



FEED^{THE}FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Cakulya cakuyungizya kuzyakulya
zyotulya munyika Kusanganya a
busu bwanswi ziyumu

Mbozjikwa



USAID
FROM THE AMERICAN PEOPLE



WorldFish



MISSISSIPPI STATE UNIVERSITY™
GLOBAL CENTER FOR AQUATIC
HEALTH AND FOOD SECURITY



Fish powder
Oreochromis spp.
Bream (Raw)

Fish powder
Oreochromis
Bream (Smoked)

Fish powder
Limnothrissa spp
Kapenta

Fish powder
Oreochromis spp.
Bream (Raw)

Fish
Oreochromis
Bream

Kumbele

Kulya tuswi tusyoonto mumazuba akusanguna ali cuulu chomwe (1,000) mubuumi kakuli nceciindi chamatalikilo mubuumi bwamwana kusikila mwana waba amyaka isika kuli yobilo cibeledela antoomwe abusani bugwasyilizya kuli mizeezo ikomene kubana akucesya buyambukizi bwakubamputila kubana. Tuswi tusyoonto tulijisi busani buyaka mubili kakuli ncolya ciyandika kapati alimwi cali ampuwo mpati mucisi ca Zambia alimwi aciindi cina Africa nkocili kumusanza nkaambo cilaligwa kapati. Tuswi tusyoonto syoonto tulijisi bukwalilizi bwa zyilyo zysisika ku kumi atosanwe (15) ziyigwasya mubili kulwana malwazi alimwi abukwabilizi buyandika mukome kwamubili amizeezo yabana.

Mfwulumende yamucisi ca Zambia isumpula zyakulya ziyisi busani mbuli nswii ziyiyumu zyitidwe zisangene amatuvwu acimbwali antoomwe amatuvwu amyungu mitende, nyemu, nyabo alimwi amwanja kusanganya antoomwi mpoonya zyezyilyo zibeleledela antoomwe kukukomenzya mwana. Busu bwa nswii ziyiyumu inga bwagwasyilizya kubamba busani alimwi akuti chakulya ciyandika kubana basyoonto abakubusi antoomwe abapati. Eeci cilimumancililanwa nfwulumende ya cisi ca Zambia kukwazamuna zyakulya ziyisi busani buyaka mubili zyindeene-endene.

1. Mukuzuzikizya kulisya bana zyakulya zyindeene-endene, tulatombelela amancililanwa aya.
2. Kunyosya mumawola akusanguna mubuumi.
3. Kunyosya kwamyenzi isika kulusele
4. Kutalisya zyakulya ziyisi busani zyubauba kukulya kwa mwana mummyenzi ili lusele. Kuzumanana kunyosya kwamyaka indilila kuli yobilo.

Mfwulumende ya cisi ca Zambia iliyabide kubelekela antoomwe ambunga zyindeene endene alimwi abantu bagwasyilizya kuzwa kunze acisi alimwi ambunga zyitalikumbatizyi kumfwulumende abamwi basyabumpampu mulwiyo antoomwe ambunga zyamucisi kubonenezya kuli kwaba kutolelela mukubelesya tunswi tusyonto syonto tulijisi busani. Kunsimina mukuba ziyiyo inzyi inga capa kuli maanda oonse kacikozya kuba azyakulya enzyi ziyisi busani buyaka mubili.

Muzeezo mupati wabulembo obu ngwakupa kuli kube kuba atwaambo kuli bamamama bamumadolopo alimwi amuminzi antoomwe ababelesi bamumutabi wa Nseba alimwi ambunga zyitalikumbatizyi kunfwulumende ziyiipa nseba alimwi abukwabilizi bwandeene alimwi alwiyo lwa Nseba zyili kabotu mucisi ca Zambia (mbuli

muzyikolo zyili ansi alimwi azyikolo zisumpukide). Azyikolo bantu mobayiiya lwiiyo lusumpukide antoomwe abuvwubi bwanswii. Bulembo obu inga bwabelesyegwa abumwi bulembo mbuli bwakusumpula Zyilyo zyindeene-endene na Improved Complimentary Foods Recipe Booklet kuzwa ku cilimumancililanwa lya National Food and Nutrition Commission of Zambia (NFNC) kusumpula bwendelenzi bwazyakulya zyindeene-endene alimwi kusanina bana mumazuba ali cuulu chomwe (1,000) akusanguna mubuumi bwabana mukomona kwamizeezo amibili yabo.

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Kulumba

MULIMO YABBUKU WAKACITWA ABAMWI

“Ba Ragsdale K., Muzungaire, L., Mudege, N.,N., Read-wahidi, M.R., Lannotti, L. (2023, July) Cibeela calanganya zyiilyo zyabusani mucinga cana Africa kusanganya alusu lwanswii ziyumu zyakulya bana basyoonto antoomwi amikwasyi. Ncililanwa Iya Feed the Future Innovation Lab for Fish.”

LUGWASYO LWA MALI

Eli bbuku lyakalebwa kwiinda mulugwasyo kuzwa kubantu baku America kwiinda mancililanwa akuba amusyabupampu kucibela canswii kwiinda mumbunga ya United States Agency for International Development (USAID). Twaambo tuli mukati twabalembi mpoonya kwiina notwiminina mbunga ya USAID nape mfwulumende yaku Cisi ca America.

Mancililanwa aya aitwa kuti Feed the Future Innovation Lab for Fish alendezyegwa a mbunga ya Mississippi kwiinda

mucikolo cipati ca University kwiinda mulugwasyo kuzwa kumbunga ya USAID (Bulumbu bwa. 7200AA18CA00030; M Lawrence, P1) Akupa lugwasyo ku FishFirst! Zambia (Mali atajoki anamba. 322554-012200-02700; Ragsdale, Lead P1; N. Mudege, Zambia, P1 M. Read-wahidi, Leas-co-P1).

KULUMBA

Macililanwa ayitwa kuti Fish-First! Zambia Project alacitwa kwiinda mubuvwutauzi bucitwa acikolo cipati ca Mississippi State University alimwi a World-Fish Zambia. Ncililanwa ya FishFirst Zambia lilagwasyilizyigwa akabunga ka Feed the Future Innovation Lab for Fish kwiinda mumbunga ya United States Agency for International Development (USAID) alimwi bukutausi bwesu balacitwa kutangazyiba Iwa Kariba. Bukutausi boonse bwa bbuku eli azubululwa ambunga ya WorldFish yendelezyegwa CGIAR bupapu zyilyo zya nswii (Aquatic Foods-CGIAR)-mukubelekela antoomwe ambunga ya mucisi ca Zambia alimwi a Bangladesh.

Twalumba kapati kubusengwese ngwese bwabuvwutauzi akabunga ka Mississippi Agriculture alimwi a Forestry Experiment Station alimwi Division of Agriculture, Zyamusokwe alimwi a busilisi bwanseba zyabanyama mukugwasyiliza mancililanwa a FishFirst! Zambia yagwasyilinzya kuti milimo yesu yeende kabotu.

Twalumba babelesi kuzwa kumitabi alanganya maumi abanyama alimwi abuvwubi bwanswii alimwi amutabi wa Nseba mucisi ca Zambia mulugwasyo antoomwi amalailile mucindi cakubamba mayalanwa aya cimwi cipati ncakuti tulumba bamamama alimwi abana bakatola lubazu mu FishFirst! Zambia cibeela cabili cipandulula bupati bujanika alimwi abwingunzi muncililanwa eli. Kamwiiya zynji kujatikizya ncililanwa Iya Feed the Future Innovation Lab for Fish akusabwi ka <https://www.fishinnovationlab.msstate.edu/>.

Matuku
(*Oreochromis spp.*)

Nchenga
(*Brycinus spp.*)

Harnessing Knowledge that makes a difference

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Fish powder
Kapenta
(*Limnothrissa spp.*)

Busu bwanswi ziyiyumu

Eeci cakujika cifwambaana cabusu bwanswi ziyiyumu zyisyoonto zyakayuma, ziyiyokedwe, akugaigwa kuba busu busetede. Busu bwanswi inga bwayungiziyigwa kuzyakulya zyinji zyandeene kusumpula busani buyandikana muzyakulya. Busu bwanswi oobu inga bwabambwa kuzwa kumisyobo yanswi zyisyoonto syoonto zyili mbuuli Kapenta, Chisense, Chitaka, azyimwi. Kuyoka nswi ziyiyumu amulilo utakasaali kapati kazyitaninga gaigwa naa kutugwa cilayandikana kutegwa kuti kazyicikonzya kukkala kwaciindi aku-yungizya bunono bwanswi.

Zyivweledwe

- Nkapu zyobilo zyatuswi tusyooonto
- Conco musyooonto omwe ya sautu (ciba cikwabilila)

Bwakubamba/ Nzila

- Amwiilangelange inswi nsyooonto njumu akugusya kufwumbwa aako kali aamibala.
- Amwiisanzye inswi njumu mumeenda aasalala mwamana mwiiyanike.
- Amwiikange nswi njumu mu mpani kaitapyi apati, kwiisandaula zyiindi zyinji, kusikila limwi icinche mubala kuba bbulauwuni (tuvwuluvwalu 15 minutes).
- Amwiigusyeye inswi yatekwa aakasaala kumane mwiizumizye kuti itontole.
- Amwiiziye naa kwiitwa nsi kuba busu kubelesya nchili ambweni ziiyoo. Amubusebe busu bwanswi, akuzumanana kuzya powder iceede buti bube busu busetede.
- Kuti naa kuyungizya kubikka munyo (naa mulayanda), kwiinda mukusanganya busu bwamana kugaigwa.
- Amuyobole eeci nchomwabamba mucibboo chijedwe.

Bwakwaapaula

- Amubambe nkapu a ½ yabusu bwanswi bwayumikwa.

Zyilombozyeka kubesya

Busu buyumu bwanswi zyishoonto bulijisi busani bubotu calo chiyandikana kuti mu-be busani abununkilizi bweelela kubana bajisi myezi cisambomwe 6 a kwiinda, bakubusi, bamitide, bamakaintu banyonsya, abamwi bapati.

Cakazwisiyigwa ku:

1. Ahern M, Mwanza PS, Genschick S, Thilsted SH. (2020). Zyakulya ziyijisi busani kufegwa mwaba aabusani buyandikana mumazuba aakusaanguna aali 1,000 aakuzyalwa ku Malawi amu Zambia :Kubamba kubikka nzila alimwi akulanganya zintu mbyuzaba . Penang, Malaysia: WorldFish. Program Report: 2020-14. <https://fish.cgiar.org/wp-content/uploads/2021/12/686cct608f5b874d689fdb822c8cba85.pdf>
2. WorldFish. (2017). Ziyibambwa kuzwa kunswi kukulwaizya kulya misyobo yanswi zyandeene ziyijisi busani buli kabotu zyamu Zambia, Malaysia: WorldFish. http://pubs.iclarm.net/resource_centre/2017-35.pdf



Kucisandulula, zivweledwe, bwakubamba akukomena kwazyapulwa

ComFA+Fish Kucisandulula, zivweledwe, bwakubamba akukomena kwazyapulwa cibambwa kuzwa utwi tusyooonto twalo tuligwa koonse kakakkwene (nswi ntete naanka njumu) ziyikwa amadeede, hanyisi (subila-red, mungunga waji-yellow, green), ama spices ngomwasala, mbuli, garam masala ampilibili itwidwe. Eeci cakulya inga cajikwa kuzwa kumisyobo kazyivwelwa zyandeene kuzwa kunswi nsyoonto antela ziyumu zyili mbuli Kapenta, Chisense, Dagaa, azyimwi. Kuti naa kubelesya nswi ziyumu, kuyoka nswi njumu akukasaala kumwi kwalo kutali kwamaningi kamutaninga zigyaya kulalombozyeka kutegwa kuti busu bukkale kwaciindi akuyungizya bununkilizi bwacakulya.

Zyivwelwa

- Nkapu zyobilo zyanswi ziyumu (antela kuswa kutuswi tusyooonto)
- Cisela ½ nkapu yamungwimba wakujisya
- Nkamu yomwe nkapu yahanyisi, itend-edwe
- Nkapu yomwe yamadeede, atendedwe kabotu kabotu
- Nkapu yomwe ya bell pepper (red, yellow, antela green), zytendedwe
- Conco mupati omwe ya garam masala (antela yakulabila)
- ½ conco musyoonto yampilibili zytwidwe (antela yakulabila)
- Ma conco masyoonto obilo asautu (nkusala)

Bwakubamba

- Amutulangelange nswi toonse akugusya kufwumbwa ijisi mubala uumbi.
- Amusanzye tuswi tusyooonto toonse mumeenda aasalala akwiituyandika.
- Kuti mubelesya tuswi tusyooonto tuyumu, amutubange mumpani mpati akukasala kutali kunji, kukopa zyiindi zynji, kusikila limwi zyibe mumubala wa brown (Citole 15 minutes).
- Amubizye mungwimba mumpani mpati, akuyungizya kaswi kasyoonto akukanga mukasaala kwatuvwaluvwalu tuli kkumi 10 minutes, kukopa zyiindi zynji.
- Amuyungizye hanyisi; amuzumanane kukanga kwatuvwaluvwalu tuli kkumi 10 minutes, zyiindi zynji.
- Amuyungizye madeede a pepper; amuzumanane kukopa kwatuvwalu-vwalu tuli kkumi 10 minutes, kukopa ciindi aciindi.
- Amuyungizye garam masala, mpilibili yalusu asautu (naa mwayanda); amuzumanane kukanga kwaciindi cilampa 5 minutes, amukope ciindi aciindi
- Amugusye aakasala amwaapule kacipya.

Caapuzya mbocilombozyeka kukomena

- Cisela ½ nkapu (kubana bajisi myezi 24 ayiinda)
- Nkapu yomwe (kubana basyoonto, bamakaintu bamitide abanyonsya, abamwi bakakomena)

Bwakubelesya

ComFA+Fish Kucisandulula, zivweledwe, bwakubamba akukomena kwazyapulwa ninzila ngubauba, kubamba cijisi busani bunji acakulya cijisi kunona kunji antela tumwi tuvwela tuyandikana kulya bana bajisi myezi 24 ayiindilila, bana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bapati.

Cakazwisigwa ku:

1. Ahern M, Mwanza PS, Genschick S, Thilsted SH. (2020). Zyakulya ziyisi busani bubotu kusumpula ziyandikana mubusani mumazuba aali 1000 abuumi mucisi ca Malawi amu Zambia :Bwakubikka ,kweendelezya akulanganya zintu mbozyeenda . Penang, Malaysia: WorldFish. Program Report: 2020-14. <https://fish.cgiar.org/wp-content/uploads/2021/12/686cct608f5b874d6896db822c8cba85.pdf>
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Zyakulya ziyandikana zyakuyungizya kuceele cabusu bwamapopwe

ComFA+Fish kuyungizya aceele cabusu nchakulya cibotu cakuyungizya cabana bavwanda abana basyoonto calo cibambwa kwiinda mukuvwela busu bwanswi zytwidwe ziyumu, zitenedwe akuzigwa kuba busu busetekede akujikwa kubelesya busu bwamapopwe aatuba, buntele bwanyemu, abusu bwacimbwali citwidwe(OFSP) busu (antela busu bwacimbwali kuti naa busu lwa OFSP talujaniki mucilawo kubikwa kujika kuba ceele. Busu Bwanswi zytwidwe ziljisi busani buli kabotu. Busu bwanswi butwidwe inga bwabambwa kumisyobo yandeene yanswi zyamisyo yandeene mbuli Kapenta Chisense, Dagaa, azyimwi. Kuyoka nswi njumu amulilo uupya asyoonto kazyitaninga ziyigwa cilalombozyegwa kutegwa nswi kaikonzya kukkala kwaciindi akwiindiliza kunona kwacajikwa eeco.

Zyivwelwa

- Nkapu yomwe yabusu bwakaswi ziyumu
- Nkapu yomwe yabuntele bwanyenu (antela cisela ½ chankapu ya coonde)
- Nkapu yomwe yabusu bwacimbwali
- Nkapu zyone yabusu bwamapopwe aatuba (antela zyimwi zyinji mbuli mbo ziyandikana)
- Ma conco mapati obilo sugar (kuli myaanda)
- Ma conco masyoonto obilo asautu (kuti naa mwayanda)
- Nkamu zyilikkumi acisambomwe 16 zyameenda (antela zyiindilila)

Kubamba

- Mucikopo, amuziywele kabotu zyoonse ziyivwelwa.
- Asyoonto-syoonto amuvwele nkapu zyobilo zyameenda muziyweledwe ziyumu kutegwa mubambe citiivwelwe bweelede.
- Mumpoto mpati, amulete nkapu 14 zyameenda aajikidwe.
- Asyoonto amukope ceele mumeenda aabila akusanganya kusikila limwi coonse cibe kabotu.
- Amujike ceele –amukope tuvwaluvwalu tuli 15 minutes kusikila ceele cilemeleme kusika cibeela mpociyandikana.
- Amuzime cijisyo, amuvwunike mpoto, akuzumizya kuti ceele cikikalikile kwaciindi cilampa 2-3 minutes. Amwaapule cijya.

Mbozyeelede kuvwula zyaapaulwa

- ½ nkapu (kubana bavwanda bajisi myezi 6–11)
- ¾ nkapu (kubana basyoonto bajisi myezi 12–23)
- Nkapu yomwe (bana bajisi myezi 24 ayiindilila, bana basyoonto, bamakaintu bamitide abanyonsya, abamwi bapati)

Mweelwe wazyakwapaula

- 16 (kubana bavwanda bajisi myezi 6–11)
- 8 (kubana bajisi myezi 12–23)
- 4 (bana bajisi myezi 24 ayiindilila, bana basyoonto, bamakaintu bamitide abanyonsya, abamwi bakakomena)

Zyilombozyeka kubelesya

- **ComFA+Fish Zyakuyungizya kuceele camapopwe** ninzila ngubauba kubamba, ljisi busani bubotu, acakulya ceebeka antela atumwi tubotu tuyandikana bana bajisi myezi cisambomwe (6 months) ayiindilila, bana basyoonto, bamakaintu bamitide abanyonsya, abamwi bakomene.

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1. Ahem M, Mwanza PS, Genschick S, Thilsted SH. (2020). Zyakulya ziyisi busani bubotu kusumpula ziyandikana mubusani mumazuba aali 1000 abuumi mucisi ca Malawi amu Zambia :Bwakubikka ,kweendelezya akulanganya zintu mbozyeenda . Penang, Malaysia: WorldFish. Program Report: 2020-14. <https://fish.cgiar.org/wp-content/uploads/2021/12/684ccf608f5b874d6896db822c8c8ba85.pdf>
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making a difference



making a difference



Matuvwu alungu mitende

ComFA+Fish amatuvwu aacitende naa lungu kalavelwa abusu bwanswi njumu, yakakangwa kutegwa kufi bube busu busetekede akujikwa antoomwe amatuvwu matete aacitende aakayanikwa azyimwi zisyu mani zytete ziyisi busani bubotu (DGLV) mbuuli matuvwu aacimbwali, cisyumani, spinach, collard greens, rape/kale, arugula/rocket, azyimwi. Busu bwanswi inga bwabambwa kuzwa kuziyikonzya kuvwelwa kutuswi tusyoonto twandeene mbuuli Kapenta Chisense, Daga, azyimwi. Kuteneka nswi ziyumu mucibeela cikasaala kutali kapati kacitaninga gaigwa kutegwa kufi ikonzye kukkala kwaciindi kacitanyongani akuyungizya bunono.

Zyivwelwa

- Cisela ½ nkapu busu bwanswi zisyoonto zikan-gidwe
- Nkapu zoyibilo zamatuvwu aacitende, aacimbwali, antela zyimwi DGLV (zyitete naa ziyumu)
- Nkapu yomwe yabuntele bwanyemu (antela cisela ½ nkapu yacoonde)
- Cisela ½ conco masyoonto wa baking soda
- Nkapu zoyotatwe zyameenda
- Nkapu zoyibilo zyamadeede aatendedwe kabotu kabotu
- Nkapu yomwe ya hanyisi, litendedwe,
- Cisela ½ ya conco masyoonto yampilibili yabusu (antela kulabila)
- Conco masyoonto omwe wa sautu (nkusala)

Bwakubamba

- Kufi naa mubelesya matuvwu aacitende aakayuma, amwaanyike mumeenda aakasaala kwatuvwa luvwalu tuli makumi otatwe 30 minutes kutegwa atetete matu.
- Amusanzye matuvwu mayumu aacitende naa alungu kutegwa kufi mugusye kufwumbwa katombe akubikka mumpoto mpati.
- Amuyungizye meenda a baking soda, amukope kutegwa zyivwelane, akujika mukukasaala kutali kwamaningi kwawoola lisika kuli lyomwe.
- Amubikke buntele bwanyemu (naa coonde), amukope kutegwa zyivwelane, akujika mpokutapyi kwi-indilila, akuzumanana kukopa kutegwa cita zyatila.
- Eeci cavwelwa catalika kubila, amuyungizye akubikka madeede, hanyisi, mpilibili yabusu, asautu (naa mwayanda).
- Amucigusye mpocikasaala kapati kwatuvwaluvwalu tuli kkumi 10 minutes.
- Amujule kuzwa mpocijikilwa. Amwaapule kacikasaala

Zyilombozyeka kwaapula ambozyivula

- ¼ nkapu (kubavwanda bajisi 6–11)
- ½ nkapu (bana bajisi 12–23)
- Nkapu yomwe (bana bajisi myezi 24 ayiindilila, kubana bacikubuka, kuli bamakaintu bamitide abanyonsya, abamwi bakomenede)

Zyiindi zyakwaapula akupa

- 12 (kubana bajisi myezi 6–11)
- 8 (kubana bajisi myezi 12–23)
- 6 (kubana bajisi myezi 24 ayiindilila, kubana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bakomena)

Mbokweede kubelesya

ComFA+Fish Matuvwu a lungu mitende nchubauba kubamba, cijisi busani bunji, cakulya cinunkilila kabotu antela cinona kubana bajisi myezi cisambombwe 6 ayiindilila, bana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bakomenede.

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Musiza wazyizyu mani

ComFA+Fish Musiza wazyizyu mani Busanduluzi, ziyivwelwa, mbocibambwa, ambozyeelede kwaapaulwa ncakulya cibambwa kuzwa kunswi zisyoonto zyalo zyakayanikwa ziumu, zyakatenekwa kugaigwa kuba busu busetede akujikwa abusu bwakayanikwa bwa beans naa cilemba antoomwe abusu bwamatuvwu aacitende naa lungu antela zymwi zisyu mani zycili kabotu citegwa (DGLV) zyalo ziomwasala (mbuli busu bwamatuvwu aacimbwali aayanikidwe, azyimwi) eeci cijikwa ceelede kuti kacijisi abowa bwakayanikwa buyumu (kufwumbwa musyobo wabowa), alimwi abusu bwa hanyisi, busu bwamwanja, busu bwa soyabeans, busu bwa garlic amungwimba wakujisya cisyumani. Busu bwanswi inga bwabambwa kuzwa kumisyobo yanswi zyandeene ziyiyumu mbuli Kapenta, Chisense, Daga, azyimwi. Kuyoka mumulilo utakasaali kapati kazyitaninga gaigwa cilalombozyeka kutegwa kuti kai-konza kukkala kwaciindi cilamfwu kakunyina kunyongana kutegwa kube kuyungizya bunono bwanswi.

Zyakuvwela

- Nkapu yomwe yabusu bwanswi ziyumu
- Otatwe ma conco mapati (tablespoons) aabusu bwamatuvwu aacitende naa lungu antela bumwi busu bwa DGLV (kuzwa kumatuvwu aacimbwali, spinach, collard greens, rape/kale azyimwi)
- Otatwe ma conco mapati aabusu bwabowa (kufwumbwa musyobo wabowa)
- Ma conco mapati yobilo yabusu buyumu bwa beans
- Ma conco mapati yobilo yabusu bwa zyananyi
- Conco mupati yomwe yabusu bwa mwanja
- Conco mupati yomwe yabusu bwa soybean
- Conco musyoonto yomwe yabusu bwa garlic
- Conco musyoonto yomwe yasautu (naa mwayanda)
- Nkapu ziyobilo zyameenda
- Ma conco mapati otatwe aamungwimba wakujisya cisyu mani

Bwakubamba

- Mucikopo, amuziywele bweelede zyoonse ziyiyumu ziyavwelwa.
- Amutile nkapu ziyobilo mumupika ujikilwa amulilo uupya kapati, asyoonto amuyungizye ziyiyumu ziyivweledwe mumpoto kumwi kamukopa ciindi aciindi kutegwa kuti kutabi makoto.
- Amulete cisanganizidwe eeci kuti cibile akujika kwaciindi cilampa 15 minutes. Amukope ciindi aciindi kutegwa kutabi makoto.
- Amuyungizye meenda aamwi (naa cayandikana) kusikila limwi musinza ulemeleme mpociyandikana .
- Amutile mungwimba wakujisya mumusinza kubelesya kakutizya kateenda kabotu, amuzumanane kukopa ciindi aciindi.
- ComFA+Fish Bean-Musinza wacisyumani inga waligwa kaikasaala naa kaupya.

Mweelwe Uulombozyeka kwaapula

- ½ nkapu (kubana bavwanda bajisi myezi 6–11)
- ¾ nkapu (kubana bajisi myezi 12–23 months)
- Nkapu yomwe (kubana bajisi myezi 24 ayiindilila ,abana bacikubuka, bamakaintu bamitide abanyonsya abamwi bakakomena.)

Mweelwe wazyakwaapula

- 12 (Bana bavwanda bajisi myezi 6–11)
- 8 (Bana bajisi myezi 12–23)
- 6 (Bana bajisi myezi 24 ayiindilila ,bana bacikubuka ,bamakaintu bamitide abanyonsya, abamwi bakakomena)

Bwakubelesya

ComFA+Fish Musinza wazyizyu mani wacisyumani nchubauba kubamba, cilijisi busani bunji akunona kwi-indilila kubana bajisi myezi iili cisambomwe 6 months ayiindilila, bana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bakakomena.

Cakazwisyigwa ku:

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2. WorldFish. (2017). Ziyibambwa kuzwa kunswi .kukulwaizya kulya nswi ziyabusani bubotu kuzwa kutuswi tusyooonto mu Zambia Penang, Malaysia: WorldFish. http://pubs.iclarm.net/resource_centre/2017-35.pdf



Bupanduluzi, ziyweledwe, mbozyibambwa ansaizi zyakwapaula

ComFA+Fish Bupanduluzi, ziyweledwe, mbozyibambwa ansaizi zyakwapaula. Nchubauba kujika antela cakulya cibambwa kuzwa kubusu bwanswi ziyumu zisyoonto, busu bwamwanja, busu bwacimbwali camungunga waji ama spices mbuuli busu bwa ginger alimwi amatuvwu aakayanikwa. Busu bwanswi inga bwabambwa kuzwa kumisyobo yanswi zisyoonto twandeene mbuuli Kapenta-Chisense, Dagua, azyimwi. Kuyoka nswi njumu amulilo uutakasaali kapati kazyitaninga gaigwa nchecilombozyeka kuti cicitwe kutegwa kuti kaikonzya kukkala kwaciindi oolu busu kutegwa kuti cinonzye cakulya.

Zyivweledwe

- ½ nkapu yabusu bwanswi ziyumu zisyoonto
- Yobilo a ¼ ma nkapu zabusu bwa mwanja
- 12 pieces twamatuvwu aa curry mayumu, aazyidwe
- ¼ nkapu yabusu bwazyanyisi
- Otatwe ma conco masyoonto a sugar
- Ma conco masyoonto yobilo yabusu bwacimbwali camu ngunga waji
- Ma conco masyoonto yobilo yabusu
- bwamagwili
- Ma conco masyoonto yobilo yabusu bwa ginger
- Ma conco masyoonto yobilo yabusu bwa garlic
- Ma conco masyoonto yobilo yasautu (naa mwayanda)
- Ma nkapu yobilo ameenda (ambwene zyiindilila zayandikana)

Bwakubamba

- Amusanganye zyoonse zyavwelwa ziyumu mucikopo
- Amuyungizye meenda kumane mukope akusanganya kusikila limwi meenda azyasanganyizyigwa ziyweledwe zisangane zyoonse: kusanganya ciindilila inga capa kuti caangane cavwelwa.
- Mwamana muvwele ceele eeci akubamba kuba muzyikotokoto zyili 50 acimwi kacikomana a 2 inches.
- Hamuwuumpe mungwimba wakujisya cisyu mumpoto mpati kusikila limwi isike ku 191 degrees Celsius.
- Mukangisye zykoto eezyi aciindi aciindi kusikila limwi zycinche kuba mubala uusubila akucincha mubala anze ,hamusandaula ciindi aciindi kubelesya muungo naa kufwumbwa eeco kutegwa kuti zyibe mumubala wakusubilasubila. Mungwimba uyandikana kuti kauli lyoonse a 191 degrees Celsius. Kuti naa tazyikasaali kapati zykoto zyamwanja inga zyeenzemuka kuti mungwimba wawwulisya. Kuti kupya kwamungwimba kauli mujulu kapati, ansi aacikoto cabusu bwabambwa kuzwa kumwanja inga zyaida kacitaninga sika akati kuti cibizwe bweelede
- Hamukange cikoto camwanja comwe muzyibeela eezyi kubona masimpe kuti cabizwa kabotu aakati.
- ComFA+Fish Savory Cassava Bites cakulya camwanja inga zyaligwa kazyipya ambwene kazyicikasaala.

Mbozyiyandi-kana kwaapula akupa

- ½ Savory Cassava Bite cakulya camwanja (bana bavwanda bakwanya myezi 6–11 months)
- ¾ Savory Cassava Bite cakulya camwanja (bana bajisi myezi ilili 12–23 months)
- Yomwe Savory Cassava Bite cakulya camwanja (bana bajisi myezi 24 months ayiindilila)
- Yobilo ma Savory Cassava Bites cakulya camwanja (bana bacikubuka ,bamakaintu banyonsya abamitide, abamwi bakakomena.)

Mweelwe wazyakwaapula

- Cakulya eeci cilabamba zyakulya kuzwa kumwanja zyitegwa Savory Cassava Bites zysisika 50

Bwakubelesya

ComFA+Fish Bupanduluzi, ziyweledwe, mbozyibambwa ansaizi zyakwapaula nchubauba kubamba, cijisi busani bunji, akununkila kabotu cakulya cibotu kubana bajisi myezi ilili cisambomwe myezi 6 bana bacikubuka, bamakaintu bamitide abanyonsya abamwi bakakomena.

Cakajanwa ku:

WorldFish. (2022). Tuswi tuyoonto tujisi busani bubotu ,kubamba akubikka busambazi okuya ku Myanmar amu Zambia itegwa SPM). Penang, Malaysia: WorldFish. <https://worldfishcenter.org/project/nutrient-rich-small-fish-production-processing-and-marketing-myanmar-and-zambia-spm>



Mbozyiabambwa, ziywelwa, bwakubamba amweelwe akwapaula

ComFA+Fish Mbocibede, ziywelwa, bwakubamba, amweelwe akwapaula nchakulya cinono cijisi busani bunji cibambwa kuzwa kubusu bwanswi njumu, cake flour, busu bwacimbwali camungunga waji citegwa (OFSP), busu bwamwanja azyimwi ziyweledwe zininono. Oobu busu bwanswi inga bwabambwa kuzwa kutuswi twandeene tuyumu mbuuli, Chisense, Dagaa, azyimwi. Kwiiyoka nswi njumu amulilo uutakasaali kapati kazyitaninga gaigwa nhecintu cilombozyeka kutegwa kuti kazyikonzya kukkaal kwaciindi mpoziyobolwa akuyungizya bunono bwayo.

Ziywelwa

- Nkapu yabusu bwanswi ziyumu
- Nkapu yomwe a ½ nkapu ya cake flour
- 6 ma conco mapati ya white sugar
- Otatwe ma conco mapati yabusu bwacimbwali camungunga waji
- Otatwe ma conco mapati yamukupa wabusu
- Otatwe ma conco mapati abusu bwa mwanja
- ½ conco musyoonto ya baking powder
- ¼ conco musyoonto yasautu (naa mwayanda)
- Ijji lyomwe
- ½ nkapu yamungwimba wakujisya cisyumani
- Conco musyoonto yomwe ya vanilla

Bwakubamba

- Aikasaale oven kamutaninga kubika 176 degrees Celsius.
- Mucikopo cipati, amusanganye zyoonse ziyumu ziyweledwe akukopa ciindi aciindi kumane musanganye.
- Amuyungizye meenda aasika ku 10ml akusanganya ciindi aciindi azyavwelwa ziyumu kutegwa mubambe ceele cuubauba.
- Mukakopo kasyoonto, amupwaye iji, kumane mubikke mumugwimba wacisyumani akusanganya a vanilla.
- Amuyungizye cisanganyizidwe kuceele akusanganya kabotu kabotu kusikila limwi caubauba.
- Kamuleka kuti ceele cikalikane kwatuvwa-luvwalu tuli kkumi 10 minutes.
- Amucikope ceele kutegwa cilemeleme kusikila ku ¼ inch akukosola kuya kuba muzyipaanzi zomuyanda.
- Amubikke mu oven akukanga akukasaala kusikila ku 176 degrees Celsius kwawoola lyomwe antela kusikila limwi buscuit libe mumubala uusubila
- ComFA+Fish Nutri-Biscuits inga aligwa kakasaala antela kaali aakati-kati .

Buyandikana kwaapula

- Nutri-Biscuit yomwe (bana bajisi myezi 12–23)
- Ma Nutri-Biscuit yobilo (bana bajisi myezi 24 ayiindilila)
- Ma Nutri-Biscuit otatwe (bana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bakakomena)

Mweelwe wakwaapula

- Cijikwa eeci cilabamba mweelwe wama busucit uusika ku 60 aajisi busani bubotu aa Nutri-Biscuits

Bwakubelesya

ComFA+Fish Mbozyiabambwa, ziywelwa ,bwakubamba amweelwe akwapaula nchintu acubauba kubamba ma biscuit aajisi busani bubotu, manono kubana bajisi myezi ilili 12 ayiindilila, bana bacikubuka, bamakaintu bamitide abanyonsya, abamwi bakakomena.

Cakajanwa ku:

WorldFish. (2022). Tuswi tuyoonto tujisi busani bubotu ,kubamba akubikka busambazi okuya ku Myanmar amu Zambia itegwa SPM). Penang, Malaysia: WorldFish. <https://worldfishcenter.org/project/nutrient-rich-small-fish-production-processing-and-marketing-myanmar-and-zambia-spm>





