container unit of the packaged food on the Internet site, and (C) a year, month, and day display of at least any one of a manufacturing date, an expiration date, a freshness date of the packaged food.

[0005] US20190354992A1 (Duckett *et al.*) discloses a method of remotely updating information related to a food product item. The method is comprised of configuring an application that can receive nutritional, allergen, dating or other important information specific to the food product. The information may be updatable either automatically or manually. The data is input into the application and linked to a remote database via a key identifier. The food product is then tagged or labeled so that a user may access the most current updated information. The method of the present invention may be used in conjunction with an intelligent printer, such as a RFID, QR code, or barcode printer, a smart device, or a personal computer.

[0006] JP2002293332A (Ichikawa) discloses a food packaging container which can convey information concerning foods to individual consumers, brokers or the like correctly and rapidly so that various data processing can be easily performed based on the information. Information concerning foods such as nutritive element information of foods is recorded on the food packaging container in the form of two-dimensional code.

SUMMARY

[0007] The following summary is intended to introduce the reader to various aspects of the applicant’s teaching, but not to define any invention.

[0008] In one aspect, a method of manufacturing a plastic article is disclosed. The method includes obtaining input material suitable for manufacturing the plastic article and for which tracing information is known; forming the plastic article from the input material; generating a computer-readable matrix barcode scannable to display the tracing information; associating the computer-readable matrix barcode with a web landing page that displays the tracing information; and providing the computer-readable matrix barcode on a surface of the plastic article, wherein the input material comprises a first ingredient and at least a second ingredient, the tracing information comprises first tracing.

[0009] In some examples, the input material comprises a first ingredient and at least a second ingredient, and the tracing information comprises first tracing information for the first ingredient and second tracing information for the second ingredient.

[0010] In some examples, said obtaining the input material comprises setting a relative proportion among at least the first and second ingredients.

[0011] In some examples, at least one of the first and second ingredients is a recycled ingredient.

[0012] In some examples, said forming the plastic article comprises thermoforming the plastic article.

[0013] In some examples, the method further includes, before said thermoforming the plastic article, extruding a plastic sheet made from the input material.

[0014] In some examples, said forming the plastic article comprises one of injection molding, vacuum forming, and blow molding the plastic article.

[0015] In some examples, the computer-readable matrix barcode is a quick response (QR) code.

[0016] In some examples, said providing the computer-readable matrix barcode comprises using a laser to etch the computer-readable matrix barcode on the surface of the plastic article.

[0017] In some examples, the input material comprises one of polyethylene terephthalate, polypropylene and polystyrene.

[0018] In some examples, the method further includes generating a revised computer-readable matrix barcode in response to a change in the input material.

[0019] In some examples, the change in the input material comprises at least one of a composition change, a source change, and a proportion change for at least one ingredient of the input material.

[0020] In some examples, the method further includes, after said providing the computer-readable matrix barcode on the surface of the plastic article, stacking the plastic article onto the particle article manufactured immediately before.

[0021] In some examples, said forming the plastic article occurs after said generating the computer-readable matrix barcode.

[0022] In some examples, said providing the computer-readable matrix barcode on the surface of the plastic article takes place within 1 minute of completion of said forming the plastic article.

[0023] In some examples, said generating the computer-readable matrix barcode comprises encoding a uniform resource locator (URL) into the matrix barcode, the URL associated with the tracing information.

[0024] In another aspect, a system for marking a plastic article with a computer-readable matrix barcode associated with input material used to form the plastic article is disclosed. The system includes a barcode applicator positioned downstream of an article forming operation. The barcode applicator is configured to provide a computer-readable matrix barcode on a surface of the plastic article. The system further includes an electronic control device communicatively coupled to the barcode applicator. The electronic control device has one or more computer processors configured to collectively: receive tracing information for one or more ingredients of the input material used to form the plastic article; generate the computer-readable matrix barcode scannable to display the received tracing information for each ingredient; transmit, to the barcode applicator, one or more commands instructing the barcode applicator to provide the generated computer-readable matrix barcode on the surface of the plastic article; and generate a revised computer-readable matrix barcode in response to a change in the input material, wherein preferably the change in the input material comprises at least one of a composition change, a source change, and a proportion change for at least one of the one or more ingredients.

[0025] In some examples, to generate the computer-readable matrix barcode, the one or more computer processors are configured to collectively encode a URL associated with the tracing information in the computer-readable matrix barcode.

[0026] In some examples, the one of more computer processors are configured to collectively generate a revised computer-readable matrix barcode in response to a change in the input material.

[0027] In some examples, the change in the input material comprises at least one of a composition change, a source change, and a proportion change for at least one of the one or more ingredients.

[0028] In some examples, the one or more computer processors are configured to collectively receive revised tracing information corresponding to the change in the input material.

[0029] In some examples, the barcode applicator is positioned upstream of an article stacking operation.

[0030] In some examples, the barcode applicator is positioned upstream of an article finishing operation.

[0031] In some examples, the barcode applicator is a laser configured to etch the computer-readable matrix barcode on the surface of the plastic article.

[0032] In some examples, the computer-readable matrix barcode is a quick response (QR) code.

[0033] Disclosed herein is a plastic article that includes an article body formed from an input material. The input material comprises one or more ingredients. Tracing information for each ingredient is known. The plastic article further includes a computer-readable matrix barcode provided on a surface of the article body. The computer-readable matrix barcode is associated with the input material and scannable to display the tracing information for each ingredient.

[0034] In some examples, the input material is a transparent plastic.

[0035] In some examples, the computer-readable matrix barcode is a quick response (QR) code.

[0036] In some examples, the computer-readable matrix barcode is laser etched on the surface of the article body.

[0037] In some examples, the computer-readable matrix barcode and the article body are of unitary construction.

[0038] Other aspects and features of the teachings disclosed herein will become apparent to those ordinarily skilled in the art, upon review of the following description of the specific examples of the present disclosure.

DRAWINGS

[0039] For a better understanding of the described examples and to show more clearly how they may be carried into effect, reference will now be made, by way of example, to the accompanying drawings in which:

[0040] Figure 1 is a perspective view of a plastic article according to aspects of the teaching disclosed herein;

[0041] Figure 2 is a perspective view of another plastic article according to aspects of the teaching disclosed herein;

[0042] Figure 3 is a schematic diagram showing a physical arrangement of equipment for manufacture of a plastic article according to aspects of the teaching disclosed herein;

[0043] Figure 4 is a schematic diagram showing another physical arrangement of equipment for manufacture of a plastic article according to aspects of the teaching disclosed herein;

[0044] Figure 5 is a schematic diagram of an electronic controller communicatively coupled to a barcode applicator and a remote storage device;

[0045] Figure 6 is a flowchart illustrating a method of manufacturing a plastic container according to aspects of the teaching disclosed herein;

[0046] Figure 7 is a schematic illustration of an example tracing report displayed on a user electronic device screen; and

[0040] Figure 8 is a schematic illustration of another example tracing report displayed on a user electric device screen.

[0048] The drawings included herewith are for illustrating various examples of apparatuses and methods of the teaching of the present specification and are not intended to limit the scope of what is taught in any way.