



## FUNDO ZIKULUZIKULU

**Umo Mbuto Zalero (Izo Ukhaliro Wakhe Wuli Kusinthika Pakugwiriska Nchito Maluso gha Sayansi/Mbuto Izo Tunthu Uto Tukulongola Ukhaliro Wakhe Tulikusinthika Pakunjizga Tunthu Uto Tukulongola Ukhaliro wa Mbuto Zinyakhe Mukati Mwakhe) Izo Zili pa Msika Zikucira Pa Calo Cose Capasi: 2011**

**Capelekeka na mlembi kwa wanthu 1 biliyoni wakavu na wanjala kweniso ku ciponosko cawo.**

***Apo cipendesero ca wanthu pa calo cose ca pasi cafika pa 7 biliyoni, Mahekala agho pakupandika Mbuto Zalero Izo Ukhaliro Wakhe Wuli Kusinthika Pakugwiriska Nchito Maluso gha Sayansi ghakulutilira kuluta panthazi apo ulimi wa mbuto izi walutiliranga kuluta pa nthazi caka na caka muvyaka 15 ivyo vyajumpha.***

Cifukwa ca phindu likulu, ulimi wa mbuto izi ukalutilira kuluta pa nthazi mu caka ca 2011 ndipo mahekala agho pakupandika mbuto izi ghakafika pa 12 miliyoni, ghakasazgikirapo na 8% ndipo ghali kukwana mahekala 160 miliyoni, ghali kusazgikilapo kujumpha mahekala 148 miliyoni agho ghakapandika mu caka ca 2010.

Kusazgikirapo kwa unandi wa mahekala kutayimuza ka 94 kufuma pa 1.7 miliyoni mu caka ca 1996 kufika pa mahekala 160 miliyoni mu caka ca 2011 kukupanga mbuto zalero izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi kuwa zakuzomerezgeka na zakupokelereka mwaluwiro comene kujumpha mbuto zose za lero mu mbiri ya mbuto izi.

Ukaboni wakuzizika comene wa mbuto zalero izi ngwakuti kufuma mu caka ca 1996 kufika mu caka ca 2011, walimi mamiliyoni wakufuma mu vyalo 29 pa calo cose ca pasi wali kupanga vigamulo vyakujumpha mamiliyoni 100 vya paiwo weni kuti wapandenge kweniso kupanda caka na caka mbuto izi pa mahekala agho ghasazgikilangapo pacokopacoko ghakukwana 1.25 biliyoni. Cifukwa cikulu ico cikupangiska walimi kuti wakholwe kweniso kuwa na cigomezgo pa mbuto izi nchakuti mbuto izi zikupeleka phindu likulu comene la cuma kweniso malo ghakutizinga ghakuwa ghawemi.

Mwavyalo 29 ivyo vikapanda mbuto izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi mu caka ca 2011, 19 vika wa vyalo ivyo vikukhupuka sono ndipo 10 vika wa vyalo vyakukhupuka. Vyalo 10 ivyo vili pa nthazi vikapanda mahekala ghakujumpha miliyoni imoza calo cili cose ndipo vyalo ivi vikupereka mwa wi ukulu pa calo cose ca pasi kuti ulimi wa mbuto izi ulute panthazi comene kunthazi uku.

Mu caka ca 2011 walimi 16.7 miliyoni, awo waka wa wanandi na 1.3 miliyoni panji kuti 8% kujumpha wa mu caka ca 2010, wakapanda mbuto zalero izi. Mwa walimi a wa, walimi wakujumpha 90% panji kuti 15 miliyoni waka wa wakavu awo walije vipangiri vya ulimi vyakukwana awo wali muvyalo ivyo vikukhupuka sono. Walimi wakutinkha comene kuti wanange cuma cawo pawaka kweni mu caka ca 2011 walimi wacoko wacoko wakukwana 7 miliyoni wamucalo ca China kweniso 7 wamucalo ca India wakasankha kupanda mahekala 14.5 miliyoni gha thonje la Bt.

Vyalo ivyo vikukhupuka sono vikapanda pafupifupi 50% ya mbuto zalero, izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi, izo zikapandika pa calo cose ca pasi kweniso vikulindilirika kupanda mahekala ghanandi kujumpha agho ghakupandika na vyalo vyakukhupuka mu caka ca 2012. Mu caka ca 2011 ulimi wa mbuto izi ukaluta panthazi mwaluwiro comene kutayimuza kawiri kweniso malo agho zikupandikapo ghakakula kutayimuza kawiri mu vyalo ivyo vikukhupuka sono, ulimi uwu ukaluta panthazi na 11% panji kuti mahekala 8.2 miliyoni kuyanankha na mahekala 5% panji mahekala 3.8 miliyoni mu vyalo vyakukhupuka.

Kunjizga tunthu uto tukulongola ukhaliro wa mbuto yinyakhe mukati mwa mbuto yinyakhe nchimanyikwiro cakukhumbika comene ca mbuto zalero izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi – mu caka ca 2011, vyalo 12 vikapanda mbuto zalero izo zina ukhaliro wa mbuto ziwiri panji zinandi. Cakukondweska nchakuti vyalo 9 mwa vyalo 12 ivi vika wa vyalo ivyo vikukhupuka sono. Mu caka ca 2011 mahekala 42.2 miliyoni panji ghakujumpha cigawa cimoza ca viga wa vinayi vya mahekala 160 miliyoni pakupandika mbuto izo zika wa na ukhaliro wa mbuto zinandi. Mahekala agha ghaka wa ghanandi kujumpha mahekala 32.2 miliyoni panji 22% ya mahekala 148 miliyoni agho ghakapandika mu caka ca 2010.

Vyalo vinkhonde ivyo vikukhupuka sono ivyo vikudangirira pa ulimi wa mbuto izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi ni India na China mu Asia, Brazil na Argentina mu Latin America na South Africa mu Africa, ivyo vyose pamoza vikupanga 40% ya cipendesero ca wanthu pa calo cose ca pasi ico cingafika pa 10.1 biliyoni mu caka ca 2100.

Calo ca Brazil, kwa vyaka vitatu vyakundongozana, cika wa msisi wakulutiska pa nthazi ulimi uwu pa calo cose capasi ndipo casazgilangako mahekala agho cikupandapo mbuto izi kujumpha vyalo vyose ndipo cikapanda mahekala 4.9 miliyoni, kusazgilapo na 20% pa mahekala agho cikapanda mu caka ca 2010. Ndongomeko yamacitiro ghaluwiro yikazomerezga mbuto zinyakhe zipya zinkhondi na imoza mu caka ca 2011 kusazgaposo nchunga izo zikunchintha kukacibungu ako kakucemeka vayilasi izo zikupandika ku Brazil izo zikapangika na bungwe la boma la calo ico lakucemeka EMBRAPA (Brazilian Agricultural Research Cooperation).

Calo ca US cikalutilira kuwa calo ico cikupanda comene mbuto za lero pa calo cose ca pasi ndipo cikapanda mahekala 69.0 miliyoni, kweniso mu calo ici mbuto zose zalero izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi zili kuzomerezgeka na kupokelereka na pafupifupi 90%. Cili kwambaso kupanda mhangi/mpheni zakucemeka RR@alfalfa ndipo mahekala 200,000 ghakapandika, kusazgilaposo apo mahekala 475,000 gha mphantata yakucemeka RR@sugarbeet ghakapandika.

Phapaya lakunchintha kukacibungu kakucemeka vayilasi ilo likufumira ku US liri kuzomerezgeka kuwa cipambi cakulyeka mu calo ca Japan kufuma mu Disembala 2011.

Calo ca India cikahenelanga kuti pajumpha vyaka 10 kufuma apo cikambira kupanda thonje la Bt ndipo kwa nyengo yakwamba cikapanda thonje ili pa mahekala ghakujumpha 10 miliyoni ivyo vikapangiska kuti mahekala ghafike pa 10.6 miliyoni, ndipo malo agha ghakaŵa 88% ya mahekala 12.1 miliyoni agho pakapandika thonje. Awo wakapindula comene wakaŵa walimi wacokoŵacoko wakukwana 7 miliyoni awo wakapanda thonje pa mahekala 1.5 miliyoni. Calo ca India cikasazgilapo makopala agho ghakufuma ku thonje la Bt na US\$9.4 biliyoni kufuma mu caka ca 2002 kufika 2010, kweni mu caka ca 2011 pela cikasanga US\$2.5 biliyoni.

Mu calo ca China walimi wacokoŵacoko 7 miliyoni (awo waliyose wakapanda mahekala 0.5) wakapanda mahekala 3.9 miliyoni gha thonje la Bt ivyo vikulongola kuti mbuto iyi yili kuzomerezgeka na kupokerereka na 71.5%. Kuzomerezgeka kwa mpunga wa Golden kuti uwe pamusika, uko kukulindilirika mu caka ca 2013/14 mu calo ca Philippines, kuzamovwira comene calo ca China.

Calo ca Mexico cikapanda mahekala 161,500 gha thonje ilo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi ivyo vikulongola kuzomerezgeka na kupokerereka kwa mbuto iyi na 87%, kuluta panthazi na 178% kufuma pa mahekala 58,000 mu caka ca 2010. Cakulata nchakuti ciwe calo cagujigomezga cekha pa thonje kweniso kupandika kwa ngoma, izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi, mu vyalo vya kumpoto kuti lisazgilepo ngoma na matani 10 miliyoni pa ngoma izo zikukhumbika comene kweniso zikugulika mwakukwera comene.

Africa nayo wakaluta panthazi pa ulimi uyu mwakuyana na malango agho ghalikuwikika. Vyalo vya South Africa, Burkina Faso na Egypt vyose pamoza vikapanda mahekala 2.5 miliyoni; vyalo vitatu Kenya, Nigeria na Uganda vikapanda minda yinandi yakuyezgererapo.

Vyalo vinkhonde na cimoza vya EU vikapanda mahekala 114,490 gha ngoma za Bt izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi, ndipo mahekala ghakasazgikirapo na 26% pa agho ghakapandika mu caka ca 2010. Vyalo viwiri vyakusazgilapo vikapanda mphanata za 'Amflora' izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi.

Kufuma mu caka ca 1996 kufika 2010, mbuto izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi zikowwira kuti kuwe Cakulya Cinandi, Kujovwira kweniso Kasinthiro ka Nyengo: pakupangiska kuti kuwe vuna inandi yakukwana US\$78.4 biliyoni; kupereka malo ghawemi ghakutizinga pakuceseska munkhwala wakukomera tuvidoyoyo mu mbuto na makilogilamu 443 miliyoni; mu caka ca 2010 pera zikowwira kucepeska muvuci wakucemeka CO<sub>2</sub> na makilogilamu 19 biliyoni ivyo vikuyana waka na kuwuskapo pa msewu magalimoto pafupifupi 9 miliyoni; kupwerera cilengiwa pakuleka kulima malo ghakukwana mahekala 91 miliyoni kweniso zikowwira pakuceseska ukavu pakowwira walimi wacokoŵacoko wakukwana 15.0 miliyoni awo mbamoza mwa wanthu wakavu comene pa calo cose ca pasi. Mbuto izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi ni zakukhumbikira kweni ici cikuleka kung'anamula kuti mbuto izi zikukhumba yayi ndondomeko ziwemi za ulimi nga kupanda mbuto mwakusinthaniska minda, kweniso cipwererero kuti zileke kukulungala ku mukhwala. Ndongomeko ziwemi za ulimi ni zakukhumbika ku mbuto izo ukhaliro wakhe wuli kusinthika pakugwiriska nchito maluso gha sayansi nga umo zikuwira zakukhumbika ku mbuto ziyakhe.

Mwaluwiro pakukhumbika nthowa zakwenerera, izo zikugwiriska nchito maluso gha sayansi, kweniso zambula kukhumba ndalama zinandi panji nyengo yinandi izo ni zakugomezgeka, zakuphindula kweniso zambula kwiza na masuzgo mu vyalo vicokovicoko na ivyo vikutukuka sono kweniso mu vyalo vya EU.

Mtengo wa mbuto izo ukhaliro wakhe uli kusinthika pakugwiriska nchito maluso gha sayansi pa calo cose ca pasi wukaŵa pa US\$13 biliyoni mu caka ca 2011 ndipo mtengo wa vinthu ivyo vikupangika kufuma ku mbuto izo ukhaliro wakhe uli kusinthika pakugwiriska nchito maluso gha sayansi, ukaŵa pa US\$160 biliyoni pa caka.

Ivyo Vikulindilirika Kunthazi kwa mbuto izi kufika mu caka ca 2015 kweniso kujumpha apo vikukhozga mtima: vyalo pafupifupi 10 vyakuti vyambe ulimi uyu; pali ndondomeko yakuti mbuyo yakwamba ya ngoma izo zikunchintha ku lulanga, izo ukhaliro wakhe uli kusinthika pakugwiriska nchito maluso gha sayansi, izakaŵe pa msika ku North America mu caka ca 2013 ndipo mu Africa mu caka ca pafupifupi 2017; mpunga wa Golden ku Philippines mu caka ca 2013/14; ngoma izo ukhaliro wakhe uli kusinthika pakugwiriska nchito maluso gha sayansi izo zikulindilirika kuti zizakalimike pa mahekala pafupifupi 30 miliyoni mu calo ca China kulondezga apo ni mpunga wa Bt. Mbuto zalero izo ukhaliro wakhe uli kusinthika pakugwiriska nchito maluso gha sayansi zingowwira comene pakufiska cakulata ca citukuko ca pacalo cose ca pasi ca 2015 pakuceseska ukavu na hafu pakupangiska kuti kuwe vuna yinandi, ivyo vingaciskika na mawupu agho nga boma yayi, mwakuyerezgera waka ngoma zakunchintha ku lulanga mu Africa zingalimbikiskika na mawupu agho ghakuciska vya ukhaliro wa wanthu nga Bill and Melinda Gates Foundation.

Kuwikapo mtima kwa ISAAA pa vigaŵa vitatu vya kugaŵana zero, kupangiska kusintha na kupereka maghanoghano ghasono kweniso kukolerana pakucita vinthu vya sono vikukolerana na sacizgo ilo wa Gates Foundation wakapereka ku G20 mu Novembala 2011.

Vinandi pa nkhani iyi vili mu Brief 43 'Global Status of Commercialized Biotech/GM Crops: 2011', cakulembeka na a Clive James. Pala mukukhumba kumanya vinandi mulaŵiske ku <http://www.isaaa.org> panji yimbani foni ku ISAAA AfriCenter pa nambala iyi +245 20 4223618, panji mulembe kalata ya kwenda pamageshi ku [africenter@isaaa.org](mailto:africenter@isaaa.org) panji ku [info@isaaa.org](mailto:info@isaaa.org).