0f{eldsf v]b5 . alp Pp6f
pTkfbgsf]cfw/et ; fduL tyf j zfofut
u0fsf]afx x] h; n]lj leG cfj xj f, v]L
tl/sdf afx >ftx? -dnvfb, l; #f0x afnL
Joj:yfkg_ sf]oyf]rt k0f] dfkfu /fdf]
pTkfbg lbG . slif pTkfbg clej J4sf]nflu
cfj Zos ; fdfuL? dW]u0f:t/lo alp Ps
dxTj k0f{Pj +kdV ; fduL dflgG . aalp
ugfsf]km/E eG]plQmf6}of]alerG, ls
afnL pTkfbgdf dfqf]ds tyf u0f]ds j J4
Nofpg alpsf]cx d\eldsf /xG . lj leG
cg; Gwga6 yxf eP cg; f/ :yfglo v]L
Joj:yfdf kl g c; n alp k0f] ubf}% b]v
@) kltzt ; Dd o; }j J4 Nofpg ; lsG .
j] flgs v]LJoj:yfsf]; fydf c; n alp
k0f] ubf{pGt hfts]k'}pTkfbg Ifdtf
lng ; lsG / pTkfbgdf cemj J4 xg
; S5 .

gkfnf v]BfG afn]sf]alp abNg]b/
xfn !) kltzt dfq b]vG eg]() kltzt
alp k/Dk/fut ?kdf xdf sf]sx?n]cfkn}
v]df 5g6 u/LarfP/ /fv]sf]alpsf]k0f]
u/LcG pTkfbg ub]cfPsf 5g\ o; ksf/sf]
:yfglo jf pGt hfts]alpsf]art ug]
afgLxdf]uf]d] e]sf sf]sx?df a9Lkr]nt
5 . of]klqmf kr]nt eP kl g cJoj:yt,
cj] flgs tl/sfn]5g6 u/Psf]alp ePsf]
l5d]Ldh]sf]thgdf pTkfbg j J4 xg
; s]f]5g . o; f]xgsf]sf/Of ls t oLhftx?n]
sf]sx?sf]cfj Zostf / OR5f klt{ubg}j f
slif k; f/ k4lt kefj sf/L5g . xdf]cj :ydf,
oLbj }sf/Ofn]ubf{sf]s:t/df gof]hfts]
cjndag b/ sd ePsf]:jlsf]k5{. alp
lj sf; sf]lj wf gkfnf pT; fxhgs 5g tklg
lj ut s]L; do]b]v vf; u/Lt/f0]If]df lghL

:t/df alp pTkfbg sDkgL ; xsf/L ; #yf,
s]fs ; dx tyf ; dbfo alp pTkfbg tyf
lj t/Ofdf nfu]sf]x]f ; /sf/Lgsfosf]thgdf
lghL:t/sf]of]bfg a9L/x]f]5 . lbu]slif
lj sf; sf]nflu u0f:t/ alpsf]pknAwtf:-k0f]
j J4 u/Lslif pTkfbgsf]pTkfbg j a9fpg
h?/Lb]vG .

!= alpsf]>ft tyf ju?

alp eGfn]; /If cfj /Ofsf]?kdf af]rh
/ v]Bkbf]sf]; fydf /x]f]hlj t e]f h; n]f0
afnL la?j f kg/f]kfbg ug{k0f] ul/G .
jfg:kts lx; fan]kl/efiff ubf{alp]n]f0{Pp6f
kl/kSj alh c08 -Ovule_ elgG . w]h]alp]n]f0
la?j fsf]; Gfg pTk]Qsf]; fwg eg] kl/efiff
lbPsf 5g\ . b:t}alp Ps cf g]h]lto
-jzfgut_ cl:t] sfod /fVg]tyf cf g]
hlj g ; Af]f ug]; fwg x]. alp hlj t x]
/ /f]f pdg]xg' kb5 . ; a}alp cGg-bfgf
xg ; S5 t/ ; a}cGg jf bfgf alp xg
; Sb} . gkfnf lgdg cg; f/sf alp ju?af6
alp j J4 ug]ul/Psf]5 M

s= khgg alp

khgsn]cf g]f/yb]df pTkfbg u/]sf]
alp]n]f0{khgg alp elgG . of]y]f]kl/d]f0df
pTkfbg ul/G / cfj flz s tyf e]f]ts
b]6sf]af6 zt kltzt g}z4 xG . of]dh
alp pTkfbg ug]sf nflu >ft alpsf]?kdf
k0f] ul/G . of]; j {fw/Ofn]f0{laqm]lj t/Of
x]f . of]alpsf]af]fdf u0f:t/ n]vPsf]
; g]h]f]kx]f]sfuhsf]; s]tkq / khgsn]
x:t]f/ u/]f]xg' kb5 .

v= dh alp

khgg alp j J4 u/LpTkfbg ePsf]alp]n]f0
dh alp elgG . of]alp ; /sf/Lkr]f]sfb]
jf alp k]f]f]s/Of lgsfon]pTkfbgsf nflu

:j ls[t lbPsf]JolQm; 3, ; :yf jf lgsfoaf6 alp lj zif1x?sf]/ybydf p'kfbg ul/G / alp kdf0ls/Of lgsfosf lj zif1x?n]kdf0ft ul/Psf]xG . o:tf alpsf]af/fdf u0f:t/ n]vPsf] ; t'f] sfuhsf] ; s'tkq / afnL lg/Ifsn] x:t'fIf/ u/}sf] x'g' kb5 .

u= kdf0ft kyd k':tfsf]alp

o; k':tfsf]alp dh alpsf]lah j'4 u/L p'kfbg ul/G . of]; /sf/Lk'fd{s'f]JolQm ; 3, ; :yf jf lgsfoaf6 alp kdf0ls/Of lgsfosf]alp lj zif1x?sf]/ybydf p'kfbg ul/G . o:tf alpsf]af/fdf u0f:t/ n]vPsf] lgnf]cIf/ tyf lsgf/df lgnf]k\$LePsf] ; s'tkq /flvPsf]xG .

3= kdf0ft latlo k':tfsf]alp

of]kdf0ft kyd k':tfsf]alp alh j'4af6 kdf0ls/Of lgsfosf]lj zif1x?sf]/ybydf p'kfbg ul/G . o:tf alpsf]af/fdf u0f:t/ n]vPsf]xl/of]cIf/ tyf lsgf/df xl/of]k\$LePsf] ; s'tkq /flvPsf]xG .

a= u0f:t/ p'Ggt alp

of]afnlsf]; r'g k\$Tl'cg?k dh, kdf0ft kyd jf latlo k':tfsf]alp alh j'4df alp p'kfbg klj lw kof]af6 alp p'kfbssf]cf'g} /ybydf p'kfbg u/L; j {he ?kdf v'bf'G p'kfbgsf]nflu kof] tyf lj t/Of ul/G . of] alp'f alp p'kfbss c'k'n]kx'f]/E'sf]; s'tkq nufPsf]xG eg]; s'tkqdf alpsf]u0f:t/ -G'gtd pdf/ z'lst, alpsf]e'f]ts z'4tf kl'tzt, p'kfbg ldt, alpsf]t'f]h c'f]b_ n]vPsf]xG . d'f]y p'N]v't >f' alp'x?sf] th'g'df u0f:t/ p'Ggt alp kof] ubf{a9L p'kfbg xG eg]kg kof] ubf{h'bf alpsf] u0f:t/ x'f; e}p'kfbg sd xG . ctM ; fnj; fnL u0f:t/ p'Ggt alp kof] ug{ ; lsPdf dfq cfzfltt p'kfbg lng ; lsG .

alpsf]u0f:t/ sfod ug\$]nflu alp

j'4 ubf{g'k'fndf k/; l'rt afnL-ds} kdf0ft kyd k':tfsf]alpaf6 u0f:t/ p'Ggt alp p'kfbg ul/G eg]c'olws k/; l'rt afnL? -t/sf/L dh alpaf6 u0f:t/ p'Ggt alp p'kfbg u/Lalpsf]u0f:t/ sfod /f'v]k'f'ng /x'sf]5 . alpsf]pknAwtf a9LePdf :jod ; l'rt afnL-w'g-u'x'f'sf]kdf0ft kyd k':tfsf] alp af6 u0f:t/ p'Ggt alp p'kfbg ul/G eg]alpsf]pknAwtf sd ePdf kdf0ft latlo k':tfsf]alpaf6 ; d't u0f:t/ p'Ggt alp p'kfbg ul/G .

@= j'Of's/ alp

; fdf'otof sg}afnlsf]b0{hft jf b0{ 0'Ga\$ n'f'G'sf]alr'df kh'gg u/f0{lg'sfnPsf] kl'xnf]k':tfsf]alp'nf0{a'Of's/ jf x'f'0'a\$ alp elgG . o; /L kh'gg ul/Psf kl'xnf] k':tfsf]alpaf6 c'f'p'g]af'x? P'sgf; sf b]v'Gg . sl'xn's'f'f'kh'g's'x'n]b0{hft e'Gf a9Lh'f'x? alr'df kh'gg u/f'p/ kl'g x'f'0'a\$ alp l'g's'f'N'5'g\ b0{hft larsf]kh'ggaf6 k'f' x'g]alp nf0{l; u'n s; x'f'0'a\$, t'lg hft alr'sf]kh'ggaf6 k'f' x'g]alp nf0{l'6'kn s; x'f'0'a\$ / r'f/ hft alr'sf]kh'ggaf6 k'f' x'g]alp nf0{ 8an s; x'f'0'a\$ alp elgG . b0{hft e'Gf a9Lh'f'x? alr'df kh'gg u/f0{lg'sfnPsf]kl'xnf]k':t'f' x'f'0'a\$ alpsf]p'kfbg l'f'd't'f' sd xG t'f'kl'g afnL laug]h'f]v'd kl'g sd xG t/ b0{hft alr'af6 kh'gg ul/Psf l; u'n s; alpsf]c'G x'f'0'a\$sf]t'h'g'd'f a9L p'kfbg l'g's'f]; f'y} afnL lalug] h'f]v'd kl'g a9L g} xG .

#= alp kl't:y'f'kg b/ -Seed Replacement Rate_

sh afnL n'f'lg]l'f'g'k'm'df cfjZos kg] alp kl/d'f'0'd'w]u0f:t/ p'Ggt alp / j'Of's/ alp kof] kl/d'f'0'sf]kl't'z't'nf0{to; j'if'sf] alp kl't:y'f'kg b/ -Seed Replacement Rate_ elgG . p'b'f'x/0'sf]nflu g'j'f's'f'f' l'h'N'f'd'f !)) x'\$6/df w'g nuf'0'5 eg]%) s'h'f' alp kl't x'\$6/sf b/n]cfjZos x'g]alp kl/d'f'0'

%)) s#hE xG . uOf:t/ pCgt alp / jOfzs/ alp u/L@)) s#hE/ sifs ckm] ; fo u/L/fv\$flalp #)) s#hE u/Lto; jif{wfg nufPsf]ePdf @)) ÷%)) ×!)) 0\$) kltzt wgsf]alp klt:yfkg b/ ePsf] eG]alerG . o; tYoaG gjfsfG lhNfdf sifsx? cen^) kltzt wfg alp s[fs ckm]; fo u/L/fv\$flalp kofu ub5g eG]alerG . ljsl; t bZsf sifsx? ; fnj; fnL uOf:t/ pCgt alp, jOfzs/ alp kofu ugI xbf tLbZdf zt kltzt alp kl:yfkg b/ /x\$flxG eg]xdf]h:tf]ljsf; fdv bZdf Gg alp kl:yfkg b/ /x\$fl]5 . cf=j= @)^&:^* df kdV vBfG afnlsf]!) kltzt dfq alp klt:yfkg b/ /x\$fl]yof]. vBfG afnlsf] thgdf t/sf/L afnIx?sf] alp kl:yfkg b/ w/]xG .

j]flgsx?sf] egf0{ cg; f/ sDtIdf ; fnj; fnLwfg, uxFafnIdf @% ds}afnIdf ## / t/sf/LafnIdf *) kltzt alp klt:yfkg b/ ePdf o; b/nf0{; Gfjfhgs dflgG . o; tYocg; f/ alp Ifqdf w]}sfo{ug{afSL /x\$fl]5 . o; sf nfu alp j]4sf]; fy)e08f/0f, kzfyg, kofslhE, ahf/Is/0f h:tf sfo{u/L sifsdaf alp klt]sf]hgrtgf clej]4 ugI sfoqnd ; Grfng ePdf dfq / uOf:t/ alpsf]

; j{ hetf tyf clwstd kofu ePdf dfq alp klt:yfkg b/ j]4 eP/ slif pTkfbgdf j]4 e0{vfB ; /Ifdf 7hf]6]f klG]5 .

\$= kdV vBfG afnlsf]alp klt:yfkg b/ tyf pTkbsTj sf]cj:yf

wfg, ds}/ uxFgkfnsl]kdV vBfG afnL ePsf]bZsf]cytGdf ; aGf a9LofhbfG ug]afnLklg xg\ gkfnsl]sh vt]lofb hldgdW]qndz !%, *-%, &^ nfV x\$6/ eGf a9L Ifqkmdf oL afnIx?sf] vt]L ul/G . gkfnsl] ljljw k\$fl/sf] cfj xjf ePtklg d:tf / dgf lhNfx? afx\$ cG ; a}lhNfdf wfg vt]Lul/G eg]ds}/ uxF ; a}lhNfdf vt]Lul/G . ljut cfw zt]AbL eGf w]}; doblv e0/x\$fl]slif kof; x?df oL afnIx?n] cG afnlsf] thgdf a9L kfyldstf kfPtklg pTkbsTj eg]cG dxfbZsf]; fy]l5d\$ldhssf]thgdf lgs} sd /x\$fl]5 . cf=j= @)^&:^* df kdV vBfG afnLwfg, ds}/ uxFvt]Lsh Ifqkmsf] qndz (@, ()=@ / (& kltzt Ifqdf pCgt hftn]9flsPsf]ePtklg uOf:t/ alpsf] klt:yfkg b/ -Seed Replacement Rate_ eg]; /b/ !) kltzt ePsf]b]vG tklg () kltzt alp s[fs ckm]; fo u/L/fv\$fl]alpaG vt]LePsf]b]vG .

tlnsf ! Mwg afnIdf uOf:t/ alpsf]klt:yfkg b/ tyf pTkbsTj

cf=j=	Ifqkm -x	alp b/ -s#hE	cfjZos alp kl/df0f -d]6g	cfkt]alp kl/df0f -d]6g	alp klt:yfkg b/ SRR kltzt	pTkbsTj -d]6g÷x]	s]kmt
@)^\$÷^0%	!%\$(@^@	%)	&&\$^#	\$%!(%=*#	@&&	
@)^%÷^^	!%%((\$)	%)	&&&(&	%)&!	^%!	@(
@)^^÷^&	!\$*!@*(%)	&\$)^\$	^&^*	(=!	@&!	
@)^&÷^*	!\$(^\$&^	%)	&\$*@#	&@)((=^	@(*	

tflnsf @ Mds}afnldf u0f:t/ alpsf]klt:yfkg b/ tyf pTkbsTj

cf=j=	Ifqkm -x‡	alp b/ -s#hE_	cfj Zos alp kl/df0f -d‡ 6g_	cfkt{alp kl/df0f -d‡ 6g_	alp klt:yfkg b/ -SRR_ kltzt	pTkbsTj - d‡ 6g÷x]_	s}kmt
@) ^S÷^0%	* &) !^^	@%	@!&%S	()	\$=%%	@!%	
@) ^%÷^^	* &%\$@*	@%	@! **%	!) \$)	\$=&%	@@	
@) ^^÷^&	* &%^^)	@%	@! * (!	!!\$^=*	%@#	@!!	
@) ^&÷^*	() ^@%#	@%	@@^%	@) (\$=#	(=@\$	@@*	

>ftMalp lahg u0f:t/ lgoG0f sfb,|xl/x/ejg, nlnTk/

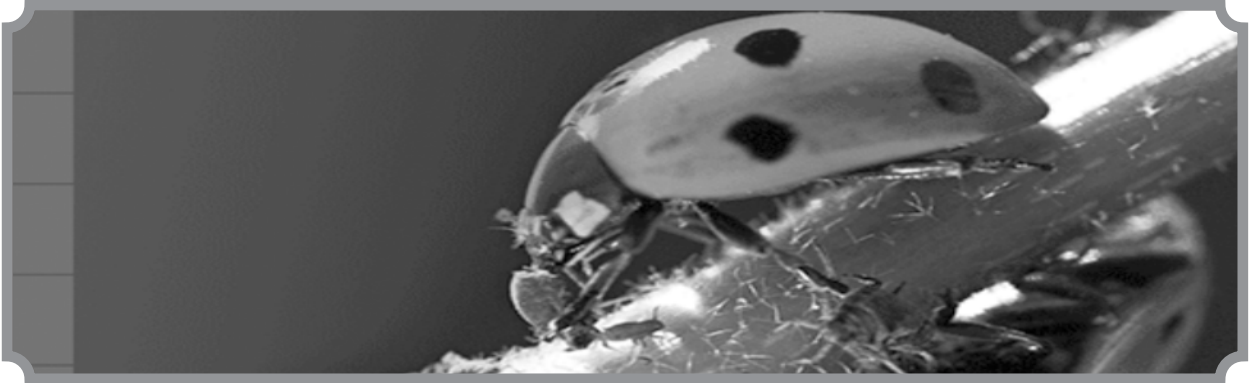
; /sf/LIfqsf]of]bfg %) kltzt ebf sd /x\$]5 eg]lghL:t/sf vf; u/Lt/f0{Ifqdf :yfkt alp lahg s}kgx? / alp pTkbs ; xsf/L; :yf tyf ; dXsf]of]bfg a9LePsf] kf0G . dly lb0Psf]tflnsfa6 alp klt:yfkg b/sf]cj:yf :ki6 blvG h; n]ubf{vfBfg afnlsf]cfziltt ?kdf pTkbsTj j]4 xg ; s\$]5g . l5d\$Ldh's ef/tdf cf} t alp kl:yfkg b/ !% kltzt ebf a9LePsf]kf0G . ; fdf0tof ; a}afnldf alp klt:yfkg b/ j]4 xbf pTkbsTj ; d‡ j]4 ePsf]kf0G . o; af6 u0f:t/ pGt alp klt:yfkg b/ j]4 ug{; lsPdf vfB ; /If j]4 ug{; lsG eG]:ki6 xG .

* nys, alp lahg u0f:t/ lgoG0f sfb,|xl/x/ejgdf j/l/i7 alp lj sf; clws‡ kbdf sfo{t xg‡G .



h'j s lj lwaf/f zqhlj Joj :y'fkg / o; sf]dxTj

☞ x'f] /fh lj i6*



kf7eld

afnL la?j fnf0{bM lb0{u0f:t/ laufg| tyf p'kfbg 36fpg|hlj x?nf0{zqhlj elg5 / oLhlj x?df x'f]gsf/s /f] , sL/f, en'kft, r/f, d', f, z'v\$'L/f cflb kb5g\ olb Ps dflg; n]c'sf{dflg; n]nu'fP'sf]afnL r'f]g| laufg|j f g'f; fg u5{eg|c'fhsf]j } flgs kl/ef'fdd dflg; nf0{klg zqhlj sf]j u'df /flv5 . afnL la?j fnf0{bM lb0{u0f:t/ laufg| tyf p'kfbg 36fpg|zqhlj x?nf0{ldqhlj sf]k'of] u/LJoj :y'fkg ug{t/sfnf0{hlj s lj lw elg5 . oLldqhlj x?df k'f]b'fngs /f] , sL/f, en'kft, r/f, hg'f/ cflb kb5g\ sg}zqhlj sf]; v'ofsf]3g'lj nf0{sd ug{k/hlj LsL/fx?, lzsf/LsL/fx? / ; Id hlj f'ofx?sf]c'wog / k'of]unf0{klg hlj s lj lw elg5 . 5f's/Ldf Ps hlj sf]k'of] u/L af\$ la?j fnf0{bM lbg|c'sf]hlj sf]lgo'q'of ug{lj lwnf0{hlj s lj lw elg5 . hlj s t/s'f'f zqhlj sf]/s'y'd ug{k/hlj LsL/fx?, lzsf/L sL/fx? / ; Idhlj f'ofx?sf]k'of] ul/5 . lzsf/L sL/f eg\$]To:tf]sL/f x'f] h; n]c'k'f'af'f'g'sf]nflu Ps e'bf a9Lk'f]f'sf] lzsf/ ub5 . hg hlj n]c'k'f'af'f'g'sf]nflu Pp6}k'f]f'ldf e/ kb5 To; nf0{k/hlj L elg5 . ; du'df kl/hlj Le'bf lzsf/LsL/fx? a9L n'efbos x'Gg\lsgsL log'x?n]w}} x'f]gsf/s sL/fx?nf0{v'f]b'5g\ ; a}h; f]

sL/sf]zqx? x'Gg\h; n]sL/sf]k'f]f]6 / j'f'nf0{; ldt ub5g\ hlj s lj lwaf/f zqhlj sf] Jo:y'fkg k'f]s'ts tyf s'qd t/s'faf6 ul/5 . k'f]s'ts t/s'f'df k'f]t c'k'f]jul//x'f] x'G eg|s'qd t/s'f'df dflg; n]lj le'G t/s'f c'kg'f0{/x'f] x'Gg\ z?df of]lj lw To't k'f]j s/L ge'P't'f'klg xfn c'fP/ j'f't'fj/Of k'f]i'f'f'sf]; d:of c'fP kl5 w}}s'f'f's tyf s'f'f lj 1x? o; t'k'f]c'f's'l'f'f' e'P'sf 5g\ of]lj lw ; lhn'f]tyf lj i'f'f'b'l'sf]c'f]j Zost'f g'kg{tyf lj i'f'f'b'l/xt e'P's'f]c'f'hsn s'qd t/s'faf6 Joj ; flos ?kdf ldqhlj sf]p'k'f'bg u/L Joj:y'fkg ug{s'f'of{t'lj}kdf cu'f'l8 a9b} u0{x'f]5 .

ha ; f'of's'f]lj sf; x'f]u'of]ta dflg; n] v't'k'f'tLz? ug{yfn]. la:tf}/hg; v'of a9b} u'of]/ h'w'nLc'j:y'faf6 k/Dk/fut v't'Lk'f]f'nL c'j'nDj g ug{yfn]. To; kl5 la:tf/}elddf dflg; s'f]r'f'k a9g yfn'kl5 v't'l'of]b h'luf l; ldt x'f]u'of]/ l; ldt h'lufaf6 a9b'f] hg; v'ofnf0{v'f'f'f'g k'v'ofpg' kg{af'w'tf ;/s'f/nf0{x'g yfn'f] / c'f'w'gs tyf p'G't v't'Lk'f]f'n'sf]lj sf; e'of]. c'f'w'gs tyf p'G't v't'Lk'f]f'n'sf]lj sf; ; f'f} s'l'f'df Joj ; fols/Of x'g yfn'f]. To; kl5 p'G't tyf j'Of'z's/ h'f't's'f]k'of] , /f; folgs dn tyf lj i'f'f'b'l'sf]k'of] , lj le'G x'f]d'f tyf c'6

/; fogx?sf]k'ofu tyf v'tL ug{dlzgsf] k'ofu xg y'nbf]. s'xL; do cfwlgs t/s'f'af6 v'tLkftLxb}uof]/ s'f'f'sx?n]/fd]p'rkfbg lng ; km eP . t/ la:tf/}c'tolws p'rkfbg lng]n'f'edf c'w'w'w/f; folgs dn / lj'iffb]sf] k'ofu tyf /; fogsf]k'ofu'af6 36bf]slif p'rkfbg -#%J ; Dd_ n'ut j'f, sd u'f:t/sf] slif p'kh, d'f'f'sf]p'rkfb's]j x'f; , x'f'g'sf/s h'lj s'f]lj if k'rf'p'g]l'fd't'f'sf]lj s'f; , ldq'h]j s'f] lj g'fz ; fy}hn, :yn / j'fo' k'b'if'of tyf d'f'g; s'f]j:f.Yodf g'sf/f'ld's c; / tyf 0's'f] :6ddf c; / k/L; D'k'f'f'h'ut'df g; d:of k'bf e'of]/ s'f]lj lj 1x?n]of]; d:of'sf]; d'f'w'g ug{x'g tyf u'd'eL/ l'r'G'g d'g'g ug{y'fn] / l'g'is'if{l'g's'f'ng ; km eP . ca ; r'f/d'f slif p'rkfbg ubf{c'tolws p'rkfbg d'f'q lng k'lg p'lr't x'f'g / h'y'f'e'f]L/f; folgs dn tyf lj'iffb]L'k'lg k'ofu ug{x'f'g. o; s'f]lj s'N'k'df k's]t'n'f'0{c; / g'k'g]u/L'l'bu'f]slif lj s'f; ug]/ z'q'h]j Joj:y'f'kg ubf{/f; folgs lj l'w'sf] ; s'f' c? lj's'N'k k'lg k'ofu ug{k'5{e'G]d'f'c'ot'f c'uf'f'8 c'f'of]/ lj'le'G lj l'w'x?sf]k'ofu x'g y'n'bf]. z'q'h]j Joj:y'f'kg ubf{c'k'g'f'p'g ; l's'g] lj'le'G lj l'w'x?d'f s'f]f'ut, e'f't's, o'f'f'q's, s'f'g'g'L, h'lj's, /f; folgs, P's'l's't c'f'lb 5'g\ c'h's'n ; s]Dd lj'iffb]sf]; s'f' c'G lj's'N'x?sf]-h'lj's, P's'l's't c'f'lb_ k'ofu ul/G . h'lj's lj l'w'j'f'6 z'q'h]j Joj:y'f'kg ubf{x'g]k'f'f'0'bf tyf a'k'f'f'0'bf? l'g'd'g c'g; / /x'f'f 5'g\M

k'f'f'0'bf

- v :j:y afnLp'rkfbg
- v ldq'h]j s'f]; A'f'f'0'
- v lj'iffb]L tyf c'j z'f /l'x't s'f]f p'rkfbg
- v sd n'f'ut
- v u'f:t/l'o p'rkfbg
- v /f'h'uf/l'sf]>h'g'f
- v :y'f'g'l'o ; f't ; f'w'g'sf]p'k'ofu
- v a'9L'd'N'o k'f'f' ug{; l's'g]
- v s'l/f'n]lj'iffb]L k'rf'p'g]l'fd't'f'df x'f;
- v l'bu'f]J'oj:y'f'kg lj l'w
- v j'f't'f] /o'f'd'g'L

a'k'f'f'0'bf

- v l'9'n'f]c; / b'l'v'g]
- v z?d'f e'f'e'n'f'n'f]/ d'x'uf]
- v p'lr't t'f'k'q'm / c'f'b't'f c'f]Z'os
- v r's'f]3'f'd ; W'f l'f'q'd'f s'd c; / w]/f; folgs lj'iffb]L k'ofu e'P's'f]l'f'q'd'f s'd k'e'f]s'f]/t'f
- v v'f; z'q'h]j s'f]n'f'lu v'f; ldq'h]j c'f]Z'os
- v a'9L; l'k tyf lj 1't'f c'f]Z'os
- v a'h'f'd'f ; x'h}p'k'n'Aw x'g s'l'7'g

t'ns'f] 6'h'and'f s'g ldq'h]j n] s'g z'q'h]j n'f'0{l'g'o'G'q'0'f u'5{e'lg b'y'f'0'P's'f] 5 .

q'm #	z'q'h]j	ldq'h]j	s'k'm't
!	n'f'x'L	:q'L:j e'f]s'f v'k'6]	
@	w'f'g's'f]k't]/f]	a'f'3]v'k'6]	
#	u'j/f'f's'f]n'f'e'f'}	6'f'0's'f]u'f'd'f	a'f?n'f
\$	v'k'6's'f]n'f'e'f'}	Metarhizium	9; L
%	v'k'6's'f]n'f'e'f'}	Beauveria	9; L

^	nfxL ; †f]lemf	<i>Verticellium</i>	9; L
&	ktnIsf]nfe{	B.T.	JofS6/]lof
*	ktnL/ vk6\$]nfe{	NPV	ef0/;
(ktnIsf]nfe{	uf0g]sL/f	lzsf/L
!)	ktnL, lem, vk6] nfxL, wld/f	dfs/f	lzsf/L
!!	cFvf krf]j f	; j eIfL	
!@	nfxL	sf(5Lcfn]	
!#	ktnL ; dXsf]nfe{ r'; fxf / df6f]f a:g]sL/fx?	s/]lj 8 lj 6n	
!\$	89j f, agf{slxg]h/f slxg]	6f0sf]df{	9; L
!%	vk6\$]nfe{	<i>Steriner gdf6f8</i>	lgdf68
!^	wfgsf]d?j f, ufhe\$fsf] cf0nfpq]/fn cfb	<i>Pseudomonas</i>	JofS6/]lof
!&	d; f	la/fnf]	hgj /
!*	; k{	u?8	df5f kfy/]sf]; k\$]nflu
!(:ofn nufot c6 hxnLhgj /	af3, l; x	hgj /

tnsf]6]andf sg ldqhlj n]sg zqhlj nf0{Joj :yfkq u5{egL k;t t ul/Psf]5 .

English name	ldqhlj	zqhlj
Ladybird Beetle	:qL :j efj sf vk6]-@,&(/ !# yfn]	sTh,] ldnj u, ; †f]lemf
Praying Mantid	cFvf krf]j f	w})xflgsf/s sL/]sf]lzsf/
Ladybird Beetle	e\$]nof	s6gLszg sTh]sL/f
Red Ant	/ftf]sldnf	sL/]sf]nfe,] vk6]/ r'; fxf
Hover Flies	3dSs8 lemff	sTh,] nfxL/ ldnj u
Dragon & Damsel fly	uf0g]sL/f	Nfdv\$]tyf c6 sL/]sf]nfe]
Ground Beetle	hldgdf /xg]vk6]	krf]LsL/f, krf] sf6g]sL/f / zv\$]L/f

Rove Beetles	lg?Z?o e?of ug{vk6]	; h; h]/ lrK\$L/f / c6 sL/fsf]km / nfe]
Checkerred Beetles	/uLruLvk6]	; tL\$]kft vfg]vk6] sf7 5\$g]vk6\$]nfe]
Fire flies	hgsLL	Zfv\$L/f / lrK\$L/f
Assassin Bugs	r'; fxf sL/f	ljleG sL/f
Wasps	af?nf	ktnl\$]nfe]
Braconids	dl; gf af?nf	KfyL af?nfn]ktnl, vk6]lemf cllbsf]nfe\$] zl// leq jf j flx/ km kf/Lk/hlj lsf]sfd u5{
Ichneumonids	„	ktnl\$]nfe]/ s/f]lemf
Chalcids	„	ktnl, nfxL, ldnlj u, vk6]/ lem f
Tachinid Flies	„	xflgsf/s sL/fsf]km

; \$f cf-f kf5{. ; du?f h] s lj lw c6 lj lwe?f pkoQmj ftj /of d?L lj iffbL/xt / lbuflj lw xf]. o; af6 zqhlj sf]k?fj sf/L Joj:yfkg ug{; s?f sd nfutdf p?kfbg tyf p?kbslj j?4 e0{s[fsx?n]cfd?fgL j?4 u/Lhljg:t/ ; w/ ug{; ls6 . o; sf] nflu kof? cg' Gwg / lj sf; tyf s[fsnf0{ cgbfg tyf ; xnot / s[fsf]kxF xg] Joj:yf ldnfpg' kb5 .

; xsf/LdGqno, s?if Joj ; fo kj 4g tyf tYofI dxzfvi, l; xb/jf/, sf7df08f}.

s?if adf; s klqs, aif{S&eb|cfZjg @)^& cs #, s?if ; r'gf tyf ; r/ s?b, xl/x/ejg .

* nys, lhNf s?if lj sf; sfofo, afhEdf j1/i7 s?if lj sf; clws? kbdf sfo{t xgx6 .

; Gb{; fduL

Gofkfg] krdG|k; fb, @)%, afnL la?j sf zqx? / ltgsf]/f?yfd .

t/sf/Lv?Lklj lw, @)^*, s?if tyf

df; ' e08f/Of ubf{ Wfg lbg' kg{ s'/fx?

8f= s?0f zdf

df; ' dflg; sf]nflu cfjZos kzhG
kfbgsg]dVo >ft xfl. df; df /x\$fl]jleG
kfb6s tTjx?sf sf/Of g}o; df ; lhn} f
hlj fOf, lj iffOf, 9; L, ls6fOf cflbnfOf{km6fpgsf
nflu tTjx? kfOf]ePsf]of]/fdff f g/fv\$fl
cj:yfdf t?G}laulg hfG . df; sf nflu
aw ul/g]kz'sf] ; DaGwdf aw u/kl5
e08f/Of]v pkefOf Dd gkuGh; Dd ljleG
kfOf]fx?df o; df ; s'dOf xg]; Defj gf xg]
ePsf]o; df kl/jtg cfpq gfbgsf nflu
df; ' p'kfbnsn]w}g}Wfg lbg' kg{xG .

df; df xg]afXo ; qndOf ljleG sf/Of?
h:t}df6f] whf] krfk] kfgL, aw u/\$}kz'sf]
dndqaf6 ; qndOf, df; 'sf6df/ ug/ a'rlavg
ug{JolQnsf]kzfzfs, xftsf]; /; krfOf df; '
sf6g]crfgf] df; ' cf] f/k; f/ / a'rlavg
ubf{kofu ul/g]ef]s'f cflbaf6 xG .

df; sf]cfGt/s ; s'dOf aw ul/g]kz'sf]
z//df /x\$fl hlj fOf lj iffOf, 9; L/ k/hlj lx?
cflb sf/Ofaf6 xG . df; 'Pp6f Psbd}l56f]
laug, ; 8g]jf cvfB xg]vfBj:t'xf]. lsgsL
df; hfOf; fw/Of tksd'df /Vbf cfwf 306f
leq g}laug z? ub\$. To; kl5 o; df /x\$fl
hlj fOf, lj iffOf, 9; L/ cG jftfj/Of tTjx?sf
sf/Ofaf6 ; s'dOf e0{To; sf]/u, uw, cfs[L
/ :j bdf kl/jtg xg hfG / df; 'slxg
yfn5 jf To; kl5 cfpq]kl/jtg'nfOf{df; '
slxg]cj:yf elgG . df; 'slxg jf laug
yfnkl5 To; df /x\$fl cuflgs kbfx? h:t}
sfaf6, kfbg, af] f]njOf cflb; f ljleG
k\$fl/sf hlj fOf? h:t}df]s';, :6f]s';,
NofS6f]; n; , :6krfOf]s';, Snl:6l8od,
:o8f]lfg; , Of]hfOf{cflbn]cfqndOf u/L
ljleG k\$fl/sf]/f; folgs kbfx'f kl/jtg
u/LbGg\ o; sf]km:j?k df; 'af6 g/fdf]
uGw cfpq]ntSs kg]/ g/d xg hfG .
vf; u/Ldf; hfOf{l56}laug]vfB j:t'sf]

?kdf lnOf lsgsLplrt tksd lagf o; nfOf
a9ldf cfwf 306f eOf a9Lsf]fsf]tksd'df
afix/ /Vbf laug z? xG . df; 'laug]
k\$bnfOf{g}df; 'slxg]jf ; 8g]elgG .
df; df sg}k\$fl/sf]hlj fOf jf 9; lsf]; qndOf
gePtklg To; df /x\$flPs k\$fl/sf]Of]af6
slx ; doleq g}df; 'cflb]laug jf slxg
yfn5 .

ljleG k\$fl/sf hlj fOf? ljleG tksd'df
dfq gi6 ug{; lsG . Pp6}tksd / Ps}
k\$fl/sf]hlj fOf gi6 ug{k\$ofaf6 ; a}k\$fl/sf
hlj fOf gi6 xbgg\ sg}hlj fOf) ; N o; df
gi6 xGg\ eg]sg}hlj fOf*o ; N o; df j
xGg\ df; df afix/L tksd / cftf a9L
ePdf 9; lsf]; s'dOf xg]; Defj gf a9L
xG . kfo u/Ldf; df kfOf]9; lx? xlgf/s
xfgg\ t/ loglx?n]hlj fOf]sf]df; df xg]
; s'dOfnfOf{tj]ug{d2t k'vfp5g\ df; sf]
; fo jf e08f/Of ubf{plrt t'kqnd /
e]Gn]gsf]plrt Joj:yf ePg eg]9; lsf]
; qndOf t]j|xg hfG .

hlj fOf?dW]klg ; fndf]hf / SoflkrOf]
AofS6]lofsf k'htlx?af6 ; s'dOf ePdf oL
hlj fOf?sf] ; s'dOf ePsf]df; ' ; jgsf]
sf/Ofaf6 dflg; df k\$ bVg] afGf xg] k\$
kng] tf/Gf/ kvfnf nlg] plrt ; dodf
pkrf/ xg g; s]dflg; sf]dTo' klg xg
; Sb5 . dly pN]vt hlj fOf]sf]df; df kjz
ePsf]sf/Of / l'gla6 p'kG ePsf /f; folgs
kbfx'f oLljleG k\$fl/sf nlfOf? dflg; df
b]vG .

gkn ; /sf/n]kz'awzfnf tyf df; '
hff Pg, @)%^ kl/t u/Lnfu'u/t'klg xdf]
b'zdf kz'aw ug]awzfnf? kof' g'xg'
dxfgu/kfnsf, pkdxfgu/kfnsf tyf
gu/kfnsf?df kz'lrIsT; s'f]b/aGLgxg'

cfib sf/0fn]:j:Yo df; 'e08f/0fdf ; d:of
 blvPsf]5 . c6 bzx?df df; 'hfF ; DaGwL
 sfo{gu/kfnsfsf]sfo{f} leq kb5 . To; h]
 ; f]; DaGwLj 1sf]Joj :yf klg u/\$f]xG5 .
 df; 'lg/llfs xgsf nflu kz'lrst; f ; DaGwdf
 sDtdf klg :gfts kf; u/\$f]xg' kb5 . t/
 of] ; DaGwdf g ; /sf/nf0{ rf; f] 5, g
 pkefQrnf0{g}. To; sf/0fn]ubf{gkfnstf
 7hf 7hf tf/xf]hx? nufot s+Pkm; Ln]
 df; 'afx/af6 cfoft u/L/fv\$ 5g\ x/\$
 df; 'laqnf?sf]k; ndf kz'aw ul; skl5
 df; 'e08f/0f u/L/fvgsf nflu l8k lk]hsf]
 Joj:yf ul/Psf]xg' kb5 . nfd]; do; Dd

df; 'e08f/0f ug{kglcj:yfdf sDtdf klg
 df0g; @) l8ulsf]l8k lk]hdf lk]h ug{kgl
 xG5 . df; 'sf6sf]cfwf 306f leqdf g}df; '
 e08f/0f ug{kglxG5 ,sgsL df; 'sf6; skl5
 t?G laug jf slxg z? xG5 .

gkndf df; 'sf]nflu P6 ag]klg nfu'
 xg g; Sg' / lj]w sf/0fn]ubf{:j R5 df; 'sf]
 Joj:yf gePsf]sf/0fn]ubf{g}lj Zj vB
 ; u7gsf]; xofudf !# s/f8sf]nfutdf
 gkfnstf]lj leG :yfgx?df * j6f 7hf kz'aw
 ug]awzfnf :ykgfsf nflu sfo{yfngL
 e0{s\$]5 .

tfnsf ! Mj leG ksf/sf]tksqddf df; 'sf]cj:yf

l; g+	tksqd	vfg of]b
!	!) ;]	vfg ; /lft
@	^) ;]	^ lbg ; /lft
#	@) ;]	sk 306fdf lalug
\$!*) ;]	^ dlxgf; Dd ; /lft
%	#) ;]	!) blv !@ dlxgf ; /lft

* nys, skl5 kz' /fu cG zof kofuzfnf lqk/Zj /df j]i7 kz'lrst; s kbdf sfo{t
 xgxG5 .



8afg ; xg ; Sg]wfgsf]hft Mj Of{; a - !

dsb e; fn*

cGt/fi60 wfg cg; Gwfg ; yf 0{In] ef/tsf]pl8; f eG]7fpFf]:yfgl0 wfgsf] hft Pkmcf/=#-P= af6 nfd]cj lwsf]8afg ; xg ; Sg]; a-! hlg krlnt :j Of{hftdf kjz u/fof]. o; /L:j Of{; a-! hftsf]hGd eof]. o; kZrft\ef/t / gkfnsf ljleG 7fpF?df o; sf]kl/If0x? ; rfng ul/P . gkfndf :j Of{; a-! hft xfn; fn}pGdf]rt klg e0; s\$]5 / of]hft clxn]8afgu:t :yfgx?df la:tf/}knb}5 . oLbj}hftx?sf 8afg ; xg ; Sg]lfdtf / af]nsf]/E afx\$ c6 u0x? ; dfg 5g\ :j Of{sf]af]nsf]/E ; gfh]xG eg]; a- ! af]nsf]/E k/fn] xG . olb \$-% lbgeGf w}kfgldf 8Aof]eg] :j Of{hftsf]wfg k/}; vfk xG . t/ :j Of{ ; a-! hftsf]wfg olb !S-!& lbg; Dd klg kfgldf k/}8Aof]/ ttkZrft kfgLolb lgsf; eof]eg]la?jft k/}d/\$]xG tyflk ; a-! hlg]sf]/Of km]LknfP/ cfpF / kln]eGf 7hf]ufh xfn5 .

hLufsf]5gf6

of]hft sd prf0{ePsf]dWd dlmnf] hLufx?sf]nflu pkoQmxG . af\$sf]prf0{ sd xg]ePsfm]@% ; #d=eGf a9Lprf0sf] kfgL nuftf/ @) lbgeGf nfd]; do; Dd hld/xg]hLufx? of]hftsf]nflu pkoQm xbfgg\

vLug]t/Isf

of]hft agf{; fg{/ 5?jf bj }klj lwaf6 ug{; lsG .

alp 5g{; do Mh]7 - ciff9

agf{/f]g]; do M@% - #) lbg]sf]agf{

agf{/f]g]b/LMnf0g blv nf0g @) ; #ld / ufh blv ufh !% ; #d .

olb l9nf]/fkf0 ug{k]g]cj:yfdf nf0gb]v nf0g klg !% ; #ld g}ldnfp]g' kb5 .

alp pkrf/

/f]u:t :yfgx?df alp 5geGf cufl8 ! ufd sfag8flhdn]! s#h= alp pkrf/ ug{k]b5 .

alpb/

nf0gdf 5g{x]f]eg]^(^)-&) s#h= alp klt x\$6/ nfb5 . 5?jf klj lwsf]nflu *) s#h= klt x\$6/ nfb5 . agf{; fg]klj lwsf] nflu #)-#% s#h= alp klt x\$6/ nfb5, o; df klt ju{ld=hLufdf #-S) ufh xg' kb5 .

dnvfb Joj:yfkg

g; {L Aof8 tyf hLuf tof/Lubfv]/Lc6 hftx?nf0{h:t}u/L k]Efl/s dn kofu ug{k]b5 .

/f; folgs dnsf]xsdf gf06fhg, kmkrf]; / kf\$; qmlz M*)M)M) s#h= klt x\$6/sf b/n]kofu ug{k]b5 . Ps ltxf0{ gf06fhg / ^mkrf]; tyf kf\$; sf]k/}dfqf hLuf tof/Lubfv]/Lkofu ug{k]b5 . csf] Ps ltxf0{gf06fhg agf{; f/\$]S% lbgkl5 / af\$LPs ltxf0{wfg kf\$fp]g]ahfd] kofu ug{k]b5 . o; afx\$ hLuf tof/Lubfv]/L@% s#h= klt x\$6/sf b/n]lhf klg kofu ug{k]b5 . af9L cfp/ kfgL lgsf; e0{ s\$] cj:yfdf @) s#h= gf06fhg klt x\$6/sf b/n]kofu ug{k]b5 .

c6 Joj:yfkg

of]hft pkoQmxg]:yfgdf enf/kftsf] ; d:of Gog xG . l; kmf/; ul/P adflhd dnvfb Joj:yfkg u/\$]v08df /f] tyf

sL/fsf]; d:of vf; }kb\$. tyfkL c6 sXL
; d:of cf0{k/df :j Of{h:t}u/L o; sf
Joj:yfkg ug{; lsG .

pTkfbg

km km\$#) lbg kZrft\ha *% kltzt
bfgfx? k/fn] /Esf] ePkl5 wfg sf6g'
kb\$. sf6] bffu/] /dff] F 3ddf ; sfp/
e08f/Of ug{kb\$. alp pTkfbgsf]nflu vtL
ug{xf]eg] km kmgeOf klxn] / km
km; skl5 ahftx? x6f0{; dfgtf sfod
ug{kb\$. ahft x6fpfv/ prf0{ la?j fsf]
/E, km km]; do, afnsf]lsl; d, bfgfsf]
cfsf/ tyf /E cflbsf]cfw/df 5gf\$ u/L
x6fpg'kb\$. afnLsf6; skl5 tTsn); sfp/
; kmu/L5\$) ebf] afnLsf]gfd tyf pTkfbg
jif{pNy u/Lxfj f gl5g]u/L; Wf tyf
; km 7f]df e08f/Of u/L/vg'kb\$. ; fdfc
tyf 8afgsf]; d:of gcfPsf]cj:yfdf :j Of{
; a-! sf]pTkfbg :j Of{h:t}\$-%& d\$6g
klt x\$6/ xg]ub\$. 8afgsf]; d:of cfPsf]
cj:yfdf 8afgsf]cj lw tyf prf0{pkoQm
ePdf :j Of{; a-! sf]pTkfbg :j Of{eOf
!-@ d\$6g klt x\$6/sf]b/n]j 4 xG . #S
lbgf]8afgsf]cj:yfdf klG :j Of{; a-! sf]

pTkfbg :j Of{eOf)-%! d\$6g klt x\$6/sf
b/n]j 4 xG . :j Of{hftnf0{:j Of{; a ! n]
klt:yfkg dfq}u/] klG c6 nfut vrdf
j 4 gu/L; fdfc Joj :yfkg ubf{klt x\$6/
? %))) blv ? @%))) ; Dd yk cflbfgL
lng ; lsg]lgisif{gkfn, ef/t / aunnbzd
laut b0j ifdf ul/Psf cg! Gwfx?n]lgsfn\$
5g\

cgkoQmf

:j Of{; a-! 5f]cj lwsf]8afgsf]; d:ofsf]
; dfwfg dfq}xf]. &-!& lbgf]8afg dfq
o; n]; xg ; Sb5 . of]eOf a9L cj lwsf]
tyf @% ; dL eOf a9L prf0sf]nuftf/
8afgsf]; d:of 5 eg]of]hftsf]vtLug{
pkoQmf .

pldPsf]alpdf of]; a-! hlgN]sfd ug{
; Sb\$. g; {Laf8df cyj f 5?j f vtLu/Psf]
cj:yfdf alp 8afgdf k/df of]; a-! hlgN]
sfd ug{; Sb\$.

* nys, lhNf slf lj sf; sf0fo, enkdf
afnL lj sf; clws t kbd sf0t
xgxG .



d' f Joj :yfkq

☞ ; G'fif /; fOnL*



d' f d'f; sf]7hf]zq' xf]. o; n]6ff},
sft/] , krf/ u/] , /fu knfP/ , vfBj:tdf
ld; fj6 u/] jf v'P/ d'f; nfo{bM lb0/x\$]f
xG . lj ifz'tMe08f/Ofdf /flvPsf] cG
vf0lbP/ d' f n] ls; fgnf0{x}fg u/\$]f
xG . o; n] j flif\$!% b|v @ kltzt
e08f/Ofdf /flvPsf] cG Iflt ul//x\$]f
xG . d' f aff6 aRg ; se/ d' f n'fg lbg
x'g . o; sf]nflu lj ifz ; /; knf0f W'fg
k'v'fg' kb\$. d' f nfo{dgkg]j ftj /Of > h'g
ug{x'g . v'fg\$ /fx' d' f n] e'g] 7fp'f
hyefjL /fv' x'g .

d' f nfo{x'fLk'}]lgoG'Of ug{; S'g'f /
o; nfo{ Iflt k'v'fg g; Sg] eg] ag'fg
; lsG . d' f Joj :yfkgsf]nflu sg}Pp6f
lj lw dfq k'fj sf/Lgxg ; S5 . To; n] d' f
Joj :yfkq ug{Ps}k6s w}}lj lw ckg'fg
; lsG . 3/ , u'f'fd leq afx/ / j/k/ ; knf
/fv' kb\$ / /5'fg, knf/ kn'g] 7fp'f
knf/x' ; do-; dodf h'df u/L h'nf'g'
kb\$. u'f'fd j/k/ em'kft-?v /fv' x'g
/ 3/-u'f'fd /f'6 k'kn' ug'kb\$. d' f nfo{
dgkg]v'fg v]df em'f0{d' f lx8g]af6'f
/flv'bg' kb\$. Ps k6s d' f k/kl5 v']
; knf u/Lkn' /flv'bg' kb\$.

lj iffbLk'of u/] klq d' f sf]Joj :yfkq
ug{; lsG, t/ of]k'f ; d'wfg x'fg . cG
lj lwsf]b'f'f'f o; af/] /fd] lfg e'Pd' of]
; :tf] ; lhnf] / k'fj sf/Lkg{c'f' . h'f
knf]knf08, jf/kn'g, /f'f'kg h:tf laiffL
k'of u/L d' f Joj :yfkq ug{; lsG .
d'nf'f'og :k]u/\$]f]7fp'f; nfo{dg kgk]
x'f e08f/d' k'}^oldu] g ug'f]sL/sf]
; fy-; fy} d' f klq lgoG'Of xG .

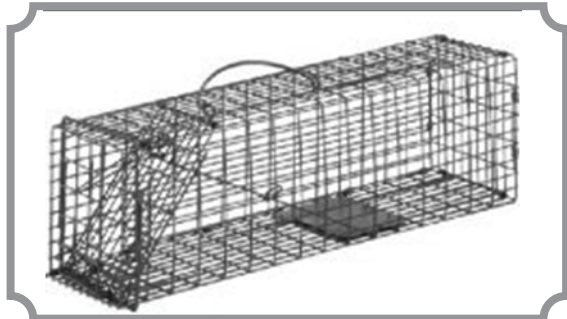
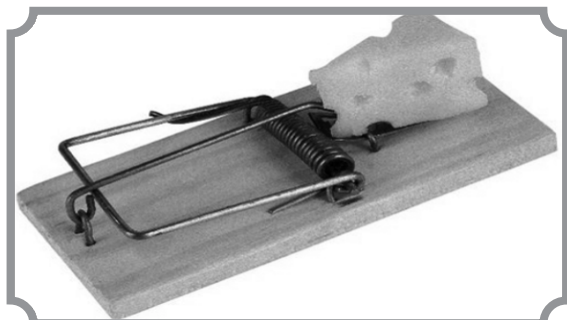
lj iffbLs; /Lk'of ug{t <

lj iffbLk'of u/Ld' f d'fgsf]nflu d' f nfo{
lj iffbL oQmr'f v] fp'g' kb\$. ; j'kyd t
d' f lx8g]af6'f]k'Qf nuf'g h?/LxG . #
/ft ; Dd d' f lx8g]af6'f]j'l/kl/ lj iffbL
gld; f0{rf/f /flv'bg]. r'fy] /ftdf aN
lj iffbLld; f0{rf/f /fv'g]. rf/f ag'f'f !
efu lj iffbLdf %) efu lk'7f]j'f eft jf r'fdn
ld; f'P/ kn' % efu lrgLj'f ; W/ / c'ns't
t'j jf l'3p ld; fp'g]. To; kl5 @ b|v @%
ufdsf]8Nf]ag'f0{d' f lx8g]af6'f] /flv'bg'
kb\$. clg k'f'f]lbg'df d/\$]f]d' f / af'fL
/x\$]f]lj iffbL oQmr'f/a6h] v'N'f]v'gL
k/ll'bg' kb\$. lj iffbL oQmr'f v'P/ d/\$]f]
d' f cG h'lj n]v'P'f ; f]h'lj df klq lj iffbL]
c; / ug{S5 .

PlGsf]hGsf]køf]h u/] klg d'; f Joj :yfkG ug{; lsG . PlGsf]hG kfgL jf vfgdf ld; fp/ ug{; lsG . o; sf]køf]h sDldf Ps xkf; Dd ul//xg' kb\$. ! efu lj iffbldf ! (efu lk7f]j f vfgf ld; f0{d'; f lx8g]7fpøf /flvlg]. x/\$ lbg lj iffbL/fv\$]f]7fpøf x/L cfjZostf cg'; f/ yb}hfg' kb\$. \$-% lbg lbgxHj iffbL vfp\$]cgkftdf d/\$]f]d'; f vfh] uf8g' kb\$.

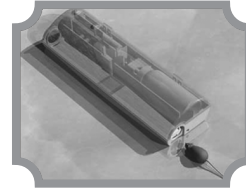
d'; f dfg{kf; f]

lj iffbL afx\$ clxn]d'; f Joj :yfkgsf] nflu eg] ahf/df lj leG lsl; dsf]kf; f] kf0g ym\$]5 . ; fw/Of d'; f dfg{kf; f]w} k'ngdf cfPsf]5 . o; kf; f]f d'; fmf0{ n]f]ofpgsf]nflu eg] vfgf /Vg]Pp6f 7fpF agf0Psf]xG . To; df c8s\$]vfgf d'; f] vfg vfhgf; fy To]kf; f]cfknaG xG . To:t}lrklrk]kf; f\$]køf]h]klg d'; fmf0{ ; dfg ; lsG . d'; f lx8g]af6f]f lrklrk] kbfi{/flvlg]/ d'; f To]af6f]k] lx8g v]bf cfk]kf; f]f k/LToxL6ff G . o; /L ; dftPsf]d'; fmf0{sxIF6f9f glbdf nu/ kmNg cyjif df/] kmNg ; lsG .



lrq Md'; f ; dfg]; fFf]- ; fw/Of kf; f]

clxn]sxL zx/x; df d'; f lgoG0fsf] nflu eg] On\$6ffgs kf; f]/ cN6; flgs kf; f] kf0g ym\$]5 .



lrqM On\$6ffgs kf; f]



lrqMcN6; flgs kf

v]af/lsf] d'; f s; /L

d'; f]e0f/df dfq geuv]av]av] ; av cfqmdOf u/Lls; fgx; nf0{bM lbPsf\$. v]af/ldf k] fn kf/Lh/f v]0bP/ la?j fsf] lj sf; cj?c u/\$]5 . 5/\$]alp g}v]0bgn] ls; fgx; nf0{w} 3f6f nfu\$]5 . To; h] v]af/lsf]d'; f klg lgoG0f ug{h?/L5 .

; jkyd v]df u0{d'; fsf]k]fnx; vfh] sfuh jf lxnfh]6fFLlbg]/ e]nkN6 uP/ xg]. hg k] fn v]nPsf]5 To; d]y tof/ ul/Psf]lj iffbLoQmr/f /Vg]. k]b\$ k] fndf % b]v !) ufd hlt rf/f /Vg]/ e]nkN6 d/\$]d'; f / afSL/x\$]f]lj iffbL oQmr/f/ afh] v]N6]vgLk'/lbg].

olb v]af/L 3/eGf 6f9f 5 eg]d'; f lgoG0f ug{PNdlgod kmkrf08 -; Nkm, km]km]d, Sjlskm cfb_ klg køf]h ug{ ; lsG . hg k] fn lxnfh]6f]kl5 klg vfh\$]5, To; df cfw jf Ps rSsl; Dd w]ffg] rSsl/fvLk] fn 6fnlbg]. o; /Lk] fn 6fn] kl5 lj iffn' 'bf; leq-leq}uP/ d'; fmf0{ df5{.

* n]ys, CIMMYT /kd/df sfo{t xgxG .

हजि फो (Bacteria) / बैक्टीरिया 3 फस / फल ; ड

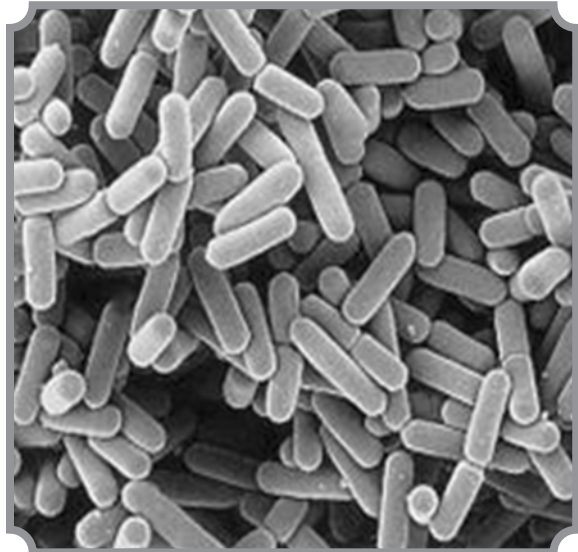
दृष्टि ; जल*

हजाह Leeuwen Hoek न]कखन]क6स ; Id हजि फोह] ; Idbz\$ oG (Microscope) अह lrg] To; ahf हजि फोह] dflg; sf]हजि गdf ; sf/]दs kl/j t\$ Nbp5 eG]s/f pgnf0{klg yxf lyPg . ; dsfnlg ljZj df AofS6/]ofsf]pkof]a6 lj leG vfB kbfx? agfpg ; lsG eG] S/f Louis Pasteur न]kQf नु]Psf]fermentation technology अह lj sl; t xB]uPsf]kf0G . pgsf]; dodf lj leG ksf/sf vfBdf pSt हजि sf]pkof] ub]gof]sl; dsf p]kfbgx? lj sf; u/]sf]kf0G h; sf]Hj nG pbfx/Ofdf kb5g \bwsf kl/sf/x? . AofS6/]of / bwsf]; DaGw oL j] flgsx?sf]kfnfd lgs}vf]Lx}cfof]. t/ xfn cf/ o; sf ; sf/]दs klfdq ge0{ gsf/]दs klfsf]klg cg! Gwg xB]uPsf]5 . h; sf]; ?jft cyf} bW Ps /fl ; fg]df]d klg x] eG] lj ifodf Robert Koch sf] Germ Theory अह lj :tfl/t ePsf] kf0G .



बैक्टीरिया जल के लिए उपयोग

बैक्टीरिया को (कमिस्टि] x]. o; df dflg; jf hgj /nf0{rflxg]; a}k\$ /sf vfBt] x? kf0G . o; df kfg]sf]dfqf *% kl]tztGf a9LxG eG]cG dfqdf kf]6g, 3]d, ; u/ (Lactose , Citrate) नु]ot le6fldgx? -P, la, ; L, l8, O]s] / ldg/nx? -SofN, lod, kmkrf]; , Dof]g] lod cflb_ xG . To; h] bW lj leG ; Id हजि फोह] {अह] rflxg] pkoSt ldl8of klG ePsf]5 . bWdf kfg] t] x?nf0{AofS6/]ofn]pkof] u/L lj leG Byproduct x? lgs]b5g, h; अह bW lj leG



हजाह ड बैक्टीरिया लैक्टोबैसिलस स्पेसिज

कल/स/द कल/ज त\$ xG hg :j:ysf]nflu क]b]hgs xG eg]; fy ; fy}sg}By-product न]dflg; nf0{lj leG ksf/sf vfB lj ifSt klG xg ; Sb5 .

बैक्टीरिया के बल; अह] क]nt kbfx{ x] h; nf0{ cfhef]L Yoghurt eg] lrgG . pSt kbfx] b0{kl]h]tsf Bacteria sf]7hf]eldsf xG . tLxg \Lactobacillus / Streptococcus . oLAofS6/]ofn]bWdf ePsf] NofS6]h]nf0{ NofS6s Pl; 8df kl/j t\$

; /Iff ug{ ; lsG5 t/ lr; f] agf0{ /fv' kb5 . o; f]eG'bf dflysf b0f 6f lj lwx? kefj sf/LgePsf]eg]xf0g t/ oLlj lwx?af6 b'waf6 ; gI /f]ux? l'gd'f]s/Of ug{ ; lsbg, b'wsf]kl/sf/ agfpbf lauf/ ug{h]lj f0hf0{ dfq sd ug{ ; lsG5 . t; y{b'w pdfn] ; jg ug{ j f kof] ug{ ; a'efbf pkoSt b]vG5 .

b'waf6 ; gI /f]ux?af6 aRg] pkfox?

tn elgPsf tl/sfx? ckgfPdf cfkm/ cf gf]kl/jf/ Pj -ufxsx?nf0{k0f?kdf b'waf6 ; gI /f]ux?af6 aRg Pj +arfpq ; lsG5 .

!_ cfkm]kfn\$]uf0e} L:j R5 5 eg]klg sfrf]b'wsf]sxn] ; jg gug{lsgeg]sxn] sfxLuf0{e} Inf0{/f] nfuklg nIf0f gb]vPsf] xg ; Sb5 .

@_ Ps k6s pdfn\$]b'w afx/L t'kqmdf /fv] \$ 306f e'Gf a9L; do kl5 kof] ug{ kg]ePdf kg]Mpdfn] kof] ug{ t/ Refrigerator ePsf]xsf @ \$ b]v \$* 306f ; Dd klg kof] ug{ ; lsG5 .

#_ b'w /fv]e'bf lgTo ; knugI/ b'w Storage ubf{5fk] /fv]h; n]ubf{v/fa lsI; dsf

h]lj f0f' / 9; lx? kj z ug{ kfp'g .

\$_ uf0{e} Lsf]yg ; do ; dodf hf'F ugI , yg ; lgPdf Pj -3fp b]vPdf e'g/L8S6/nf0{ b]vP/ uf0] : thf0{cf]fw vj fp'g' kb5 . ; fy} pSt /f]s]cf]fw vj fp-hh b'w ; jg ug{ xb'g .

%_ b'whG6 kbfx? agfpbf xftaf6 v/fa ls60f? kjz ug{ePsf]h]o]Stut ; /; kn0f lgs}Wfg lbgkb5 .

lj leG lsI; dsf AofS6/lofn]b'wnf0]lj leG lsI; dsf kl/sf/df kl/jt'g u/Lo; sf]u0f:t/ a9fP/ gofF:jfb lbg, k} f cfhg ug{Pj + Joj; fosf] ?kdf kof] ug{ d2t k'vfp'5 . slt 7'p'df t?G b'w aRg ; Dej 5g eg]lrh p'kfbg u/] cfo cfhg ug{ klg ; lsG5 . t/ xfl gk'vof0sg b'wsf] Joj; fo ug{Pj +; jg ug{xf]eg]o; n]; fdfG kvfnb]v H'bg lng]/f]ux? a'ef0g Ifo/f]h, a] hf] L; So "lkr/ klg ; fg{ ; Sb5 . t; y{ b'w ; jg ug{ j f laqm ug{k} {dfly elgPsf pkfox? ckgfpg'h?/Lb]vG5 .

* n'ys, ; Idh]lj lj 1fg lj efu, cd' ; f0G Sofk; , 7d'hd' lzI0f ; xfos kbdf sfo't x'g'G5 .



; km tfsf|syf

bj / fh ubfL*

; fxf; / nugzIntfn|km Joj; foLag\$ f uNlXblg\$-S :yfoLa; fxf; e0{u~hfgu/ % df c:yfoL ; kdf al; la3f hLuf e8fdf ln0{Uofl8ofh; / uhfa vtLub|cfPsf #& jif\$ k\$z kGt clxn|gknd}7hf km pTkfbS Joj; foLsf|?kdf :yflkt ePsf 5g\

cfF / hfF/ ePdf sfd ug{hUff hldg g}rflxbg /}5 eGg\clxn|k\$z kGt :gfts|/ cWog k/f u/\$f kGt km\$sf ; fvg lyP t/ klg cWog; F}/fhwfgldf xfh; h ubfub|PsfPs pQmJoj; fo 5f\$L lj bZaf6 cfoft ul/g|Uofl8ofh; km gkndf klg lsg pTkfbg gug{egL To; af/ ; fvwfh ubfUofl8ofh; km vtLug{t; f/f| gkg|pkoQm|f| lrtjg /fh|/ vtLJoj; flos ; kdf ug{yfn}.

clxn|pgn|Uofl8ofh; / uhfa km\$af6 j flif\$ %) -^) nfv\$|sf/fxf/ ub5g\.

pgL; F km vtL; DaGwLsg}tfnld 5g t/ !# jif{oxLJoj; fon|pgnf0{of|Joj; fodf ; km cgejL/ lj 1 ; dt agf0{ s\$|f|5 .

pgn|ebf|v kif dlxgf; Dd !) lbg\$| km\$df Uofl8ofh; sf|alp /f|g|ub5g\ / sflt\$ dlxgfa6 jZfv dlxgf e/L km pTkfbg lnP/ ahf/ Joj; fo ub|cfPsf 5g\ km\$sf|ahf/ ;jbZL/ lj bZdf stf/ / ef/tsf| gofHbNl/x\$|kGt atfp5g\ stf/af6 ; f|/Esf|/ lbNlaf6 uhfaL/Esf|km\$sf| dfu -Demand_ cfp|u/\$f|klg atfp5g\

clxn|pgsf|knd(f s/a %) -^) hgn| /fhuf/Lkfp|u/\$f|/ lgoldt ?kdf b|gs @* hgfnf0{ /fhuf/L lbg ; s\$|f| pgL atfp5g\ ; fy}km\$sf|dfu al9/x\$|/ lj bZg| sXL/sd ;jbZd}/f\$g ; s\$|f|f uj{; dt ub5g\pgL.

sfd ubf{nugzNtfsf|cfj Zostf kg|ePsf|n| To; nf0{dgg u/} g}ckmoxfKlg ; km ePsf|kGtsf|egf0{5 .

s|if Joj; fo /fd|kZf xf|/ o; df ; a} nugzIn eP/ Joj; flos ?kdf cufl8 a9g| xf|eg|:jbZd} kZ:t /fhuf/L; hgf xg| ePsf|n|lj bZdf cKof/f / hf|vd sfo\$|f| vfh|df oj f hgZlQmhfg gkg|kGtn|atfP ; fy}pgn|clxn|s|if pTkfbgzIn 7fpF v08ls/of e0{x\$|f|f klg lrGf JoQmub| ; /sf/n|s|if g|lt NofP/ s|if eldsf|; AfOf ug{kg|klg atfP . Pp6f oj f :fjbZd}sxL u5{eG}Joj; fo ; Grng u/} pbfx/Oflo sfo{ug{; km ePsf|f pxfFuj {ug{xG ; fy}x|dn|klg pxf|f|; fxf; / nugzNtfsf| cgZ/Of u/} w|}oj f hgZlQmf0{Joj; flos jG k|Of ldnf| / s|if lf|sf|lj sf; df oj f hgZlQnsf|/fhuf/dhs Joj; fo agf| eG| ck|ff lnPsf|5f|.

*n|vs, s|if ; r'gf tyf ; r'f/ s|b| xl/x/ejgdf k|lj lws ; xfos kbdf sfo{t xgxG .

df} d cg' f/sf]df}Lufhf Joj :yfk g / df}lsf]j flif\$ hlj grof{

☞ ; df} tDafx'akif

cfwlg tyf Joj ; flos df}l'kfngsf] ; kn'rtf vf; u/] ufhf Joj :yfk gdf e/ kb\$. cfwlg 3f/ sl'qd cfw/ rfsf, dx dbfglsf]k'ofh, ufhf :yfgt/Of / df} d cg' f/ ufhf Joj :yfk g cfwlg df}l'kfngdf df}L / df}lh'w p'lkfbg j l4 ug{l j z'if klj lwx' x'g . c'w klj lwsf] ; fy} df} d cg' f/ df}L ufhf Joj :yfk g u/df dfq df}l'kfnsx'n] kn'0'bf lng ; Sb5g\.

df}lsf]hlj grof{f0{d'Wgh/ /fv] df}L kfnsn]lgDg df} ddf lgDg adf]hd ufhf Joj :yfk g ug{kb\$.

!= a; Gtsfnlg df} dsf]Joj :yfk g -kn'NuOf -r'q _

o; df} ddf x'g]df}lsf]hlj grof{c'Wog u/] lgDg adf]hdsf ufhf]sf]sfo'x? ug{ kb\$M

- 708lsf]df/df k/\$f df}Inf0{a; Gtsf] z?df g}lrgLrf:gL-!Msf]cgkftdf #:\$ lbg _ vj fp/ ; ls'p agfpg]. h; n]ubf{r/gdf kj'fx ePsf]kik/ ; sngdf tlat'f cfp'5 .
- dxsIf yk ug{l'qd cfw/rfsf k'ofh ug{.
- 5fp/f sl'fdf sl'qd cfw/ rfsf yk ubf{dx / 5fp/f rfsf] ; sf]alr'df y'gk5{. df}lsf]rfsf agfpg]l'fdt'f ePdf dfq cfw/ rfsf yk ug{k5{.
- sd{k}df}Inf0{r/gdf hfg p'lk}Of hufpg / gof'cfw/ rfsf k'ofh u/] kl5 !Msf]cgkftdf #:\$ lbg lrgL rf:gLv'j fpg].

- df}lsf] ; Vof j l'akl5 kj'zaf/ 7hf] ug{/ e]06n] g 7hf]kfg].
- ufhf p'lkfbgsf]nflu 5fp/f rfsf p'lkfbg ug{.
- &: & lbgdf ufhf lg/ll'of ug{ ÷5fp/fx?df /f] bl'vPdf pkrf/ ug{.
- ufhf lj'efhg ug{.
- xh 56sf]df} d ePsf]xh 56 lgo'q'Ofsf pkfo ug{/ dx÷s6 h'ddf ug{:yfg cefj x'g glbg]; dodf g} dx sf'9g]j'f ufhf lj'efhg ug{/fg'' 9f'sfsf]k'ofh ug{- ; l'g'df of]lgod nfu'x'G_ cflb .
- /fg''kn'g'sf]nflu /fg''p'lkfbg ug{.
- dx p'lkfbgdf j l'4 ug{ufhf :yfgt/Of ug{. vf; u/] d]kn'kf df}lsf]nflu ufhf :yfgt/Of clt cfj Zos 5 .

@= u]dsfnlg df} dsf]Joj :yfk g -az'fv-h]7_

o; df} ddf x'g]kr'08 ud]l'af6 df}Inf0{ arfpg lj'le'g Joj :yfk g? ug{kb\$. df}L ufhf]df 5fp/f xs'f'p'gsf]nflu ; fdf'otof #@ -#% l8uL ; † t'fks'd sfod u/\$f x'Gg\ t/ aflx/Lj'ftfj/Of g}#% l8uL ; † e'Of a9L t'fks'd ePdf df}Lufhf]sf]t'fks'd klg j l4 eP/ dg rfsf k'lhg]/ 5fp/fnf0{g/fdf]c; / ug{l df}Inf0{cf'gf]ufhf]sf]lj'le'g sfo'x? ug{s7lg e0{x'uf'ofu ; d'† ug{l'ub'5g\.

oL sf/Ofx'n]ubf{kr'08ud]l'af df}lsf] Joj :yfk g lgDg adf]hd ug{ kb\$

- 3f/sf]kj'zaf/ l; wf 3fd gkg{l'u/L /Vg' kb\$.

- Df}l3f/nf0{5xf/Lof cfem'ndf /Vg' k5{jf 5fgf xfv'g d'fbf} 3d, k/fn jf c'6 j:t'k'ofu ug'; ls'5 . 5fgf} xfv'f 3f/sf]afx/L9Ssge'bf ! k'ib d'fy xfv'g'k5{.
- 3f/sf]kj}zaf/ 7hf]kfg{k5{ e}06n} g klg 7hf]agfpg'kb5. dx sif /fv'Psf] 5 eg]dx / 5fp/f s'fsf]ar'df klg e}06n} g /Vg' kb5 .
- 3f/ j/k/Lof df}Lvs'df k'z:t ; kn kfg]sf]kj}fx xgkb5 . o; ; dodf df}Inf0{ w} kfg]sf] cfj Zostf kb5 . w}df}x? kfgL; sngtkm' nfu]eg]kik/; ; sngdf sdL'c'p'5.
- ud'ldf df}Inf0{gg'sf]klg cfj Zos kg{xgfn]Ps ln6/ kfg]df * ufd gg'ldnf/ gg' kfgLklg pknAw u/fpg' kb5 .
- 3f/ afx/ tk'sd \$) l8ul.; } e'bf d'fy ku'df lr; f]:yfgdf ufhf :yfg'G/Of ug{k'5 .

#= jiff{snlg df} dsf]JoJ:yfkg -c; f/-efb]

jiff{snlg df} d df}Isf]nflu cTo'G dx; s'6 Pj -k'it'sh df} d xf]. o; df}ddf lgDg cg'; f/ ufhf JoJ:yfkg ug{k'5 .

- 3f/ leq kfgLl5g{glbg]. ; Dej ePdf 3f/x? kfgLgkg{cf}x?df /Vg].
- Vfgf gePdf s'qd vfgf pknAw u/fpg]/ ufhf]sf]lfdt'idf xf; c'fpg glbg].
- kj}zaf/ ; fgf]kfg].
- lg/II'of / ; /; k'ib]goldt ug]snf, k'/fg / l/Qf]rfsf? 3f/leq g/Vg]
- sdhf] ufhf ; e'fhg u/] dhjt tj/n] /Vg].

- kfs]ts zqx? h:t}c]/E'fn,j 5o,+ sldnf?af6 df}Inf0{ hf]ufpg].
- o; /Ldf}Lufh'nf0{cg'sh jftfj /Of agfP/ o; df}ddf xg ; Sg] u'x'ofua'f6 df}Lufh' arf0{ufh'fsf] lfdt'f oyfj t sfod /Vg ; s'df c'fpg] z/b s'fndf /fdf]k'ib'of lng ; ls'5 .

\$= z/bsfnlg df} dsf]JoJ:yfkg -c; fh -s'lt'5_

of]df} d df}Isf]:j l'of] Ctdf lgDg JoJ:yfkg ug{h?/L5 .

- dx s'ldf s'qd cfw/ r'fsdf df}In] sf]fx? p7f0{ ; s'f] lbg' k5{ .
- ufh'fsf]dhj b'Inf0{d'Wgh/ /fv] ufh' lj e'fhg ug{k'5 .
- 5fp/f p'k'bg ug]x]eg]5fp/f s'ldf s'qd cfw/ r'fsf -df}Isf]lfdt'f cg'; f/_ yk ug]. o; /L'cfw/ r'fsf k'ofu u/k'5 a'nsL# lbg; Dd ! M ! sf]cgkftdf lrgL rf:gL vj'fpg].
- Jf'f'f/ ug]; do e'Psfh]/fg"kn] sfo'f]nflu klg /fdf]; do xf] . o; sf]nflu kfs]ts /fg"p'k'bg ug{ ; ls'5 .
- k'ib' & lbgdf lg/II'of / 3f/leq ; /; k'ib'ug{k'5 .
- dl'kn] df}LePdf pkoQmr/g l'fdf ufh' :yfg'G/Of ug{k'5 .

% = lztsfnlg lxp' df} dsf]JoJ:yfkg -d'z/L - df3_

Hf8f'fddf /fgh]km kfg{5f8g} df}Isf] ; v'of klg sd xg]/ df}Lufh'nf0{ls'ofzIn agfpg lgDg cg'; f/sf]JoJ:yfkg ug{k'5 M

- ufh' dhab /Vg]

Dhab ufh' e'Gfn]5 e'bf a9L 5fp/f / df}In] 9fs'f] r'f'sf] e'Psf] ufh' xf].

- v'fgf cefj x'g glbg]

Df/Lufh'fdf v'fgfsf]ce'fj b]v'Pdf c'To'Gt hf8f]; dodf lrgL rf:gL- 8'9' efu lrgL / Ps efu kfgL ld; f0{ df}Inf0{ v'fgf lbgk5{.

C'ofgf]7fp'ff uf'fhf :y'fgf'G/Of ug'kb5 . @%j dx uf'fhf'nf0{ 5f'8} / dfq dx sf'9g' kb5 .

3f/ leqsf]cf] / 708laf6 df}Inf0 ar'fpgsf] nflu lgDg adf]hd sfo'x? ug'kb5 M

- ; k/ sIf x6fpg]/ 5fp/f sIfdf 8dL af8{-5'8}j'f/ _ k'of'fh u/LI/Q :y'fg ePdf ; V'f sfuh of h6 j'f]f /fv] cf] / 708laf6 df}Inf0{; /I'ft /fVg' kb5 . To; }u/Lkj'zaf/ ; fg]kg], cf; g af'8'af e'Psf l5b'x? 6fVg].
- pknAw ePdf ydf'f'h 3f/sf]k'of'fh ug]. o; k'sf/sf]3f/df afx/sf] j'ftj/Of e'Psf]lr; fh]3f/leq c; / ug]; Sb'g .
- ; /; k'nf0{ug}

Df}In]g'9fs'f'f r'fsf, s'nf / k'fgf r'fs'x? 3f/af6 lems] / df}In]9fs'f'f dfq 3f/df /fVg]. cf; g af'8{ ; km /fVg' kb5 .

- lgoldt uf'fhf lg/I'f0f
- 3df0nf]lbgdf dfq 3f/ v'fhL%÷& ldg'leq lg/I'f0f u/] /fh' nfu] gnfu'sf], v'fgf e'08f/ e'P, ge'Psf] x'g'kb5 . H'fb}lr; f]/ abnLe'Psf] lbgdf 3f/ v'fVg'xb'g .
- J'ftj/Ofdf \$ l8uL; ‡ e'Gf sd t'fksd] xg]e'Pdf df}Inf0{3f/ afx/ lg:sg'lb'g'xb'g .

pk/f'Qma'f'ix?nf0{W'fg k'YofP/ hf8f] ofddf uf'fhf Joj:y'fkg sfo{u/L uf'fh'fsf] I'fdt'f ag'f0{/fv'df c'fpg]a; G' C'tsf]k'k/;

kj'fx af6 dgLb] k'nf0bf lng ; ls'G5 .

df}Isf]j flif\$ h'lj grof{

; fdf'G ; kdf df}Isf]j flif\$ h'lj grof'f'f0{ df} d cg'; f/ lgDg adf]hd l'j e'fhg ug{ ; ls'G5

!= a; G'sfnlg h'lj grof{

t/f0'af df3÷k'nf0'Of, d'W kxf8df k'nf0'Of b]v' a'z'fv / p'Rr kxf8df h]7; D'sf] c]lwnf0{df}Isf]a; G'sfn df'G ; ls'G5 .

- a; G'sfndf af'8 la?'j'fx?df k'nf]f r'9Lk'ix? k'nb5g / k/fu Pj -k'k /; sf]k'j'fx j'f4 x'G5 . o; sf]sf/Ofn] df}Ldx -k'k/; _ ; sng ub5 / j'z'j'f4 ub5 .
- of]; dodf ; a'e'Gf a'9L v'fg]s'/fx? ; sng / ; r'0 ub5g\
- /fg"df}Inf0{hf'8't'f'8; f' km k'fg{ k'Of' huf0{Ps dx'gf leq}k'z:t} 5fp/fx? x's'f'p5g\
- z'Its'fndf sdhf] x'g kuL; s'f] uf'fhf'nf0{h'lp'f'f l'p ag'f'p'f5g\
- s6, k'k/; / 5fp/fx? k'z:t x'G5g uf'fh'fdf gc6fpg]h:t'f]e'of]eg]df}L gof'fj ; f'f; sf]Jo'j:y'f ug]t'v{df n'f'f5g .
- o; /L x'h 56'g] k's'p'f ; ? x'G5 .
- x'h 56, j'z'j'f4 / dx ; sng k'f'p a; G' s'fndf x'g]ub5g\
- Ps :j:Y'o dhab uf'fh'faf6 o; ; dodf #-s k'6s ; Dd x'h 56g]ub5g\
- ; fl]s u'8'ff a:g]uf'fh'fsf]nflu klg /fg" df}Isf] cf]Zos kb5 .
- x'h 56 x'g' cu'f'l8 gof'f'fg"p'k'f'bg ub5g\

- efn]nfu\$fl/fgñ]dfq lg; lrt km kfg{/ j z r'Ng]xgfn]ue{; r'gsf] nflu efn]df]lx? p'kfbg ub5g\
- o; /Lxñ 56sf]tof/ldf efn]df]L tof/ u/L/fg"df]lsf s'fif agfp5 .

@= u[d÷j iff\$fnlg hlj grof{

; fdf'otof h7b]v efb; Ddsf]cj lwnf0{ u[d of jiff\$fnlg /fvG ; lsG5 .

- o; df} ddf-j ftj /0fdf ud{k9b} hfG5 .
- kik /; / s6 jiffh]aufP/ nfG5, vfgsf]cejf xG5 .
- df]lsf]kl/>d / ; do 3f/leq tksd 708f tNof0{j ftj /0f cgsñ ugdf s]b't /xG5 .
- 5fp/fx?nf0{ko'k vfg / :ofx/ gkg]xgfn]ufhfsf]lfdtf sd x'f} hfG5 .
- k's]ts b'zdgx? H:t}c/fin, a5o'F?, sldnf, d'g ktnL, dn; k'f] r/f c'fbsf] xdnf a9b5 .
- dhab ufhfsf df]lx?n]sdhf] df]lsf] e08f/df n6g]ub5g\
- pQmsf/0x?n]ubf{df]lx? 3f/ Tofu ug{tkmp'cdv xG5g\
- clj/n jiff{x/Latf; n]nfdj; do; Dd df]L aflx/ lg:sg kfp'5gg\.
- 3f/leq cf] a95, k/fudf 9; Lk5{ s'fifdf a'f u/\$f]dx laub}hfG5 .
- latkft]sdk]df]Lk'f e0{hyfefjL sfo{ ug{ yf'nb5g / ufhfnf0{ g} ljg'fzlt/ nDsfo{/x\$'f xG5g\.
- nuftf/ jiff{ePsf]cj:yfdf df]lx? 3f/leq a:b5g, df} d :j R5 xgf; fy

t?G}uhf]6fg{r/0lt/ p9g yf'nb5g\

- o:tf]klt'sh df} ddf df]In]ux' Tofu ub5g\ -k'f ; }g'fdf of]kj]t 5_

#= z/bsfnlg hlj grof{

cf]Zj gb]v dfu{ Ddsf]cj lwnf0{ df]lsf] z/b s'ndf /fvG ; lsG5 .

- z/bsfn df]lsf]nflu bf] f]dx kjfx xg]cg'sh df} d xf].
- w]y/L jg:klt af'6 la?jf kmL jftj/0df kik/; kjfx a9g yf'nb5 .
- k'z:t kik/; tyf s6 ; sng ub5g\
- 5fp/f p'kfbgdf ult cfp5 / ufhfsf] lfdtf ; b'9 / dhab a'f}hfG5 .
- V'f; u/Lof]s'ndf ufhfdf k'/fgf/ j4 /fg"5 eg]k'g]sfd xG5 . o:tf]/fg"kg] sfo'nf0{j]4b/ e'f5g\ of]k'f]ts n'f0f g}xf].
- ha /fg"@jif{k'5]ta km kfg]lfdtf sdhf] x'f} hfG5 / /fg"t]j sf] p'kfbgdf klg sdL cfp5 . o:tf] df]In]gof'f/fg"s'fif lgdf'f ub5 .
- /fg"kg]sfo'f sldtf klg @÷# /fg" tof/ ug{xgfn]ufh'f k'g] / lj'eflht e0{xñ 56sf 36gfx? xG5g .

\$= z'f'sfnlg hlj grof{

of]; do t/f0'f 5f'f]; do xG5 t/ kxf8lt/ eg] km'Nu0f ; Dd klg lr; f] /xG5 .

- 708La9LeP/ df]lsf]ultj lw la:tf/df cj/fv k'5 .
- dx kjfx klg sd x'g ; S5 .
- Df]Lk'fM do u'8leq}; ldt /xG5 .
- j4 df]lx? D'f}hfG5g\ gof'h'cdg]

k\$of sd xG, /fgh]km kfg]sd
klg /fsg ; S5 .

8f=/Tg ykf -lk=Pr=8L_ ksfzs MahoflugL
df}lkfng tflnd s, j f 6; fn .

* nys, pHjn lzz' lgstg cfj; lo
df}j =x\$8f-%, e}j/f\$sf ; ykfg kfrfo{
gkfn aLkd{x\$8f - % sf lgbzs Pj -df}L
kfg ; Dj GwL>ft JolQm-klzIfs_ xgxG .

æfw/et df}lkfngÆnys Muf{k; fb
bjf8L, zs/ k; fb Gofkfg] ksfzgmgn
;/sf/ sif tyf ; xsf/Ldofno, sif ljeu,
Joj; flos sl6 lj sf; lgbzgn, xl/x/ejg,
nlntk/ .

; G6 ; fduL

æfwlgs tyf Joj; flos df}L v}LÆ
nys Mjlg rff tf/fbjL>j7, ksfzs M
u08sLjLsG; g, sf7df08f}.

æfwlgs df}Lkfg kl:tsfÆk\$fsz M
df}L lj sf; zfvf, uf}fj/L, nlntk/

ædf}Lkfg klzIfs ; ft kl:tsfÆnys
clg?bgfy zNs ksfzg McG/fli6 Pssf
kj tlo lj sf; s, sf7df08f} gkfn .

ædf}Lkfg cfo chg Joj; foÆnysM



slkmrf nlf]dVo dVo sL/fx? / ltgsf]lgoGqOf

☞ /z]ff l; dv8f*

! = ; t]uj f/f

of]sL/fsf]z/L n]Drf]cfsf/sf]xG .
o; sf]k]fVdf ; t]w; fh]l; u]l/Psf]xG .
jo:s ktnLkf/nf]3fd tyf ud{kcf]xj fdf
; lqm xGg\ kfyLuj/fh]slknsf]dh tyf
zfvf xffx?df v; f]af]n]sf]cGt/df kg]u/L
km kfb5g\ Ps kfyLuj/fh]Ps k6sdf
; o u]ff ; Dd km kfg{; Sb5 . pQmkmx?
Ps}7fpff gkf/L!) u]ff ; Ddsf]ykf]xg]
u/Lkys kys 7fpff km kfb5]. km kf/\$f]
@:# lbg]sf]cGt/df ; fgf ; fgf aRrfx?
lg:sGg\ . oL nfe{x?n]sf08sf]v; f] /
rlsPsf]af\$fa6 sf08df k]fn kf/L leq
k:b5 / 8f]leqsf] slnnf] efu vfg
yfb5 . 8f]leq logx? ; ?E h:tf]cfsf/
agf0{ 8f]sf] tn vfb} a9g yfb5g\ .

of]uj f/fh]vfb}hfbf agfPsf]; ?E o; \$f]
lai6fn]6Dd 6fb}hfg]x]f k]fn b]vbg,
kftx? kx]n]P/ cf]0nfPsf b]vg]/ af]nf0{
x]n]fpbf sL]fn]v]Psf]7fpff6 kl6Ss e]r]g]
xG . oLaRrfx? !) dlxgfsf]cGt/fnkl5
@! b]v #) lbg ; Dd ; z]k cj:yfdf /xGg\
/ To; kl5 ktnL ag] k]fna6 aflx/
lg:sGg\ jo:s cj:yfsf]ktnL7fpfftyf
jftj/Of cg; f/ aif]z?jft xg'eGf cu]8
r]q, azfv tyf d; /, kff dlxgdf lg:sg]
ub5g\ of]sL]fn]cf]q]dOf u/\$f tyf k]fn
kf/\$f]7fpff/k/ af]n]x? c]n p7\$fb]vG
h; n]ubf]k]z u/\$f]7fpffQf nufpg ; lhnf]
xG .

@ = /ft]uj f/f

; t]uj f/fkl5 slknsf]of]bf]f]vt/gfs
sL]f x]. o; sL]fsf]jo:s kfyIn]klg ; t]f]
uj f/f]kfyIn]enr s]f af]s] 8f]sf hfg]

slnnf dgf tyf kftx?df km kf5{ h; af6
s]Llbgkl5 -%& lbg dl; gf nfe{x? lg:sGg
/ xfu]k?sf]8f] 5\$] leq k:5g\ of]8f]
leqleq}; ?E h:tf]cfsf/ agf0{8f]sf]d]fyt/
slnnf]efu vfb}cu]8 a9b5 .

lgoGqOfsf pkfox?

- slknsf nflu 5xf/lb/ xg]v la?j fx?
slknsf]gof]Ha?j fx? nufpg' eGf @:#
aif]cl3g}nufpg]Joj :yf ug]lgtfG
h?/L5 .
- sL]fa6 ul; t la?j fnf0{sfb5fb} u/L
x6f0{x]f f v]Ng]lsl; dsf]agfpgk5{.
- k]o\$ jif{sL]f p8g]; dosf]Vofn /fvL
sf08df sL]f nlf]g]cj:yfsf]lg]/If0f
ug]k5{.
- uj f/fh]t la?j fnf0{sfb5fb} u/Lx6fP/
3fd / x]f f l5g]agfpg'k5{.

= kmsf]uj f/f

of]lj Zje/ km; s]sf]sL]f x]. o; sf]
kfyLvk6h]kmsf]gf06f]lt/af6 ; ?E agfP/
km leq !%j 6f hlt km kf5g h; af6 nfe]
lg:sg u0{km vfg]ub5 . of]sL]f em]sf]
kmdf % dlxgf; Dd af]g ; Sb5 . sd prf0df
/ ud] If]qdf o; sf] k\$fk j 9L xG .

lgoGqOfsf pkfox?

- slkmm l6kf0kl5 af] jf e0df km
/xg' xbg .
- slknsf]af]df ad] dLkm l6k] gi6
ug]kb5 .

\$=ulg :sh / aifpg :sh

of]sL/f xl/of]/usf]vf]6f h:tf]k fF
laxg xG . o; n]efn]lagf g}sl/a ^))
ufF; Dd km kfg{; Sb5 . of]sL/fsf]hLj gL
@ b]v \$ dlxgf; Dd xg ; Sb5 . of]sL/in]
slnnf kftx?df tyf slknsf bfgf?df cfqrdOf
u/L/; r'; / vfg]ePsf]xgfn]kft tyf km
rfp/Lk/\$f]xG . of]sL/in]la:6fPsf]kbfy{
ulnof]xg]ePsf]xgfn]kftdf snfn]9; Lb]yf
kg\$]f ; fy} sldnfx? nfu\$]f b]vG .

lgoGOfsf pkfox?

lgd cfwl/t laifbL% Pd=Pn kl't ln6/
kfg]sf]b/df 3fh agfO{:k]ug{kbf . ; fy}
aufF ; /; krfOdf a9L Wfg lbg' kb5 .

%= h/fsf]h'sf

h/fdf nfg]h'sf Hfb}; f'gf uf'nf cfsf/sf
xGg\ o; n]h/faf6 /; r'; / c/lasf slknsfO
lgs}xfgL u5{. o; n] ; a}dl; gf zfvf
h/fx?nfO{vfp/ dVo h/f gfE]f]agfp5 .
af\$ sdhf/ xG / df6fd]f c8dfpg]h/f
gePdf af\$ 9N5 .

lgoGOfsf pkfox?

- ; Wf ; dodf g; {Lsf]hldg vghf u/]
3fddf ; s'fpg' kb5 .
- h'sf nfu\$]f af\$ h/f ; lxt pvfn]
krfNg].
- af\$ pvfn] ^) ; dL= ulx/f]vfn]8f]vg]
Ps jif{ Dd df6f]; Sg lbg].
- ; Dej eP /f] :6f ?6:6sdf sndLu/\$f
c/lasf la?j'f nufpg].
- af\$sf] j]l/kl/ ; okqL nufpg] .
- sv'/fsf]; hLk'of]h g'ug].

^= ; 6xfh af]/

of]sL/f /ftf]/usf]xG . kfyLsL/in]
slnnf slknsf] cfWng] k'fnkf/L Ift
ub5 . of]sL/fsf]%) ufF; Dd km kfg{
Ifdtf xG . of]sL/fsf]hLj gLsl/a ! dlxgfsf]
xG .

lgoGOfsf pkfox?

• k'fnleq a:g]ePsf]xgfn]lj ifbLcf]fwL
Tolt nfekb xg ; Sb5, To; h] 5xf/lbf/
la?j fsf]-s6x/, a8x/, asfOgf],lgd _ /fd]
kaGw ldnfpg]/ cfqrdOf u/\$f]xfuf? s6]
hnfO{lb'gkb5 .

&= ldnLau

of]sL/fsf]/u kxhf]ePtfklg o; sf]z/L
; f]f]e]fn]9f]sPsf]xG . of]cfqrdOf u/\$f]
8fF, slknsf]km tyf cfWnf?df Ps euf8
e0/x\$]f b]vG . oL sL/f k'fF ljlg
xGg\ ldnLau sL/fsf]kfyIn]sl/a !))
b]v !)) ufF; Dd km kfg{; Ifd xG .

lgoGOfsf pkfox?

• lgd cfwl/t lj ifbL% Pd=Pn kl't ln6/
kfg]sf]b/df ldnfO{:k]ug{kbf .

slkndf nfg]dVo dVo /f]x? / Itgsf]lgoGOf

!= slkm /i6 -l; w/]

of]/f]h kftdf nfg . lxp]df slx/f]tyf
jif{df} d h]j fOsf]nflu cg'sh jftfj/O
xf]. ebf]b]v silt\$; Dd of]/f]h a9L
b]y'k5{. z?z?df kftsf]tNf]efudf lknsf
kxhf]/usf bfgfb/ yf]kfx? / dftyNf]; txd
v}f yf]kf b]y' kb5g .

/f]syfd

• krfNg, h]7 / c; fh dlxgdf af\$]ld>Of
!Ü 5gfn]krfOdf u5{.

@= snfn]slxg]/f]h

of]9; lj f6 nfg]/f]h xf]. of]/f]h]sf]hLj fO]h]
vf; u/] kft, slnnf dgf, km / slnnf

kmdf cfqrdOf u/] snf]agfp5 / kl5 ; 8]
 km Pj kftx? emg . kftx? xffij f6 5]P/
 emg t/ dl; gf 9'; Isf] TofG fn]
 en68Gg .

/f\$yfd

· /f] nfu\$ f efux? sf6] hnfpkg5{.
 5xf/Lxfrf]/ afSnf]5 eg]cfjZos dfqdf
 5xf/Isf]kaGw ldnfpg' k5{.

· /f] nfu] sf6\$ f xff, km lgZrt 7fpff
 Joj :yfk g ugkb5 . j iff{cufj }af\$ff]ld>Of
 !U 5sgk5{.

#= h/f slxg]/f] M

slkmauFfdf kfgLhdff, u\$dh ubf{h/f
 j/k/ 3fprf\$ nfu\$ of]/f]sf]9'; In]kj z
 ug]d\$ f kfp5g\ km:j?k h/f slxg]/f]
 nfu5 / /f] nfu]k5 afx?sf]h/f slxg]
 sf08 g/d / lunf]xg] / cGdf jf\$ dg]
 xG .

/f\$yfd

· /f] nfu\$ f]af\$ pvn] hnfo\$gk5{.
 To; 7fpff af\$ff]ld>Ofsf]3fh v6fpgk5{j f
 ! blv @ shLs\$if rg xfn] kgkb5 t/ ^
 dlxgf; Dd csf] la?Jff nufpg' xb\$.

\$=kmsf]bfu

/dff]5xf/Isf]Joj :yf gePsf]slkmauFfdf
 a9g]qrdsf kmdf ebf\$]s8f 3fdfs]sf/Of
 hn] bfu nfu5 . v}]bfu ; s] bA5 /
 kfr dGdf 6fE G . bfusf]j/k/L uhfaL
 kxhf]3]fn]9fs\$]xG . km kfs\$]efg
 xG .

/f\$yfd

· 5xf/Isf]Joj :yf ldnfpg]/ af\$ff]ld>Of
 5g]ugk5{.

* nys, s\$if cg' Gwg s\$]afuj fgLkf]/f
 sf:sL df k]j lws clws\$ kbdf sfo{t
 xgxG .

; Gbe{ ; fdfuL

■ ojs Wjh hE; E; ; G/ Itjf/L@)^*, slkm
 afndf nfg]dVo sLfx? / Itgx?sf]Plsst
 Joj :yfk g, lqej g ljZj lj Bfno s\$if tyf kz'
 lj hfg cWog ; :yfg, /fdk/, lrtjg .

■ ojs Wjh hE; E @)^*, h]s lj lwj f6
 sL/lgoGOf, gkfn ; /sf/, s\$if tyf ; xsf/L
 dGfno, s\$if lj efu, afnL; /fOf lgbz'gfn,
 xl/x/ej g, nln tk' .

■ Naidu (1998). A compendium on pest and
 diseases of coffee and their management in
 India. Central Research Institute, Coffee
 Research Station- 577177, Chikmagalur District,
 India. Pp 1-67.

klg pknAw u/fpgdf w}g}; xofu ldN5 .

; f/fzdf eGkb{a} f/ -xbk vLsf nflu ; DalGwt lgsfoaf6 plrt tflnd, ; /; Nfx, alp lj hgsf]Joj :yf, ahf/ cflbsf]Joj :yf pknAw ePdf o; nf0{cem]ofj ; flos ?kdf vL ul/gsf ; fy}sf]sx?sf]hlj g:t/ klg psf; Lbz}cfly\$ d?b08sf ?kdf ; xofu kYofpg 7hf]d2t kb5 .

* nys, sif lj efu, xl/x/ejgdf gf; = kbdf sfo{t xgxG .

c; n alp

/3gy Gfkg]*

u0f:t/sf]c; n alp ; w}kofu u/fE
alp clt ; jhg; ln eQ xf]. kl/kSs .
hlj lt j :t'xf]. afx/Lcfj /0fn]9sdSs ..
htg u/L9fs\$]5 ; Gfg a9fpg .
alp xg ; Sbg x} . ; a}vfg]cG ..

; a}alp cG xG, t/ ; a}cG .
alp xG kofu u/ eG ; lsbg ..
u0f:t/lxg alp kofu ug{5f8Lb} .
:t/lo >ft alp vflLvfhlNp ..

hftlo / jzofut ; kdf z4 alp .
zfl//ls / efts ; fy}5fgLlnpE .
plrt lr:ofg tfl /fd]bfg ; dfgtf .
c; n alpdf hfG x}Uls; fgsf]gftf ..

pkrf/t rldsnf]/ cfhl; nf bfgf .
pdf/ zlQnw}ePsf]z4 alp 5fg ..
u0f:t/ alp kofu u/ p'kfbg a95 .
ul/aL/ ef\$d/L; H}vB ; \$6 365 ..

kfd{s} / alp sLkgLghLJoj ; foL .
dVo >ft dfg\$]5 c; n alpnf0 ..
lh-slj-sf- ; dtaf6 alp p'kfbg xG .
k/fdz{/fv ls; fg c; n alp sg 5 ..

sg 7fpEsg df6df s]sf]vLxG .
yfx kfg h6-P-nf0{; fw]yfx xG .
To; h]t c; n alp hfgL5fgL/fv .
ls; fg xfdLs]fdf g}a9\$]5 ; fv ..

*nys, Iflo alp lahg kofuznf ; G/k/, sGrgk/df afnLj sf; clwst kbdf sfo{t xgxG .

अपकोणुलःसः सिंधु / पंगु वल



ए. च. वग्न*

स/ला6} L (Cucurbitaceae) क/ज/द/ क{0:सः (Sechium edule) Ps dxTj kO{axj ifl / अपकोणुल/afnLxf]. o; sf]pTkt d; sf] / dW cd/Isidf ePsf]dflgG . cuHlgfd :Sjf; af6 gkfnLgfd 0:सः /xg uPsf]dflgG . 0:सः sf]8f sf]ffl ds sh} f]k/}sf] xG . h; sf]kntknsf7 k; }sf] / 6kftknsdnf]sf7 gk; }sf]xG . 0:सः sf]h/faf6 w/} nx/}xflfx? knfp5g\ Itglx?Af6 klg w/}xflfx? knfp5g\ 0:सः sf]kft *-% ; }d= nfd] xft cfsf/sf] 6kfd #-% cff sf]ffl ds laefhIt zvf kftx? ePsf] / emn]9fs}sf] xG . 0:सः Ps}afdf efn/ kfyLkm knG]axlnE} > oL:jo; }rt afnLxf]. 0:सः sf]dVo df}h/f af6 knfPsf /}fbf/ ; xfos h/fx?df t?n km5 . o; sf nlu piOf / pktjOf xfj kfgLpkoQmdflgG . gkndf 0:सः sf]kofu t/sf/Lafnlsf]?kdf ePtfdg o; sf]v}In] Joj; flos ?k lng ; s}f]5g . o; sf]xl/of dGf, slnnf km / t?n u/Ltlg afnLlng ; lsG .



0:सः sf]kft



0:सः sf]km

0:सः sf]dxTj

!_ ; lhn}krfpg ; lsg]snlnf km t/sf/L agfP/ jf pl; g/ vfg ; lsG .

@_ le6fdg P, lj = / ; E; SofN od / kmfd kZ:t kfOg]slnnf dGf / kftx?nfO{; fu ; /x t/sf/LagfP/ vfg ; lsG . 0:सः sf] km tyf alpdf z/L/nfO{cTofjZos kg] ljleG Pldg]cDnx? (amino acids) kfO5 .

#_ 0:सः sf]t?nnfO{t/sf/LagfP/ jf pl; g/ vfg ; lsG . t?nsf]dN6 kmeGf dxlf]

xG . la/fdln]klg ; hln}krfpg ; Sg]xhf o; nfO{c:ktndf la/fdlsf]vfgfsf]?kdf klg kofu ul/G .

\$_ o; nfO{aRrfsf]vfgf, h', , ; ; h, k]6 / hfd agfpg klg kofu ul/G .

%_ o; sf]nx/fnfO{6kL/ 6f/Lagfpg klg kofu ug{; lsG .

^_ 0:सः sf]km jf t?nnfO{ufO{e} Isf] vfgfsf]?kdf klg kofu ul/G .

&_ km jf kftaf6 agfPsf]v}fnfO{dqfzosf]

कृषि/ल 3हफग] (Lira, 1988) चिह्नसं ; फु}ग; फ कृषि] / pRr / Qmrfk h:tf / fुsf la?à klg
 कृषि ul/5 . 0:s'; sf]kft, alp jf kmsf]kृषि]d6sf]; d:of / z/L ; lgg]; d:of klg
 36फ5 (Bueno et al. 1970) .

6]n MD:s'; sf]kto\$!)) ufd km, 8fF / t?ndf kfo] / f; folgs tTj x?

/f; folgs tTj	km	8fF	t?n
zIQm-lsnf]Sofnf]L	@^-#!	^)	&(
kfgL-Ü_	*)-(\$	()	*)
3hgZIn lrgL-Ü_	##)#)^
c3hgZIn lrgL-Ü_)=@)=&	#^
kृषि -Ü_)=(-!=	!\$	@
tृ -Ü_)=!)#)=\$)=@
sf]kft08\$ -Ü_	#%-&&	\$=&	!&*
/}f -Ü_)=\$-!>	!=@)=\$
Sofn; od -ldnLufd_	!@!(%*	&
kृषि]kृषि; -ldnLufd_	\$-#)	!)*	#\$
kmfd -ldnLufd_)=@)^	@%)=*
le6fdg P -ldnLufd_	%	^!%	
le6fdg la -ldnLufd_)>\$)=!*)>#
le6fdg l; -ldnLufd_	!!-@)	!^	!(

; fT Mengels 1983; Aung et al. 1990.

*_ 0:s'; sf]afnfo{e-!fo lgoGssf]?kdf
 klg कृषि ug{; ls5 . lsgsLo; sf]jfg:kltS
 j[4 r]f]xgSF ; fy}afsf]kृषि]6 klg w}}
 x5 . h; n]ubf{hldgnf0{j iff{ofdsf]kृषि]sf]
 l; wf kxf/af6 hf]fp5 .

(_ 0:s'; sf]kmndf kZ:t /; xg]xrf df]L
 Joj; fodf klg o; sf]7hf]of]ubfg 5 .

!)_ Ps}af\$af6 w}}p]kृषि] lng ; lsg]/
 o; af6 Hbf dfqdf sf]kft08\$ kfo] / xrf
 o; nf{vfb ; /Iffsf]pkfosf]?kdf klg

lng ; ls5 .



0:s'; sf]km



0:s'; sf]dGf



0:s'; sf] t?n

xf] fkgL/ df6f

o; sf]v}lsf]nflu ; dGf; txaf6 #) dE blv @)) dE; Ddsf]prf0{e0{; fklfs cfbtf *) - *%j, jiff{!%)) - @)) ld=ld= klt aif{/ @) - @% ; ‡ tfkqnd ePsf :yfgx? pkoQmxG5g\ 0:s'; sf]km kmNg !@ 306f ksfz klt xg]lbg rfxG . tx]l8ul ; ‡ tfkqnd sd tfkqnddf o; sf]km slxg]/ @*) ; ‡ tfkqnddf 0:s'; sf]afg:klts j 4

dfq Hbfbf xg'sf ; fy}km em{ub5 (Vargas 1991). o; sf]v}lsf]nflu lk-Pr-dfg %%-^-% ePsf] kz:t lr:ofg / h]s kbfy{ePsf] anfb]bf6 df6f]pkoQmdf6G . a9L tiff/f] kg]/ kfgL hDg]7fpF6; sf]nflu cgkoQm 7fp xf].

pkoQmhft

gkndf 0:s'; sf]lj leG lsl; dsf hftx? kf0G5g\ hft cg'; f/sf]kmsf]/^ -xNsf kxhf; ‡f]km, xNsf xl/of]km / uf9f xl/of] km, kmsf]tfn -w}; fgf km kmNg ; fgf km kmNg, denhf km kmNg, 7hf km kmNg / w}7hf km kmNg, kmsf]nDaf0{ kmsf ; txsf]sf -sf gxx] kftnf sf xg] denhf afNf sf xg]/ afNf sf xg] / kmsf]; txsf]sh] f]-sh] f]gxx] xNsf sh] f]xg] denhf ulx/f sh] f]xg]/ ulx/f sh] f]xg] cfbdf leGtf kf0G5 (Sharma, 2010) . ulxssf]0R5f / rfxgf adfhldsf] hftsf]5gf6 u/L o; sf]v}L ug{pkoQm xG . xl/of]kmdf kftnf sf xg]/ 7hf w}kmNg]af6 af6 alp hDdf u/L nufpg pkoQmdf6G .

nufpg]; do

axj if6 afnLePsfh]0:s'; nf0{Ps k6s nufPk15 k6s k6s pTkfbg lng ; lsG .

6]n !M:0:s'; sf]nufpg]; do / lj leG lsl; dsf pTkfbg lng]; do

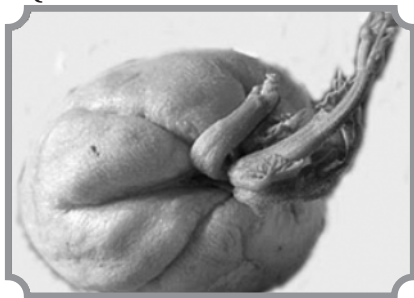
nufpg]; do	pTkfbgsf]lsl; d			
	dGf	km	t?n	dGf
sflt\$-dl; /	krfNuOf-c; f/	; fpg-dl; /	dl; /-df3	krfNuOf-c; f/
azfv-h]7	-	; fpg-dl; /	dl; /-df3	krfNuOf-c; f/
c; fh-sflt\$	-	-	dl; /-df3	krfNuOf-c; f/
dl; /-	-	-	-	krfNuOf-c; f/

hldg tof/L/ dn

0:s'; nf0{8dfE / vf8n bj }tl/sfa6 nufpg ; lsG . 0:s'; nufpgsf]nflu Ps ld6/ r'f0, af/Lcg' f/sf]nDaf0 / xf/-xf/sf] b/L@-S dl6/sf 8dfEx? pkoQmxG . kTb\$ ju(d6/df !) s'hL-ufa/dn, @ ufd l8PKL, #) ufd o'/lof / #) ufd kf\$; /fd] E df6fd ldnfpg' kb\$. 0:s'; nf0{S% 3g ; dl6sf]vf8ndf /fd] E dn / df6fd; f0{ klg nufpg ; lsG . km afnlsf]lgldQ xf/df !-# dl6/sf]kmsdf nufpg ; lsG . t?n afnlsf]nful !x!-% dl6/sf]b'ldf / xl/of dGf afnlsf]nful !x! dl6/sf]kmsdf nufpg ; lsG .

alp

0:s'; vtL6' fPsf]km jf alp jf ; Ss/ af6 klg ug{; lsG . kmaf6 0:s'; sf]k; f'Of ug{ljlw ; lhnf] ; :tf] / /fd] dflgG . 0:s'; sf] kmnf0{ !#-!S' ; t' t'kqrd / *)-() U ; fklfs cfbt'fd /fvf !% lbgdf /fg nfossf 6' f knfp'g\ kmnf0; t'P/ /fg' kb\$. To; kl5 kmnf0{df6fh]5f]g' kb\$.



6' fPsf]alp km

uf\$dh / l; Ff0

z? cj:yfdf eni' lgoGOf ug{/ df6f] v'shf]kfg{! -@ k6s uf\$dh ug{kb\$. wj} p'kfbg lngsf]nflu x'k'fd Ps k6s l; Ff0sf] Joj:yf ul/gkb\$. hf8f'fd z? x'f' cfwf kn6sf]5fkf]lbg' /fd]dflgG .

yk dn

nx/fsf]tla j]4 ePsf]cj:yfdf km

afnlsf]nful%) ufd o'/lof kl't aff / t?n Pj -xl/of dGf afnlsf nful@% ufd o'/lof kl't affsf b/n]af\$sf]j]l/kl/ sh} f'lf /fvL l; Ff0{ug{k'kb\$. km afnlsf]nflu km kn6] ah'fd bf] f]k6s yk dn lbg'kb\$. xl/of dGf afnlsf]nfulkTb\$ l6k'f0{kl5 !} ufd o'/lof kl't affsf b/n]x'f]g' pkoQmxG .

sf65f / t'fnd

Jo; flos vtLsf nfuly'f'f'f' lbg'kb\$. 0:s'; sf nflu @-# ld6/ c'hf]6'f' agfpg' pkoQmxG . t'; f/f]kg{dlxgdf 0{s'; sf] af\$nf0{hldgaf6 sl/a ! ld6/sf]prf0'f' sf6Lo; sf]en'f' x6fpg' kb\$.



y'f'f'f' 0:s'

afnLlng]/ e08f'Of

0:s'; /fk\$]#-S dlxgdf km65 . 0:s'; n] /fk\$]*-(jif{ Dd p'kfbg lbg]ePt'klg #-S jif{ Dd dfq Jo; flos p'kfbg lbG . km nfu\$]f]#) lbgdf l6'g tof/ xG . kn6 yfn'kl5 x'k'fsf]Ps lbg afnL y'Gofpg' pkoQmxG . 0:s'; sf]en'f' a9b} h'f'f' ; fu jf dGf afnLklg lng ; lsG . ; fu afnLl6k\$}lbg vfgkb\$. kmnf0{l6k\$] Ps x'k'f; Dd / hldg dgLvf8ndf jf lzt e08f/df -&% l8=; t' /fv] Ps dlxgf; Dd vfg ; lsG . t?nnf0{vg\$]f]t?G} hldg dgLvf8ndf jf lzt e08f/df -&% l8=; t' /fv] jf r'fgf agf0; 'sfP/ klg vfg ; lsG .

p'kfbg

Ps aff aff Ps jif(f #)) km jf !%-^} shLkm k'f' ug{; lsG . 0:s'; sf]p'k'bs]j

nueu @)-#) 6g kl't x\$6/ xG5 . 0:s' ;
v'tLa6 ^-!# s'hlT?n afnL'ng ; lsG5 .
o:t}o; af6 !-%@-% s'hl; fu afnL'ng
; lsG5 .

/f'h / ls/fx?

0:s' ; /f'h sLfn]sd xfgLk'v'fpg]afnL
xf]. Ps jf b0{jif]afnLdf e'bf ax-jif]
afnLdf /f'h sL/sf]k's'fk a9Lb'v'G5 . g'k'fndf
&\$ k'sf/sf 0:s' ; kf0G5g\ h; d'v'leqL
dw] df kf0g'df kfp8/LldN8o'9' ; L/ c'f'nfpg]
/f'h a9Lnf'v5 eg]kxf8df kf0g'df ef0/ ;
/f'h a9Lnf'v5 (Sharma, 2010) . 0:s' ; df
nflg]s'xL /f'h sL/fx? tn lb0'psf]5 .

6f6]k'f6]ef0/ ; /f'h Mo; /f'h'sf]k's'fk
ax'afnLk'f'f'ndf H'bf xg]x'bf 0:s' ; nf0'
7fp'f'k'v] Ps b0{jif]k'5 cs'f]7fp'f'f' nufpg'
pkoQmxG5 .

c'f'nfpg]/f'h Mo; /f'h'n]k'}af'nf0'
; s'fpg ; Sb5 . o; sf]/f'sy'f'sf]nflu 0:s' ;
nf0{jif]k'5]gof'f'af'af6 nufpg' pkoQm
xG5 . /f'hL la?jfnf0{ h/b]v x6fpg'
kb5 . o; sf]/f'h'y'f'sf]nflu 8f0'v'g Pd-
\$% @-# ufd kl't ln6/ kfgldf ld; fP/ 5g'
; lsG5 .

kfp8/LldN8o'9' ; LMo; /f'h n'f'v]eg]
kl'xf kftdf / k'5 8f7df ; dt ; t'f w'afx?
b'v'f kb5 / af6 ; s] dg{y'f'v5 . o; /f'h'sf]
lgo'q'f'sf]nflu af/L ; w} ; k'n /f'v'gkb5 .
H'bf /f'h n'f'v]eg]So/fy'g !-@ d'LnE kl't
ln6/ kfgldf ld; fP/ af6df /fd'f] f' 5s'g'
kb5 .

nfxIMsLfn]0:s' ; sf]8f7sf] / ; r' ; L
la?jfnf0{xfgLk'v'f'v5 . nfxLsL'f b'v'f kg'
y'f'ng]lal'Qs}af6df uxt jf b'wnf0{kfgldf
ld; f0{5g'kb5 . nfxLlgo'q'f'sf]nfluLxft'h]
l6kg]j'f 8f0d'y'f'6 %) 0=; f' ! d'LnE kl't
ln6/ kfgldf ld; fP/ af6df /fd'f] f' 5g'klg
ug{ ; lsG5 .

km s'xfpg]c'f]fn]0:s' ; sf]p'k'f'bgdf
7h'f]l'f't k'v'f'pg ; Sb5 . o; sf]lgo'q'f'sf]
nflu km leq k'n kf/L'c'f] f nufpg]e'nf'
af/Ldf b'v'gf; fy d'f'nf'log %) 0=; L! d'LnE
kl't ln6/ kfgldf ld; fP/ af6df /fd'f] ; u
5s'g' kb5 . e'nf' lgo'q'f'sf]nflu So'h'lo/
k'n'f'f'g kf; f's'f]klg k'of'u ug{ ; lsG5 .

lg:sif{

le/fnf]tyf k'of'udf g'c'f'0{x's'f]hldgdf
y'f]d'x'g't'df w'}km'fpg ; lsg]0:s' ; nf0'
Joj ; flos ta/n]v'tLu/] c'f'f'bgLa9fpg]
k'f'f'f' l:y't ; w' / ug]e-'f'fo 36fpg]c'f'f'
h:tf dx'tj k'f'k'f'f'f' l'ng ; lsG5 . w'}k'ng]
/ n'f'f] ; do; Dd kl'g e'08f'0f ug{ ; lsg]x'bf
o; sf]p'k'f'bgaf6 t/sf]l'sf]c'f'oft kl't:y'f'kg
ug{/ t/sf]Lp'k'f'bg g'x'g] ; dod'f kl'g o; sf]
c'k'f't{ug{ ; lsG5 . To; h]ax'p'k'of'uL0:s' ; sf]
Joj ; flos v'tLdf ; /sf/ / s'f'f's bj}k'f'f'sf]
W'f'g's'if'f' x'g'h?/L5 .

; G'e{ ; fdfuL

Aung, L.H., A. Ball and M. Kushad. 1990. Developmental and nutritional aspects of chayote (*Sechium edule*, Cucurbitaceae). Econ. Bot. 44:157-164.

Bueno, R.R., S. Moura and O.M. Fonseca. 1970. Preliminary studies on the pharmacology of *Sechium edule* leaves extracts. An. Acad. Cien. Brasil 40:285-289.

Engels, J.M.M. 1983. Variation in *Sechium edule* Sw. in Central America. J.Am. Soc. Hort.Sci. 108:706-710.

Lira, R. 1988. Cucurbitaceae de la Península de Yucatán: Taxonomía y Etnobotánica. Tesis Maestría en Ciencias (Ecología y Recursos Bióticos), Instituto Nacional de

Sharma, M.D. 2010. Chayote Cultivation in Nepal. Hamro Sampada. Vol 4:6-12.

Vargas, E. 1991. Chayote *Sechium edule* (Jacq.) Swartz, Cucurbitaceae. Pp. 327-336 in Aspectos Técnicos sobre Cuarenta y Cinco Cultivos Agrícolas de Costa Rica. Ministerio de Agricultura y Ganadería, Dirección General de Investigación y Extensión Agrícola. San José de Costa Rica.

ca rfxlf]l6d/sf]dxTj aem Joj ; flos
v]ltknfnfu\$]xf].

a9LcfdM P h]6LP=afa' Ūca dh]of]l6d/
v]Lug{r'f]eg] ug{; S5't <

h]6LP=M ; lsG a9Lcfd . dh]cl3 egL
xfngL Ūsl/a !@) b]v @) ld6/ prf0
ePsf/ kpxdf 708f / udkf Gofg]xfj kfgL
xg]hun / v]af/ldf l6d/sf]Joj ; flos v]L
ug{; lsG . pQ/ kjk/ blif0Ldfx\$ ePsf
; fdbflos jg tyf lghLhūf l6d/sf]nflu
pkoQmdfG .

a9LcfdMca Joj ; flos lx; fan]l6d/ v]L
ug{k'of]eg] s; /Lz?jft ug{t h]6LP=
afa' <

h]6LP=Ml6d/ v]Lb0[sl; da6 ug{; lsG
cfd . Pp6f alpaf6 agf{tof/ u/Lv]Lug
/ csf{x'af6 =

a9LcfdM To; f]eP dnf0{klxn]l6d/sf]
alpaf6 agf{tof/ ug{t/sf atf0} 5f/f
= kl5 sndlsf] s'/f u/faf Ū

h]6LP=M l6d/sf]g; {ldf alpaf6 la?jf
p'kfbgsf] nflu r'j-zfv dlxgf /fdf]
dfG . la?jf p'kfbgsf] nflu l6d/sf]
alpnf0{@\$ 306f cuf8 lr; f]kfgldf lehpg'
k5{/ To; kl5 tof/ ePsf]g; {L Aof8df
kftnf]u/Lnf0gdf 5g{k5{.

a9LcfdM alp Aof8df 5/klg 5kf]lbg]/
ahf ahfdf kfgLklg lbg'k5{x'f]gXg 5f/f

h]6LP=M xf]cdf ; Vv ePdf a/f] / kfgL
klg lbg]ug{k5{/ enf/kft cPdf x6f0{lbg'
k5{cdf .

a9LcfdMl6d/sf]alp slt nlf5 afa'==P
/k'glsf]nflu <

h]6LP=M Ps /k'gL hūfsf]nflu @% ufd
l6d/sf]alpsf]cj Zostf k5{a9Lcfd .
g; {ldf /fv\$]alpsf]cs'/0f !% b]v @)
kl'tzt dfq xg]ePsf]g; {L Aof8df /fdf]

x]rfx ug{k5{.

a9LcfdM P==pdf/ zlQmsd xg]/x\$.

h]6LP=M xf]cdf l6d/sf]pdf/zlQmsd
5 . / alp pdg klg #- \$ dlxgf nlf5 .

a9LcfdM P==clg Aof8df pdf/\$]agf
sltsf]pd] ePkl5 cGq hūfdf ; fg{l7s
x'f] t <

h]6LP=M g; {ldf pdf/\$]l6d/sf]la?jf ^
b]v !) dlxgfsf]ePkl5 csf]7fpdf ; fg{
cyjf /f]gsf]nflu pkoQmxG . l6d/sf]
la?jf ; fb{Ps af\$ b]v csf{af\$sf]b/Lb0
ld6/ -!%=@) _ sf]kmsdf kg]u/L/f' of
; fg{k5{.

a9LcfdMca 5f/f of]Joj ; flos lx; fan]
l6d/ v]Lug{egkl5 s:tf]vfnf]df6df
v]L ubf{ pkoQm x'f] 5f/f ==

h]6LP=M l6d/ v]Lsf]nflu c? afnlnf0
h:tf]Hfb}dlnnf]df6sf]cfj Zostf kb'g
cdf cG v]Lsf]nflu pkoQmgxg]eL/
kfv, sf'nf tyf k'f]l/nf]e"efu / cl'hokgf
^% b]v &) ePsf]anf\$]bf]dg df6df klg
l6d/ v]Lug{; lsG .

a9LcfdMc? afnlnf0{h:tf]dnf]cfj Zostf
knf{sLgknf{5f/f <

h]6LP=M To:tf]w}cfj Zostf kb'g cdf .
ca clxn]clb'f]gs p'kfbg eGg\To; h]
uf0:t\$]/fd/Lkr\$]dn kof] u/] l6d/
v]LU'of]eg]w}]/fdf]cdf .

a9LcfdM of]t lah'la?jf p'kfbg ug{/
nufpg]t/sf eof]. clg csf{x'f] klg ; fg{
; lsG eGypG=

h]6LP=Mxf]cdf, dl/ k'f] dlxgdf l6d/sf]
l5lkPsf]x'f]nf0{!% ; #d=ndf]/ #j6f
c'nf kg]u/Lsl6E agfpg'k5{oLsl6Enf0
dn df6f]e/\$]k'f]lylg Aofudf 58s]kf]/
/f'g'k5{. sl6E /f]ge'bf klxn]@# kl'tzt
?6\$; # -Rootex-3_ sf]en'f]df r'f] b0{

लद 7f0\$ f] tks

; !df /; f0nE*

cfhef]n ld7f0\$ f] pkof] w} } 7fpdf xg
 yfn\$ f] 5 . ljleG v'zlsf cj ; / , lj j fx,
 efi- et], khf- cfh cflbdf ; lhn}: yfg kfPsf]
 5 ld7f0h]. ahf/df ljleG /E, cfsf/ /
 : j fbsf ld7f0{pknAw xg yfn\$ f] 5g\ ld7f0{
 ahf/df kl't: kwf{a9bf] 5 / cfkn] p'lkfbg
 cema9Lcfsif\$ agf0{ufxs a9fpg ld7f0{
 Jofkf/lx; n] ld7f0df cvfB kbfsf] kof] u
 ug{ yfn\$ f] 5g\ o: tf cvfB kbfsf] {d; fOPsf
 ld7f0{cfsif\$ blvPtf klg : jf: ysf] b] 6sf] 0fn]
 Tolt nfebfs eg] xfg\ pNf] o: tf ld7f0\$ f]
 kof] u/df : jf: ynf0{g/fdf] c; / kg{hfG
 . o: tf xfgsf/s ld7f0{af6 aRg pkef] 0rx;
 cfkn; r] xgkb5 .

krfpg ; Sb5 . o; n]z/Ldf w} }; d: ofx;
 lgDfpg ; S5 h: tM6fpsf] bVg]; d: of,
 j fs- j fsL nfg] slAhot, Ufl: 6s, k\$ /
 cfBf]; DaGwL; d: of, cN / , kn\$; f] sf]; d: of
 cflb . o: tf cvfB cfNdlgodsf] tksnf0{
 s; /LrG] t < tks ePsf] ld7f0df ; nf0{
 sf] Lafnf tks rdSb/ g} /lx/Xof] eg] Tof]
 r] Lg} xf] / ld7f0{vfg of] b 5 eG] s/f
 yxf kfg' k5{ . t/ olb tks 98] snf]
 ePdf Tof] cfNdlgod xf] / ld7f0{vfg of] b
 5g egLaem' k5{ .

* n]s, s]if ; r'gf tyf ; r'f/ s] b,
 xl/x/ejgdf s]if ; r'f/ clws] kbdf sfo{t
 xgxG .

ld7f0hf0{cfsif\$ byfpg tkssf] kof] u
 ; fw/Of xf] . ; fdfGtMo; sf] nflu r] b] Lsf]
 tks kof] u/ G5 . z' r] b] Lw} } dfqdf
 lnPdf lj ifsf] sfd u/ t'f klg sd dfqdf
 lnPdf lj gf xfg u/Lz/Ln] o; nf0{wft' s}
 ; kdf dnf]; u{ug{; S5 . To; h] r] b] Lsf] tks
 : jf: ysf] nflu xfgsf/s dflgbg t/ Jofkf/lx; n]
 r] b] Lsf]; \$f cvfB cfNdlgodsf] tks kof] u
 ug{ yfn\$ f] 5g\ hg : jf: ysf] b] 6sf] 0fn]
 xfgsf/s xG . cfNdlgod Ps r] b] z/L/
 leq kjz ul/; s] kl5 of] d] u] f] , dl: tis,
 sn] hf] kn\$; f] nufotsf tGx; df u0{hDdf
 xg] u5{ . To; kl5 of] z/Ldf SoflN; od; f
 kl't: kwf{ug{ yfn5, / z/Lsf xf8x; df wft'
 aG] klqmof sd xg hfG km: j; k x•L
 sdhf] xG . o; n] lzzx; sf] j] 4df / f] s] j 6
 Nofpg ; Sb5 . h] lj t s] ifn] cfNdlgod

