Some dry pet food manufacturers have begun to add fresh meat to their dry pet food manufacturing processes at the preconditioner stage, prior to the extruder. However, above a certain percentage inclusion, fresh meat is required to undergo a tricanting or dewatering process which reduces the oil and water content of the meat, before it can be added at the preconditioner, so that the mechanical cooking extruder can still form chunks that do not break down into pieces.

Because of the physical characteristics required of the materials in order to be suitable for mechanical cooking extrusion, dry pet foods are inherently and generally much higher in dry grain or dry carbohydrate (e.g. potato / sweet potato) content, relative to other forms such as 'wet' (e.g. canned). As a result, and combined with the use of dry rendered animal proteins, dry foods historically have been lower in palatability.

One example of a known dry pet food manufacturing process is shown in Fig. 1. The raw materials such as dried meat and vegetables are stored in a step 1, and they are weighed, ground, and mixed together in steps 2 to 4. Fresh or frozen meat is tricanted or dewatered in step 5, and added to the mixed dry ingredients in a preconditioning step 6. The mixture then passes through a mechanical cooking extruder in step 7, to provide strips which are die formed into chunks as described above in step 8, and dried, cooled, and packaged in steps 9a to 9c. The chunks final moisture content is typically in the range of 6 to 10%, and temperature less than 5°C of ambient.

It is an aim of the invention to incorporate non processed fresher meats (i.e. not dewatered, not decanted, nor triacanted) into a dry food manufacturing process to provide a higher quality (fresher, more palatable) pet food, whilst maintaining the packaging advantages, convenience, nutrient density and shelf life that dry food offers.

SUMMARY OF THE INVENTION

According to the invention, there is provided a method of manufacturing a dry pet food, comprising receiving unprocessed meat, grinding the unprocessed meat to produce a ground meat, forming the ground meat into a slab or a plurality of strips, passing the formed meat through a steam cooker to raise the temperature of the formed meat to a cooking temperature and cutting the formed meat into chunks, drying out the chunks to produce dried chunks and heating the dried chunks to a higher temperature than the cooking temperature to pasteurise the dried chunks.

Since a steam cooker is used to cook the meat by steam and at lower temperature for longer when compared to the cooking that is done by a conventional mechanical

CLAIMS

1. A method of manufacturing a dry pet food, comprising receiving unprocessed meat, grinding the unprocessed meat to produce a ground meat, forming the ground meat into a slab or a plurality of strips, passing the formed meat through a steam cooker to raise the temperature of the formed meat to a cooking temperature and cutting the formed meat into chunks, drying out the chunks to produce dried chunks and heating the dried chunks to a higher temperature than the cooking temperature to pasteurise the dried chunks.

2. The method of claim 1, comprising mixing the ground meat with less than 20% by weight dry ingredient prior to the forming of the ground meat into the slab or plurality of strips, the slab or plurality of strips comprising greater than 80% by weight ground meat.

3. The method of claim 2, wherein the dry ingredient comprises at least one of a dried vegetable, dried carbohydrate, dried cereal, or dried legume and dried fruit preparation.

4. The method of claim 2, wherein the step of grinding the unprocessed meat comprises initially grinding the unprocessed meat, mixing the initially ground meat with the dry ingredient, and subsequently grinding the mixture of the initially ground meat and the dry ingredient at a finer level of grinding than a level of the initial grinding, prior to the step of forming.

5. The method of claim 1, wherein the step of forming the ground meat is performed with an extruder that does not impart any significant heat to the ground meat through friction or shear forces, such that the formed meat is in an uncooked state.

6. The method of claim 1, wherein the cutting of the formed meat into chunks is performed after the formed meat has passed through the steam cooker.

7. The method of claim 1, wherein forming the ground meat into a slab or a plurality of strips comprises forming the ground meat into a slab, the method comprising cutting the slab into a plurality of strips prior to the steam cooking by using a slitter.

8. The method of claim 1, wherein the cutting of the meat into chunks comprises cutting each of the plurality of strips into multiple separate lengths.

9. The method of claim 1, wherein the steam cooker comprises a conveyor belt configured to carry the slab, plurality of strips, or chunks, along and through a steam filled enclosure.

10. The method of claim 1, wherein prior to the step of drying the chunks the chunks exit the steam cooker or a chunk cutter onto a transfer belt, and wherein air fans or water sprays directed towards the transfer belt are used to help cool the chunks..

11. The method of claim 1, wherein the drying of the chunks comprises reducing a moisture content of the chunks from greater than 60% by weight to less than 12% by weight.

12. The method of claim 1, wherein the drying of the chunks comprises a first stage of outer skin hardening and a subsequent stage of full chunk drying.

13. The method of claim 1, wherein the slab or the plurality of strips comprises a moisture content of greater than 40% by weight.

14. The method of claim 1, further comprising coating the dried chunks with a liquid fat or oil.

15. The method of claim 1, further comprising packaging the dried chunks into containers, for sale.

16. The method of claim 1, wherein the slab or the plurality of strips comprises a moisture content of greater than 60% by weight.

17. The method of claim 1, wherein the cooking temperature is above 80 degrees centigrade.