**Supplementary materials**

Publications: Kim et al., 2021 [46]¹ defatted meal; Hartinger et al., 2022 [20]; Józefiak et al., 2018 [37]; Onsongo et al., 2018 [33]; Vilela et al., 2021 [45] Mahmoud et al., 2022 [82]; Mutisya et al., 2021 [74]; Elangovan et al., 2021 [23].

**Figure S1.** Nutritional composition of different *Hermetia illucens* meal.

Publications: Elahi et al., 2020 [28]¹ no data for ash composition; Józefiak et al., 2018 [37]; Bovera et al., 2016 [36]; Khan et al., 2018 [31]; Benzertiha et al., 2020 [29]; Dalmoro et al., 2021 [83]; Sedgh-Gooya et al., 2022 [18].

**Figure S2.** Nutritional composition of different *Tenebrio molitor* meal.

Publications: Vilela et al., 2021 [45]¹, no data for cysteine; Osongo et al., 2018 [33]² no data for tyrosine; Mutisya et al., 2021 [27]³ no data for valine, alanine, cysteine, glycine, glutamine, proline, serine, and tyrosine; Mahmoud et al., 2022 [82]; Elangovan et al., 2021 [23]5 no data for alanine.

**Figure S3.** Total amino acids (%) of *Hermetia illucens* larvae meal.

Publications: Khan et al., 2018 [31]¹ no data for arginine; Dalmoro et al., 2021 [83]² no data for arginine and tyrosine; Bovera et al., 2016 [36]³ no data for phenylalanine, aspartic acid, cysteine, glycine, glutamine, proline, serine, and tyrosine; Sedhgh-Gooya et al., 2021 [51]4 no data for tyrosine;, aspartic acid, glycine, glutamine, proline, serine, and tyrosine; Elahi et al., 2020 [28]; Benzertiha et al., 2020 [29].

**Figure S4.** Total amino acids (%) of *Tenebrio molitor* larvae meal.