



Zaà jiiiri 1996 hali 2015 : n̄maari berente fotoosi duninya kuna jiiiri warankante Clive James, ISAAA harkusu nna hallitakpe, hantum Tila dii, Clive James n̄a kamm̄e dam à kpaasi Norman Borlaug , laakari karani igbekpe, ISAAA harkusun, s̄e

Haya wei yo kà nn huro m̄oon jiiiri waranka banna – banna w̄o kuna zaà 1996 halli 2015.

Hayà #1: jiiiri w̄o ya cii jiiiri warankante kà nn n̄maari berente n̄era bayo dunian kuna. n̄maari berente faari batume baa bayo hali ka t̄o hekitar miliar hinka zaŋa Amarika ganna faari baajine hinka (hekitar milion 937) noo nn faari duniŋa kuna nna saabuyo , ganna waranka ahinka sii jiiiri nna jiiiri jiiiri waranka banna - banna w̄o kuna 1996 - 2015. Harufariyo riiba t̄o wakati dii kuna bisa miliar 150 amarika d̄olar. Hali harufari milion 18 ka nn dom h̄on̄u b̄on̄on riiba t̄ont̄oni nn tutuuma do, hunayo talikater̄e kuna ganna talika yo kuna.Nn kuna 90 % barà no harufari c̄ene-c̄eneyo

Hayà #2: jiiiri waranka banna azansi yarda yo m̄ojine kpeiyo seedayo.jiiiri waranka ahinka sii banna ganna batume m̄ojine kpeiyo t̄o zaa 1996 hali 2014 hekitar milion 181,5 jiiiri 2014.batume dii t̄o hekitar milion 179,7 ka nn faari 2015 ;ou zobuyo c̄ene (1%) jiiiri nna jiiiri 2014 nna 2015 binni. Ganna f̄oyo n̄a nn ganna faari zaka t̄ont̄onu beinsika af̄oyo na zobu haya yo hei a à zobu dunjan kuna saabu gana wakati dii. Batuma yo dii ka nn zobu dii hini ka t̄ont̄onu ka t̄o nuŋu cirici dee heiyo dii i boori.dunŋa gan̄i faari zaka t̄ont̄onu cee z̄ongu f̄o j̄ere , zaa hekitar milion f̄o nna zemine (1,7%) 1996 ka t̄o hekitar milion 179,7 jiiiri 2015. Da dii yaa nam n̄maari dimi berete yo azansi w̄o kpei bara azansi beeri duninyan m̄ojine kpeiyo hini gaà.

Hayà # 3: Jiiiri taaci c̄ere ga - c̄ere ga ganna talika yo n̄a n̄maari berente faari t̄ont̄onu. 2015 kuna. Amarika Azia nna Afirka harufariyo faari m̄eef̄o hekitar milion 97 .1 ou zemine beeri kunune beeri 179 .7 ga (2014 n̄mene banna) beinsika ganna arizikinte yo na hekitar milion 82.6 (zemine hartani 2014) . Dir̄ou zaŋa ya yaa bo kpei . Ganna 28 ka nna n̄maari berente faari 2015 kuna 20 bara no Ganna taliayo, cinni ou 8 mà cii ganna arizikinteyo.

Hayà # 4:n̄maari berente seedayo margayo dom bàra no zemine 33 hekitar milion 179,7 kuna. Seeda yo dii harufaariyo ya n̄maari berente hinza gaà.margayo dii t̄ont̄onu hekitar milion 51,4 jiiiri 2014 hali hekitar 58,5 milion 2015, t̄ont̄oni dii t̄o Hekitar milion t̄ont̄oni dii t̄o o zemine wei cini taaci (14%), Ganna weicini taaci ya n̄a n̄maari berente seeda marga hinkà faari 2015 nn kuna ganna talikayo wei cini f̄o. Vietinam ganna na agbado kaà Bt/kà suuru na subu wii n̄maari berente sinte jiiiri 2015.

Hayà# 5: n̄maari berente faari yaasi ganna talika yo kuna jiiiri 2015. Amarika ganna – ganna ya na batume beeri faari , Berezili ya bara sinte , a bana Arigentini . Azi ganna Vietinam na n̄maari berente faari cee sinte . **siyaasa himma** na Bengaladesi na gabta Bt faari ka yei ka m̄oon d̄o d̄o t̄e c̄ene, dundu bisa nna haabu sinti. Filipini gono ko agbado berente faari jiiiri wei cini hinza go.nna kak̄ou tila f̄o jisi anasawa goosi bugu f̄o kuna n̄maari berente saabu gana , saaka Induniisi gono ko s̄oŋru an kara ka a yarda nna oŋgiri faari zaà.Sine ganna na haabu himma dam ko haabu Bt faari (miliar warankka a hinkka sii (18) Amarika d̄olar kuna zaà 1997 halli 2014). Da aseke nna Chemchina n̄a m̄e non miliar 43 Amarika d̄olar Syngenta gbeido s̄e. 2015 kuna Indiya ganna ya barà ganna sinte duniŋa kuna .Haabu Bt ya barà haya kà nn mutu ka faari bayo. A riiba yo t̄o miliar 18 amarika d̄olar zaà 2002 hali 2014 binni . Afriria ganna kpei m̄ojine faari dii kuna ba nna ka k̄ogiri beeri na nn wahalani aseke nna Afrik du sud ka ana niiya yo zobu halli hekitar dubu 700 jiiiri 2015 zobuyo dii t̄o zemine 23. ŋa dii ciba iri s̄e wahala ka k̄ogiri gona Ga biganna kuna nuŋu ka Agbado berente kaa tuu k̄ogiri WEMA (Water Efficient Maize for Africa) azansi gono hini hin̄on b̄on̄on hali 2017.Sudan ganna na haabu Bt faari t̄ont̄oni zemine 30 ka t̄o hekitar dubu 120 jiiiri 2015, bensi ka nawiya tutuuma na Burkina - faso gan̄i an faari t̄ont̄onu jiiiri 2015 Afirka ganna iyyaku ya na gan̄i yo faari n̄ma dii n̄maari yo ka talikayo baà hini ka hanfaani, dir̄ou k̄ok̄o n̄ma duka m̄e non.

Hayà # 6: *Amarika ganna kuna .ηmaari bereente mawjine kpeiyo yaasi 2015.* Mawjine kpeiyo hini yo baà haya tutuuma mænonyo fotoosi sinte ηmaari bereente taago zaŋa dundun bisa Innate nna pɔm Arctic ηmaari kaà n nà dimi bere fotoosi sinte kaà n nà dimi bere SU Colza, mænon sinte ham dimi bereente , isaham babati kaà nna dimi bere ka bɔɔ baà nmaa, R&D looyo tɔntɔni azansi beeri kaa nn dimi bere nna kaà nn cɛɛ CRISPR (Clustered Regularly Interspersed Short Palindromic Repeats), ya barà agbado kaà a tuu kɔɔgiri looyo (gunna ganna ganna). Dow nna DuPont yaa marga kaa bere DowDuPont.

Hayà #7: *Agbado ka à hini kɔɔgiri looyo beeri Amarika ganna kuna.* Agbado dimi bereente DroughtGard faari batume sinte Amerika kuna 2013 tɔntɔnu baajine wei cinni guu (15) ka à kpei zaa hekitar dubu weegu 50 jiiri 2013 halli dubu 810 jiiri 2015 ka a ciiba yo kaa harufaariyo tuu asɛ.Haya guda fɔ nna non igbe **WEMA** (Water Efficient Maize for Africa) ka à guuri no nma kanna agbado dimi bereente ka a hini kɔɔgiri tamma – tamma Afrirka ganna foyo kuna kaa nba fisɔu nɛ ka kpei jiiri 2017.

Hayà# 8: ηmaar Dimi bereente gɔɔɔyo yaasi Nasaarà ganna kuna. Nasaarà Ganna guu gudaafɔ yo dii yaa takiri koo agbado Bt tuuri dumma hekitar 116 870 faari dii yei banna zeminɛ 18 dee nna kari nna 2014 . Faari batume zakà zobu ganna yo dii kulu kuna saabu ηmaani – ηmaani yo gana zaŋa agbado faari, zam ka na kamme dam harufariyo sɛɛ nna caada.

Hayà # 9 : ηmaari dimi bereente riibayo. lasabu beiyo ceejiyo 147 banbata ka n tɛɛ jiiri waranka banna banna wɔ kuna ciiba ka “ **sɔɔci ηmaari dimi bereyo azansi looyo nam safari looyo zobu zeminɛ 37 ka ηmaari duuri tɔntɔnu zeminɛ ka harufariyo riiba kaarani halli zeminɛ 68**”(Qaim et al,2014). Beiyo wɔ yaa beiyo ciini koofani ka n tɔɔ jiiri nna jiiri (brookes et al, 2015). Zaa 1996 halli 2014, ηmaari yo dii nam hɛɛɛ zobu , ganna yo boori ηa nuɲu na sarà nna: ηmaari faari tɔntɔni (miliar 150 dɔlar), nuɲu hinɔn kaa safari cilo milion 584 furuu ,2014 fɔlonku, heu laalo zobuyo halli cilo miliar 27 zaŋa yà himma nna nma loole milion 12 kaa hini yo bɔnɲɔ jiiri fɔ mɛɛ, tuuri dimi yo kɔɔɔyo nna ganna hekitar milion 152 ka nna faari nn bɔnɲɔ zaa 1996 nn halli 2014, talikaterɛ zobuyo harufari n ηmɛnɛ iyyaliyo cɛnɛ -cɛnɛ nna milion 16,5 safu kuna , kaa à tɔ ɔ bɔɔ milion 65 ka nn dom gono talikaterɛ kuna. Dmaari dimi bereente barà no alheiri ,anama à na cii safari kulu; farimmi azansi hinɔn yo looyo zaŋa batume barigi nna tuuriyo sennin barà no tɔntɔni ηmaari dimi bereente yo looyo kuna, zaŋa n cim kaa tɔɔ nna ηmaari bɔnɲɔ yo.

Hayà #10 : Suba senniyo. haŋa hinza ya himma nma laka yeeti . **senni sinti** , boro maa tuu mɔɔ bayo (90 halli 100 zeminɛ) yobuyo ka nn ηmaari bereente nɛɛra kuna hɔn **maa gɔɔɔɔ nam an sei**. Alma batume cinni kpaara taago yo sɛɛ ηmaari taago zaŋa agbado bereente kaa hinni gono asɛ halli **hekitar milion 100 duninya kuna:** hekitar 60 Azia kuna (Sini ganna na hekitar 35 faari) Afrika ganna na hekitar milion 35 faari .**Senni hinkante , bonigi ηmaani-ηmaani 85 kaa nn batuyo lasabuyo kuna,** ηa dii banna n baa mænon. A kuna agbado kaa a kɔɔgiri saabu WEMA ηmɛnɛ ka nn dɔm baa sei Afirika ganna kuna 2017, mɔn dɔɔɔ Azia ganna nna ayaba cirici nna dolique ka a hini kɔkɔyo ka a baa Ganna talikayo hanfaani . Gbeidɔyo dɔ kamme liko nna borom kpaasiterɛ kuna nna hanfaani tɔɔ Afirika ganna sɛɛ domu nn kannna dimi cirici yo harufariyo sɛɛ. **Senni hinzante** ηmaari dimiyo ka nn bere yaa barà beiyo kaa nn kpei mawjine hɔnyo wɔ. **Beiyo haŋa ka a boori no CRISPR** . Nuurakpe tutuuma lasabu bayo ka ηmaari dime bereyo , barà no alheri , fɔlonku ka a hanfaani baa dee mba karri nna ηmaari bɔnɲoyo hini hinza kuna. Deidei , dirà nna ηmaari dimi bereente kaà kammu, ηmaari bereente yo dii tuu, **deidei nma beiyo sariyo gana ,ka a tɔɔ guuri ka suu caada.** (Flavell, 2015) nà Suba Azansi taago fɔ zaà ka a barà **ahinza mɛɛfɔ marga , dimi bereyo , nna kɔkɔyo** (tuuri kɔkɔyo looyo zaŋa dimi kɔsɛ **nma duu ka tuuri dimiyo bere**) nma duka tuuri dimi faari tɔntɔnu , “**kulu-kulu gɔɔɔyo kuna**”ka nma ηadi ba nam irim tɔɔ ηmaa ka kuɲu gaa nna hɛɛɛ maa zobu nna talikaterɛ.

ISAAA bara igbe ka asuu fotoosi tɛ kaà ataaziriyo nna liko gaà. Batumeyo kaà nna ηmaari dimi bereente faari nn bɔnɲɔ ISAAA tilayo kuna nà barà kabunte ceefɔ baa tuuri mani nn zaà. Laabari cinniyo baka tilawɔ tɔntɔnu tila cɛnɛ lamba 51 nna 272 banna , “20 th Anniversary of the Commercialization of Biotech Crops”(1996 to 2015) , and Highlights for 2015” kaa Clive James hamtum . Dee noo baà laabari tɔntɔni , wɔ kpei <http://www.africenter.isaaa.org> ɔu wɔ kpei ISAAA kaa agono Azia gabaii, +254204223618 ɔu wɔ wasika hantum ka samma africenter@isaaa.org