to minimize the amount of karanjin and pongamol in the seedcake for use as a viable food source.

[0005] The widespread use of pongamia-derived foodstuffs is currently prevented by the absence of methods for preparing pongamia compositions having low levels of karanjin and pongamol while maintaining the high nutritional content (proteins, carbohydrates, etc.) intrinsic to the oilseeds. Existing methods for the removal of these undesirable components in pongamia seedcake often require harsh, destructive conditions that reduce and degrade the nutrients to the point that the nutritional value of pongamia is severely impacted. The lack of methods for producing pongamia compositions having the critical balance of preserved nutritional content and sufficiently low levels of anti-nutrients have precluded the incorporation of pongamia-derived protein as a replacement food source on a large enough scale to remain economically feasible.

[0006] Thus, what is desired in the art are commercially viable methods to obtain edible compositions from pongamia oil seeds that retain an optimal nutritional balance, while minimizing components such as karanjin and pongamol.

BRIEF SUMMARY

[0007] Provided herein are compositions obtained by processing pongamia oilseeds under certain conditions to obtain a composition suitable for consumption by humans and other animals.

[0007a] In an aspect of the present disclosure, there is provided a pongamia composition, comprising:

karanjin or pongamol, or both;

tannins;

digestible proteins;

carbohydrates;

antioxidants; and

minerals,

wherein the composition has:

(i) a karanjin content, if present, of less than or equal to 100 ppm;

(ii) a pongamol content, if present, of less than or equal to 100 ppm; and

(iii) a tannin content of less than or equal to 0.5% w/w.

[0007b] In another aspect of the present disclosure, there is provided a method of preparing a pongamia composition disclosed herein, comprising:

heating pongamia oilseeds at a temperature between 25°C and 200°C for a suitable time to provide treated oilseeds;

dehulling the treated oilseeds to produce dehulled oilseeds;

mechanically pressing the dehulled oilseeds to produce a deoiled seedcake;

combining the deoiled seedcake with solvent to provide an extraction mixture, wherein the solvent comprises alkyl alkanoate or alcohol, or any combination thereof; and

separating the extraction mixture into a miscella and the pongamia composition.

[0007c] In a further aspect of the present disclosure, there is provided a method, comprising: feeding a pongamia composition disclosed herein to a non-ruminant animal.

[0007d] In another aspect of the present disclosure, there is provided a poultry feed, comprising:

a base feed; and

a pongamia composition disclosed herein.

[0007e] In a further aspect of the present disclosure, there is provided a poultry feed, comprising:

corn;

a soybean supplement; and

a pongamia composition disclosed herein.

[0007f] In another aspect of the present disclosure, there is provided a food composition, comprising:

a pongamia composition disclosed herein.

[0008] In some examples, provided is a pongamia composition, comprising: karanjin or pongamol, or both; tannins; digestible proteins; carbohydrates; antioxidants; and minerals. In some examples, the composition has: (i) a karanjin content, if present, of less than or equal to 100 ppm; (ii) a pongamol content, if present, of less than or equal to 100 ppm; and (iii) a tannin content of less than or equal to 0.5% w/w. In some variations, the composition is in the form of meal. In certain variations, the composition is in the form of flour.

[0009] In other examples, provided are methods of preparing such pongamia compositions. In some examples, the method comprises: heating pongamia oilseeds at a temperature between 25°C and 200°C for a suitable time to provide treated oilseeds; dehulling the treated oilseeds to produce dehulled oilseeds; mechanically pressing the dehulled oilseeds to produce a deoiled seedcake; combining the deoiled seedcake with solvent to provide an extraction

mixture, wherein the solvent comprises alkyl alkanoate or alcohol, or any combination thereof; and separating the extraction mixture into a miscella and the pongamia composition. In some variations, the mechanical pressing is performed by an expeller or an expander.

[0010] In yet other examples, the pongamia compositions provided herein are formulated into feed compositions, suitable for feeding to humans and other non-ruminant animals. In some examples, provided is a method comprising feeding any of the pongamia compositions described herein to a non-ruminant animal.

[0011] In yet other examples, provided are feed compositions that comprise the pongamia compositions provided herein. In one variation, provided is a poultry feed, comprising: a base feed; and any of the pongamia compositions described herein. In another variations, provided is a poultry feed, comprising: corn; a soybean supplement; and any of the pongamia compositions described herein.

[0012] In still other examples, provided are food compositions that comprise the pongamia compositions provided herein. In some variations, provided is a food composition, wherein the food composition is a confection, condiment, cereal composition, baked good, baking good, cooking adjuvant, dairy product, dietary supplement, tabletop sweetener composition beverage, or other beverage product.

DESCRIPTION OF THE FIGURES

[0013] The present application can be best understood by reference to the following description taken in conjunction with the accompanying figures, in which like parts may be referred to by like numerals.

[0014] **FIG. 1** depicts an exemplary process for preparing an edible pongamia composition.

DETAILED DESCRIPTION

[0015] The following description sets forth exemplary methods, parameters and the like. It should be recognized, however, that such description is not intended as a limitation on the scope of the present disclosure but is instead provided as a description of exemplary embodiments.