



BBEST 3MAN NO NHYEHYEE HO NSEM TIAWA

Ghana BBEST Nhyehyee Tiawa a Eto so mmienu 2

Nhoma akyerɛwfo din: Dr Richard Bayitse ne Dr Rapheal Nsia-Gyambibi

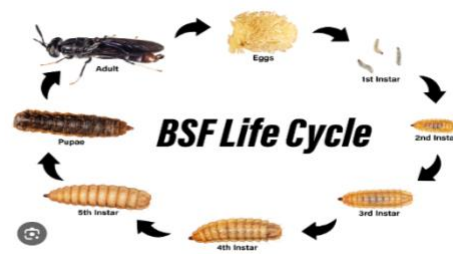
CSIR-Institute of Industrial Research



Akyi asem

BSF for Bio-Circular Economy and Environmental Sustainability (BBEST) adwuma no ayɛ akwan foforo a ɛbetena ho daa na ɛka mmoa aduane a wɔtaa de ma akoko/mpataa/mpɛko ma akuafoɔ nketewa a wɔyɛ wɔ Ghana no ho dwuma de adi mmoa aduane a wɔhwehwɛ a ɛrenya nkɔanim ne ɛka kɛsɛ a wɔbɔ no ho dwuma berɛ a mmoa aduo/protein a wɔde di dwuma no trɛw wɔ nkuropon mu. Ɔkwan foforo a wɔayɛ ne sɛ wɔde Black Soldier Fly (BSF) larvae aduane bedi dwuma sɛ protein fibe a wɔde besi ananmu wɔ akoko/mpataa/mpɛko aduane a wɔyɛ mu (mfonini 1). Wɔakyɛ sɛnea BSF nwansena tumi yɛ adwuma sɛ aduane ma mpataa, mpɛko mma, ne akoko mma (Roffeis, 2018; Bruni et al., 2020).

Wɔ Ghana no, BSF nwansena a wɔyɛ no renya nkɔsoɔ, na mfididwuma no regye atumu na BSF akuafoɔ ne nkoko akuafoɔ de redi dwuma. Ɛsɛ sɛ wɔhyɛ BSF nwansena a wɔde bedi dwuma sɛ aduane no ho mmra na ama wɔadi aduane ahobammɔ gyinapɛn ahorow ne adetɔn gyinapɛn ho nnwuma a wɔagyɛ atumu.



Akoko a wɔredi BSF nwansena

BSF nwansena

Mfonini 1: BSF larvae sɛ protein fibe a wɔde ma mmoa aduane (Source: BSF royalty-free images and Terrell and Ingwell (2022))

Gyinapɛn yɛ nwoma a wɔde adwene a ɛwɔ mu na ɛde asi ho, a adwumakuo a wɔagyɛ atumu apene so na ɛde ahwehwɛdeɛ, nkyɛɛkyɛɛmu, akwankyerɛ anaa su a wɔbetumi de adi dwuma daa de ahwe sɛ nneɛma, nneɛma, akwan ne dwumadie no fata wɔn atirimpɔw. Gyinapɛn ma adetɔnfoɔ abotɔyɛm ne ahobanbɔ, nya nkɔsoɔ, kwan a wɔfa so kɔ dwa foforo so, ɛma dwaso kyɛfa kɔ soro na ɛmma ɛka so te.

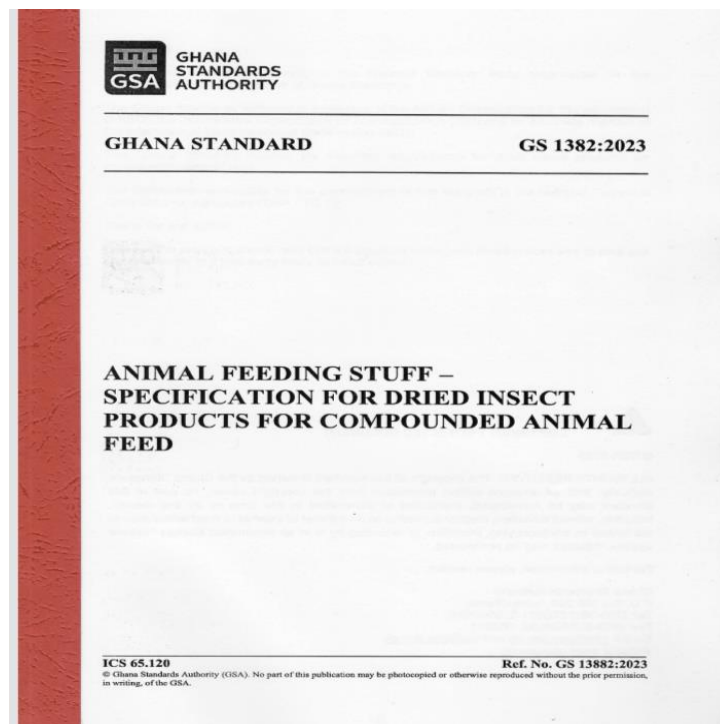
Ghana Standards Authority (GSA) yɛ Ɔman Gyinapɛn Kuo (NSB) a wɔde sii ho wɔ Standards Decree, 1967 (NLCD 199) ase sɛ wɔbɛhyehyɛ na wɔaboa ma wɔayɛ gyinapɛn a ɛfiri Ghana, amanaman ntam ne Ɔmantam gyinapɛn a wɔbɛgyɛ atumu sɛ Ɔman gyinapɛn, ne saa ara nso na ɛbɛyɛ beaɛ titire wɔ Ghana a wɔde wɔn ho bɛhyɛ amanaman ntam ne Ɔmantam gyinapɛn mu.

Ano aduro a ewɔ hɔ nanso ennɔɔso

Codex gyinapɛn yɛ amanaman ntam aduane gyinapɛn, nneyɛe ho mmra, ahotew ho mmra, akwankyerɛ ne nyansahyɛ aforo a wɔde asi hɔ de abɔ adetɔfoɔ apomuden ho ban na wɔahwɛ ahu sɛ, wɔbɛyɛ nneyɛe a ɛfata wɔ aduane ho adwadie mu. GSA de ne ho to codex gyinapɛn ahorow so ma aduane sɛ wɔanhyehyɛ ɔman no gyinapɛn no a. Nea ɛyɛ awerɛhow no, wɔankyerɛ BSF nneɛma wɔ Codex gyinapɛn ahorow no mu. Ɛwom sɛ, wɔ Afrika no, Kenya ka aman kakraa bi a wɔyɛ gyinapɛn maa BSF nneɛma ho nanso wɔ Ghana no, gyinapɛn pɔtee biara nni hɔ a ɛfa BSF nneɛma ho.

Ano aduro a BBEST Dwumadie no yɛ

Esiane sɛ BBEST Dwumadie no hunuu hia a gyinapɛn ahodoɔ ho hia na ɔbesi ɛkwan a ɛda ho nti, BBEST Dwumadie no boaa ma wɔyɛ Ghana Gyinapɛn no GS 1382:2023 (Fig. 2). Ne tintim puei wɔ ɔman no gazette a wɔkyerɛw no afe 2023. BSF yɛ nkoekoemmoa, enti wɔde saa gyinapɛn yi na ɛhyɛ ade biara a wɔde fi mu no ho mmra. BSF mfididwuma ma nwansena a wobetumi de ayɛ mmoa aduane a wɔde ma akokɔ, mpataa ne mprɛko aduane bere a wobetumi de BSF frass adi dwuma sɛ aduro a ... abode3....



Mfonini 2. Krataa ɛdi kan wɔ Ghana Standard GS 1382:2023 (Source: Ghana Standard Authority)

Awie

Sɛ wɔanhyehyɛ Ghana Gyinapɛn bi a ɛbɛhwɛ sɛnea wɔde nkoekoemmoa aduane a wɔn ayɛ no bedi dwuma a, anka mmoa aduane a wɔtaa de di dwuma a ɛho ka yɛ den a wɔde di dwuma ne ne

kɛsɛ ɛntumi nyɛ yie. Gyinapɛn GS 1382:2023 ama BSF akwanya koro a ɛyɛ pɛ sɛ wɔbɛfa nneɛma a ɛyɛ papa so ama adetɔfoɔ akomatɔyɛm ayɛ kɛsɛɛ. BBEST adwuma no na ɛmaa saa nhyehyɛ yi yɛɛ mmerɛ sɛ wɔbɛhyehyɛ na wɔawie Ghana gyinapɛn ahorow no.

Nkyerɛkyerɛ a ɛko so wɔ gyinapɛn no ho hia ma ɔman ne ankorankora adwumayɛkuo, wɔn a wɔyɛ aduane, wɔn a wɔyɛ nkoko, mpreko ne mpataa akuafo, ne wɔn a wɔyɛ BSF na ama wɔn aniso nnuanennuru a wɔhwehwe wɔ nkoekoemmoa nneɛma ne nea wɔde di dwuma wɔ aduane a wɔyɛ mu no ayɛ kɛsɛ.

Nhoma Ahoro a Wafa

BSF royalty-free images. Available at: <https://shutterstock.com>. [Accessed July 24, 2025].

Bruni, L., Belghit, I., Lock, E.-J., Secci, G., Taiti, C., and Parisi, G. (2020). Total replacement of dietary fish meal with black soldier fly (*Hermetia illucens*) larvae does not impair physical, chemical or volatile composition of farmed Atlantic salmon (*Salmo salar* L.). *Journal of the Science of Food and Agriculture* 2020; 100: 1038–1047. <https://doi.org/10.1002/jsfa.10108>

Terrell, C., and Ingwell, L. (2022). Black Soldier Fly Composition Guide. Available at: <https://extention.entm.purdue.edu>. [accessed July 24, 2025]

Roffeis, M., et al. (2018). Life cycle cost assessment of insect-based feed production in West Africa. *Journal of Cleaner Production*. 199: 792–806. <https://doi.org/10.1016/j.jclepro.2018.07.179>

Beayɛ a wɔdi dwuma Na Wonya Nsem Pii

Dr Richard Bayitse

CSIR-Institute of Industrial Research 92 Boundary Road Otinshi, East Legon

E-mail: rbayitse@gmail.com; rbayitse@csir-iir.com

Phone: +233277616565; +233591583751 (on WhatsApp)

Ngyentumu

Norway Agency for Development Cooperation (Norad), Norway grant number QZA-21/095, nam Amanaman Ntam Asoɛɛ a ɛhwɛ Tropical Agriculture (IITA) so na ɛde sika maa saa nhyehyɛ tiawa yi sɛ nea ɔde mmoa titiriw mae wɔ adwuma no ho : “AKOKO, APATAA NE MPREKO ADUANE ORGANIC FERTILIZER VALUE CHAIN DEVELOPMENT A WɔDE BLACK SOLDIER FLY- NKURɔFOɔ MU BIOWASTE ADWUMA A WɔGYɛ Wɔ DRC, GHANA, MALI NE NIGER”. Wɔyɛɛ mmra a wɔbɛkyerɛw ne nhyehyɛ no ho gyinae a ɛnyɛ nea ɔde mae no.

