CLAIMS

1. A method for improving the nutritional value of mannan-containing cake comprising the steps of
   (i) providing mannan-containing cake with an oil content from 8% to 16% (w/w%),
   (ii) forming an aqueous slurry comprising the mannan-containing cake,
   (iii) contacting the slurry with one or more enzymes to produce a soluble hydrolysate,
   (iv) contacting the soluble hydrolyzate with a fermenting organism
   (v) and thereby obtaining mannan-containing cake with improved nutritional value,
   wherein the mannan-containing cake is selected from the group consisting of palm kernel cake, palm kernel meal, coffee waste, guar meal, and copra cake.

2. The method according to claim 1, wherein the mannan-containing cake is half press PKC++.

3. The method according to claim 1, wherein the mannan-containing cake with improved nutritional value has a mannose content from 2% to 30%, such as from 2% to 20%, such as from 2% to 18%, such as from 2% to 16%, such as from 2% to 14%, such as from 2% to 12%, such as from 2% to 10%, such as from 2% to 8%, such as from 3% to 7%, such as from 4% to 7% w/w% in a 90 w/w% dry matter composition.

4. The method according to any of claims 1 to 3, wherein the mannan-containing cake with improved nutritional value has a content of non-starch polysaccharide from 2% to 40%, such as from 2% to 30%, such as from 2% to 28%, such as from 2% to 24%, such as from 2% to 22%, such as from 2% to 20%, such as from 5% to 20%, such as from 10% to 20% and such as from 15% to 20% w/w% in a composition with 90 w/w% dry matter.

5. The method according to any of claims 1 to 4, wherein the mannan-containing cake with improved nutritional value has an acid detergent fiber bound nitrogen (ADF-N) selected from the group consisting of from 5% to 50%, such as from 5% to 35%, such as 5% to 30%, such as 5% to 25% .

6. The method according to any of claims 1 to 5, wherein the mannan-containing cake with improved nutritional value has a crude fat content of from 8% to 16%, such as from 8% to 14%, such as from 10% to 14% and such as from 12% to 14%.

7. The method according to any of claims 1 to 6, wherein the mannan-containing cake with improved nutritional value has a true metabolisable energy of 2400 kcal/kg to 4000 kcal/kg as determined in Example 2, such as a true metabolisable energy of 2400 kcal/kg to 3800 kcal/kg, such as a true metabolisable energy of 2400 kcal/kg to 3800 kcal/kg, such as a true metabolisable energy of 2400 kcal/kg to 3600 kcal/kg, such as a true metabolisable energy of 2400 kcal/kg to 3400 kcal/kg and such as a true metabolisable energy of 2400 kcal/kg to 3200 kcal/kg.

8. The method according to any of claims 1 to 7, wherein the one or more enzymes in step iii) in claim 1 have one or more of the enzyme activities selected from the group consisting of cellulase, mannanase and mannosidase.

9. A mannan-containing cake with improved nutritional value obtained or obtainable by the method according to any of claims 1 to 8.

10. A mannan-containing cake with improved nutritional value comprising one or more of the features selected from the group consisting of

    (i) a content of less than 30% mannose w/w% in a composition with 90 w/w% dry matter,

    (ii) a content of less than 40% non-starch polysaccharide w/w% in a composition with 90 w/w% dry matter,

    (iii) a content of less than 40% acid detergent fiber bound nitrogen,

    (iv) a content of true metabolisable energy of at least 2400 kcal/kg,

    (v) improvement in digestible amino acid content of at least 4% compared to full press PKC++ as defined in Example 2,

    (vi) improvement in digestible cysteine content of at least 50% compared to full press PKC++ as defined in Example 2,

    (vii) improvement in digestible glycine content of at least 5% compared to full press PKC++ as defined in Example 2, and

    (viii) improvement in digestible lysine content of at least 10% compared to full press PKC++ as defined in Example 2.

11. An animal feed or an animal feed additive comprising the mannan-containing cake with improved nutritional value according to any of claims 9 to 10.

12. The animal feed or an animal feed additive according to claim 11, wherein the animal feed or an animal feed additive is an animal feed or an animal feed additive for a mono-gastric animal.

13. Use of mannan-containing cake with improved nutritional value according to any of claims 9 to 10 or the animal feed or the animal feed additive according to any of claims 11 to 12 for feeding a mono-gastric animal.

14. The method according to any one of claims 9 to 11 or 13, wherein the mannan-containing cake is half press PKC++.