



Xwe kpe hwe nu ko go atin vi GM ton le sisa gbɔn gbɛ ɔ bi ji nu we ISAAA de. (1996-2015)

**Clive James, gan e hwe aza nu ISAAA bo le do e wa e we ε
Μεταφο ɔ so wema elɔ do te nu, nuto xame to ton, me se bo do me wu, me
gudoton e yi untun daxo gbɛ ɔ ton do fifa kan xixo linu. Norman Borlang Lo
bo le nyi dodo nu. ISAAA ɔ.**

Nu wiwa wo e kan atinvi GM ton le do hwe ko nukon ton le die (1996-2015)

Nu wiwa nukon ton # 1. Lihwe afowo afoton (2015) go we nyi hwe kpe hwe nu kogɔ, bo atinvi GM ton le do nu kon yiyi tawun sin dajɔ li nu. Aikungban de bo do de wu nu jre kpo kanti le do (ha) liva we atinvi GM ton we e le (2 milliards ha) ee yi USA sin aikungban le we mon livi afene kanton afoton nukun we (937 millions d'ha) gbɔn gbɛ ɔ me do to ko aton nukun aton (28) hwe wu hwe wu nu hwe ko gudoton le (1996-2015). Glesi le sin le do, besi 1996 yi je 2015 we e len do akwe liva kanton gban (150 milliards) dollars U.S kaka yi je glesi livi afoton nukun aton (18 millions) ee gbɛ wan nu GM sin atinvi le e bi we no mo le hwe wu hwe wu. Do kanwe ko ji ɔ ye me kanwe wo (90%) we nyi glesi kpevi lo bo le nyi wamamonon lo do to e man yi nukon an le me.

Nu wiwa we go ɔ #2. Nun kon yiyi e kun kpla Atin GM ton do xwe ko e wa yi le eme e. Besin le xwélé 1996 kaka wa yi je 2014 ɔ, atin GM ton dido do gbɛ ɔ bi me ɔ, e nyi ala de we e nyi ɔ, e yi aga titeungbe. Kpodo a tin ɔ dido livi kenne ko nukun do kpo adade (181.5 millions ha). Enyi e na je do nujlekpɔ kanton ledo livi kenne ko e hwe kpe de (179.7 millions ha) e ji e tun atin mo koton le do do lihwe afowo afoton (2015) e ɔ, e de kpo tahun (1.0%) do Lihwe afowo wene (2014) wa yi je lihwe afowo afoton ɔ me (2015). Do to de le tun atin ɔ mo un koton, mo dokpo ɔ, to de le yi gudo de me tahun do kpo cowun xime e jinukun taji wabi e u. To ene le e yi gudo do atin dido sin aliji e ɔ hen ɔ, ye na le na wa yi nukon ganji xwe ee nu e ajoxanu ne le na wa yi kwe e. GM sin ji nukun dido yi nukon azon kanwe ko gbon gbɛ o bi me, gbon atin dido do nujlekpɔ kanton ledo livi dokpo jeji (1.7 millions) do le xwélé 1996 wa yi livi kenne ko e xwe kpede (179.7 millions) do lihwe afowo afoton (2015) gbé. E ne ɔ we zon bo Atin GM ton dido nyi nunyen walɔ dagbe do xwe ee mi do gudo wa yi le e me.

Nu wiwa aton go ɔ # 3. Do xwe ene gudo ton ee mi do gudo wa yi le me e, To e do goudo le e tuun atin GM ton ɔ do gle gegé ji. Do lihwe afowo afoton (2015), glesi e nyi Amelika Latinou ton le, Azi ton e nyi Afrika ton le e kpan, no bu bo le nujlekpɔ kanton ledo livi kanwe afoton nukun we jeji (97.1 millions ha) e na do ɔ kanwe wene do kanwe ko ji (54%) nujlekpɔ kanton ledo GM ton do gle nujlekpɔ kanton ledo livi kene ko e hwe kpede (179.7 millions) so bo do kanwe waton do kanwe ko ji (53%) do lixwe afowo wene go ɔ me (2014) lo ɔ to e do ajo jinu tawun le le gle nujlekpɔ kanton ledo kanwe nukun aton e xwe kpede (82.6 millions ha) e na do ɔ kanwe aisen do kanwe ko ji (46%) e so bo do kanwe tenwe do kanwe ko ji (47%) do lixwe afowo wene go ɔ me (2014). nukon yiyi ene ɔ na no mo do do to ko aton nukun aton ee do nukun GM ton do 2015, ko nyi to e do gudo le e bo tanton ny to e do ajo linu tawun le.

Nu wiwa ene go ɔ # 4. Nukun GM ton ee e no do le e d'axi ji ɔ, e no yi ten gban nukun aton do kanwe ko ji (33%) do nujlekpɔ kanton ledo livi kene ko e hwe kpede (179.7 million) me. Jinukun ene le e do gba e do nukon yiyi do glesi le wu do nukun GM ton taji aton le kpa xwe. Nukon yiyi ene ɔ, e hen ɔ e na xa do nujlekpɔ kanton ledo livi kanwe wodonko jeji (51.4 millions ha) do lixwe afowo wene go ɔ me (2014) loo yi nujlekpɔ kanton ledo livi kanwe afoton nukun aton jeji (58.5 millions ha) do lihwe afowo afoton ɔ me (2015) - Nukon yiyi nujlekpɔ kanton ledo livi tenwe jeji, e na do ɔ aga yiyi wene do kanwe ko ji (14%) . To wene we le atin e xo do we mi de e do nukunme we ji do lihwe afowo afoton ɔ me (2015). Do to ene le me ɔ, to e ma do nukon yiyi a ɔ, wodonko we de me. Vietnamu to ɔ do gbayikun ee nyi yoyɔ bo no lisa xa nuvi do gbɛ le bo le nyi nukun nukonton GM ton do lihwe afowo afoton go ɔ me (2015).

Nu wiwa atɔɔn gɔ ɔ # 5. Gbe ɔiɔo taji ee kukpla gle GM tɔn ee le ɔo lihwe afɔwo afɔtɔn gɔ ɔ (2015) mɛ le ɔjie. Ɖo yovo gbé ji ɔ, amelika latinu wɛ ɔo ayikungban gege bɔ Blézilu kpo Ajantinu kpan bɔ de u. Ɖo Azi ɔ, Vietinamu wɛ nyi to é do ji nunkun é nyi GM tɔn e é. **Djlo acɛkpikpa Bangladesh** tɔn ɔ wu wɛ sɔn bɔ auberginu^{Bt} ɔo nukɔn yiye e wɛ na bɔ mɔnlíkun dagbé (riz doré) kpodo yovo dokwin (pomme de terre), avɔkanfun GM tɔn ee ɔo nukun wɛ e ɔe. Filipunu le nɔ do jinunkun é nyi gbade GM tɔn é sin xwé watɔn dié bɛ ka nyi ɔuɔé ji nu ye. Xo ɔé ton sin gbéta ényi hwèdɔgbasa Indonési to ɔ tɔn mɛ bo kunkpla jinunkun GM tɔn le hwé nu é to éne ɔ ɔo gbésisɔmin bo na le léké GM tɔn ɔo to ɔ mè é. Cinu ka kpoɔo nyɔna é nyi avɔkanfun^{Bt} tɔn mɔ wɛ; e mɔ akwɛ liva afɔtɔn nukun atɔn (18 milliard) dollars US ɔo lé xwélé 1997 yi jɛ 2014. Bɔ ChemChina ɔ, e sɔ jinukun akwɛ liva kanɔe nukun atɔn ɔ'ahi ji nu Syngenta. Ɖo lihwe afɔwo afɔtɔn (2015) gɔ ɔ mɛ ɔ, Indu ɔ wè nyi to nukɔn tɔn é ɔo avɔkanfun glélile d'ali e. Abgɔ avɔkanfun^{Bt} ɔ tɔn ɔo taji. Lé é ye mɔ ɔo nukun ene le mɛ é su kpo bɔ bɛsin lixwé afɔwo we gɔ ɔ yi jɛ lixwé afɔwo wene gɔ ji (2002-2014) é yi liva Afɔtɔn nukun atɔn (18 milliards) dollars US. Yozo sukpo ɔo Afrika ɔo e ka ɔo nukɔn yiye. Afrique du sud to ɔ, e sɔn aku ɔuɔo u bɛ jayi nujlɛkpo kantin ledo afatɔn donu nuwɔntɔn kanwe ko (700 mille ha) ɔo lihwe afɔwo afɔtɔn ɔ mɛ (2015); e blo ko nukun atɔn ɔo ɔo kanwe ko ji (23%). Nu e wu wɛ zɔn bɔ gbade ee tutome WEMA (Water Efficient Maize for Africa) ɔo lihwe afɔwo afɔtɔn nukun we gɔ ɔ mɛ (2017). SUDAN to ɔ lɔka le lé avɔkan fun^{Bt} glé ɔ gban ɔo kanwe ko ji (30%) bo yi nujlɛkpo kantin ledo afatɔn donu kantɔn (120 mille ha) lihwe afɔwo afɔtɔn gɔ ɔ (2015). Hwénenu ɔ, Burkina Faso eyɛ ɔo nukɔn yiye ɔé a. Ɖo lihwe afɔwo afɔtɔn (2015) ɔ, To tantɔn ɔo Africa gbeji le jinunkun e nyi GM tɔn le bo kɔn ɔe e na ci ɔ, trala ɔ wama mɔn nɔn le.

Nu wiwa ayizen gɔ ɔ # 6. Nunkɔn yiye taji e e nyi USA tɔn ɔo lihwe afɔwo afɔtɔn (2015) gɔ ɔ mɛ e. Nukɔn yiye tawun tin ɔo GM sin atin dudo le kpaxwé : «nu nukɔn tɔn le ɔ » gbe yiye kpo do jinukun GM tɔn le « nu yɔyɔ le » atin GM tɔn ɔi yovo dokwin InnateTM kpo é nyi Arctic[®] tɔn e kpan, ajɔnusia ee ma nyi GM tɔn a e SU ColzaTM e, e yi gbe nu zize do axio ɔ ji, nunkɔn yiye le tin ɔo gbe yi nu, nududu e nyi kanlin le tɔn bɔ GM ka blo bo sɔ d'axio ji é. GM le ba do nu hwévi ɔe bo ze nyi axio ɔ ji nu ɔagbé tovi le tɔn. nukɔn yiye tin ɔo nunyen mɔ taglome sɔgbé nɔn ee nyi CRISPR (Clustered Regularly Interspersed Short Palindromic Repeats); gbeyiye ɔaxo ene nu gbade nukɔntɔn GM tɔn, tutome ene wu wɛ zɔn. Dow kpo do DuPont kpan wɛ nɔ bub o do DowDuPont wa.

Nu wiwa tenwe gɔ ɔ #7. Mɛ gege do gbade nukɔn tɔn é nyi GM tɔn ɔo USA. Ayi e ji e do jinunkun enyi GM Drought GardTM, nunkɔn nunkɔn tɔn ɔo USA do lihwe afɔwo watɔn (2013) gɔ ɔ, nukɔn yiye GM tɔn ɔ é yi azɔn afɔtɔn nujlɛkpo kantin ledo adɔkpo we afatɔn (50 mille ha) ɔo lihwe afɔwo watɔn (2013) gɔ ɔ yi jɛ nujlɛkpo kantin ledo afatɔn donu afene wo (810 mille ha) ɔo lihwe afɔwo afɔtɔn gɔ ɔ (2015). E ne wɛ de xle ɔo glesi le yi wan nu jinukun GM tɔn le. Nuwiwa mɔ un kɔ tɔn le tin ɔo alo ɔo alo mɛ enyi axɔsu kpo do tito mɛ enyi gbeto kpa tɔn bɛ non ylo ɔo WEMA é ten tin bo na sixu le gbade GM ɔo gbɔn to e nyi mɛwi gbeji tɔn le é bi mɛ bɛsin din wa yi lihwe afɔwo afɔtɔn nukun we gɔ ɔ mɛ (2017).

Nu wiwa tantɔn gɔ ɔ # 8. Nino mɛ e atin GM tɔn le ɔo ɔo yovo anyu wewe nɔ le gbe dji e. To atɔn enyi Union Européenne tɔn le do gbade^{bt} tɔn nujlɛkpo kantin ledo adɔkpo atɔn jɛji. Ɖo kanwe ko ji ɔ, afɔtɔn nunkun atɔn jɛn ye nyi ni e jlè do lihwe afɔwo wene (2014) gɔ e way i e wu. Glélile ne ɔ ɔé kpo ɔo to gégé mɛ ɔo nugege wu. Trala ɔ, ɔo gudo yiye gbade glélile tɔn wu.

Nu wiwa tɛne gɔ ɔ # 9. Le e atin GM tɔn le nɔ na e. Do ba nu nu kantɔn konunkun tenwé gɔ ɔ é nyi xwé ko gudo e mi blo wa yile ton ɔ'élxle gbɔn gbè ɔ bi mɛ ɔo " nunyen kwin do ji nukun ja sin aliji ényi titome atin GM tɔn na bɔ ajo xa nu yovo tɔn é nɔn huzu ada nu nukun ɔo zizan ɔé kpo bi. Atinken zizan ɔo gbantɔn nukun we ɔo kanwe ko ji (37%), nukɔnyiyi gle tɔn ɔo ko nukun we ɔo kanwe ko ji (22%); le é glesi le mɔ e, kanɔe ko atɔn nukun atɔn ɔo kanwe ko ji (68%)” Ɖo le xwele 1996 wa yi lixwé afɔwo wene gɔ ɔ 2014 ɔ, Atin e nyi titome atin GM tɔn na bɔ nu ɔagbé ɔu bo nɔ ganji ɔo agbaza mɛ tiin, bɔ ayi kungban le le ɔo ganji bo nɔ lè na jinukun gege tɔn. E jle do akwɛ liva kantɔn gban (150 milliard) dollard US, jo nyan nyan (CO₂) e nɔ ji nunkun e

nɔn nɔ jinukunsi kpo ayikungban kpan ji ɔ dɛkpo. Ya dɛsu dɛ kpo. Jinukun ɛ nyi titomɛ GM tɔn do taji, lo ɔ e nyi amansinkuin nu azon bi a. Gbeyi nu nu dagbɛ wiwa do glɛlilɛ sin aliji nu nyɔna gbɛ ɔ tɔn ci dji lɛɛ aman hwendo mɛ ton lɛ dɛ gbɔn ɛ dɔwun.

Nu wiwa wo go ɔ # 10. Nuɔo nukun lɛ. Akpa xwɛ nukɔn tɔn ɔ, gbɛ yi yi nu GM walɔ sukpo yi kandɛ wo dɔ kanwɛ ko ji (90%) yi jɛ (100%). Ð'axi taji daxo GM tɔn lɛ mɛ ɔ, adagblogblo su kpo lɛ ɛ bagbɔn wɛ ɛ dɛ ɛ a. ɛ do mɔ co glɛ gbadɛ dɛdovo GM tɔn nu jrɛ kpo kantin lɛ dɔ livi kanwe ko gba kpɛ to yɔyɔ dɛ vo lɛ mɛ (100.millions ha) dɔ Asie ɔ livi kandɛ ko (60.millions ha), livi gban tɔn (35.millions ha) dɔ Cinu kɛdɛ kpo nu jrɛ kpo kantin lɛ do livi gban tɔn (35.millions ha) do Africa gbeji.

We go ɔ ajɔnu yɔyɔ kanwɛ atɔn (85) devo tɔn dɔ Pipeline bɛ ko jɛ gbɛdjɛ gbɛdjɛ kpon dɔ glɛlilɛ linu, nu e nɛ lɛ wɛ nyi dagbɛ GM tɔn e nɔ mɔ aku dɔ lɔ bo mɔ nɔ fiɔ a ɛ. Titomɛ WEMA tɔn e dɔ na gbɔn Africa dɔ hwɛ afɔwo afɔton nukun we (2017) go ɔ mɛ ɛ. Mɔnlikun (Riz Doré) ɛ nyi Asie tɔn ɛ, kwekwe ɛ nɔ vlɔn ganji e kpodo dolique e nɔ na tawun d' Africa gbeji e, To ɛ ma yi nukɔn gɛgɛ mɛ wɛ ɛ ko dɔ nukɔn yi yi dɛ kpodo titomɛ ahosu kpodo gbɛtɔ kpaa (PPP) lɛ kpan. **Nun atɔn gɔɔ wɛ** nyi dɔ atin yɔyɔ e e sin genomu wɛ ɛ dji lɛ e sixu nyi nukɔn yi yi daxo bi dɔ nunyɛn tɔ lɛ nukun mɛ. **Dɛvo ɛ nyi CRISPR (Clustered Regularly Interspersed Short Palindromic Repeats) e wɛ nyi azɔwanu yɔyɔ dɔ nunyɛn titeungbe lixo.** Ðoba nu nuto gɛgɛ mɔ dɔ genomu ɔ nyɔn bo na nà le titeungbe dɔ akpaxwɛ enɛ: **gbesiso linu, wezun kikan linu axi dudo linu kpo nulɛvɔ to linu kpan.** Vo gbingbɔn ee dɔ nunyɛn yɔyɔ elɔ mɛ wɛ nyi dɔ e kpo kwɛ hu OGM lɛ lo bo lɛ dɔ titomɛ dagbe e nɔ jijɔn nunyɛn ji bo nɔ na sɔgbɛ ha ayi dɔkpo dɔkpo. **Nu walɔ dagbe dɛ dɛ bɛ sɔ xwɛ (Flavell, 2015) bo zɔn bɛ na mɔ nukunu jɛ troika ee nɔ dji nunɔmɛ genomu kpo nuvi do gbɛ lɛ kpan.** (nuvi dɔ gbɛ kleun kleun zizan nɔ zɔn bɛ e nɔ dɛ e jɛ ji lɛ kpo.) Bonu ye na sixu lɛ glɛ gege bɛ na sukpo « bo vlɔn ada bo dɔji », ba lifɛn nu ya, ba si xu nɔ titomɛ e nɔ jɛ hun do le e wagbɔn bɔ ayi ja yi na tiin do nududu kpa xwɛ ɛ, bɔ adɔ ma sɔ na tɔn a ɛ.

ISAAA ɔ gbɛta ma do nukun akwɛ co wa nu wɛ bɔ Gbɛta mɛ kpaa tɔn kpodo axɔxu tɔn kpan bi wɛ non da lɔ ɛ. Atiin GM tɔn ee bɛ wa bɔ ISAAA jla xo tɔn lɛ ɔ, azon dɔkpo jɛn e nɔ ha yee. Bonu mi na dɔ mɔjɛmɛ devo lɛ ɔ, mi na kɔn wema kpa “*20th Anniversary of the commercialization of Biotech Crops (1996 yi 2015) and Highlights for 2015*” tɔn ɛ e mɛdaxo Clive James wlan ɛ mɛ. Mi na bado nu nu gɔna ɔ, mi na yi <http://www.africenter.isaaa.org> abi mi na ylo azɔ xwe ISAAA tɔn ee dɔ Azie Sud-Est tɔn e do +254204223618 eglo hun mi wlan nu sɛ do africenter@isaaa.org