Clearing up the confusion

You will see and hear a number of different terms relating to plastic which can be confusing or misleading. In particular, the terms ‘biodegradable’ or ‘compostable’ can be misleading unless they are backed by a recognized certification.

For the above reason, in California, it is illegal to sell any plastic item, or any item with plastic packaging, that includes a label stating it is "biodegradable," "degradable," "decomposable," "compostable" or "marine degradable" (or any alternate form of those terms).

In Bermuda you will regularly see such terms on products, so we will attempt to clarify those terms below.

Biodegradable

The word Biodegradable is a poorly defined term when applied to packaging. Essentially a biodegradable item can be broken down into increasingly smaller pieces by bacteria, fungi or microbes to be reabsorbed by the surrounding environment, ideally without releasing toxic substances or causing any pollution. Some things are naturally biodegradable, like food and plants, while other items can break down into harmful chemicals or gasses.

The trouble is, everything we use or create could be labeled ‘biodegradable’ because eventually everything will breakdown - from organic waste and wooden cutlery to plastic packaging or steel machinery. It could just take a very, very long time or it may require specific conditions. So, putting the word ‘biodegradable’ on labels isn’t very helpful to anyone trying to make greener shopping choices.

The definition of ‘biodegradable plastic’ are plastics that can be broken down by microorganisms (bacteria or fungi) into water, carbon dioxide and some bio-material. Biodegradable plastic needs air and sunlight to biodegrade. Most biodegradable plastic will not biodegrade in the ocean or freshwater. An environmentally friendly biodegradable plastic can take three to six months to decompose, but even then it may require ideal conditions at the right temperature, humidity and oxygenation. This would not include a regular plastic bottles which are estimated to take between 450 and 1000 years to decompose.

BioPlastic or Biobased

A bioplastics can be defined as a plastic polymer that is manufactured from a natural source or renewable resource. Such sources might include starches, wood, sugars or vegetable oils and are therefore called biobased. This is opposed to traditional plastic which uses fossil fuels as its starting component. Biobased and fossil fuel based plastics may be virtually identical in chemical structure and properties. A bioplastic may not be readily biodegradable. The advantage of plastic made from a biobased source is

that it may be more carbon neutral in a life cycle analysis (release less greenhouse gasses).

Home compostable

A better defined term to look for in packaging is ‘Home Compostable’. Packaging labeled as home compostable means that the customer can place the packaging in the home compost bin along with fruit and vegetable matter**.** Home compostable packaging means that any component or material used in the packaging including the printing ink, and the adhesives will decompose into organic soil.

Compostable

When the word ‘compostable’ is used alone it usually indicates that the item is only compostable in an industrial or commercial facility. There is no such facility in Bermuda and in most countries such facilities exist in only small numbers. Industrial composting facilities treat the packaging at high temperatures (above 55 degrees, much higher than can be achieved at home) to accelerate degradation of the material. Usually a large amount of food and vegetable waste is required to compost a biodegradable plastic.

Certification for compostable products can also be confusing. TUV Austria is a certification body recognized throughout the European Union. Their certification indicates “OK Compost Home” and “OK Compost Industrial”. There is no American certification for home compostability.

On US labeling you may see that the product meets ASTM d6400 indicating that the product meets the standard for industrial composting. Additional industrial compoable certifications include Canadian BNQ 0017-088; and European EN13432

At this time the only home compostable standard which should be accepted in Bermuda is TUV OK Compost Home.

Plastic Recycling

In principle, many plastics can be recycled. However, in practice, there are a variety of different barriers that can undermine this process. Unfortunately, it does not always make environmental, economic, or technical sense to do so. Here are some reasons why recycling cannot always happen:

- Many times, items can include multiple types of plastic and different layers which are hard to separate and make recyclability difficult and costly.

- Plastics can often be contaminated by food and other substances, making the resins not clean enough to be reused.
- Recycling facilities cost millions of dollars to build and operate and can only be profitable when a huge amount of plastic is treated every day. Small quantities of plastics can therefore make recycling non-economical and non-beneficial, due to low efficiencies and high costs. There is no plastic recycling facility in Bermuda. Exporting plastic for recycling is not economically viable.
- Some plastic cannot be recycled. Plastic types 1,2,4 & 5 can be recycled. Types 3,6 & 7 cannot.
- Nearly 300 million tonnes of plastic wastes are produced every year. Only 9% of plastic waste is recycled.

Greenwashing

Greenwashing is essentially when a company's marketing promotes their product as being environmentally friendly or sustainable when in fact it is not. Such marketing may mislead the consumer into purchasing products that are not environmentally friendly. This may be as simple as putting a product in a green box with a leaf on it or using poorly defined key words. In other cases marketing may emphasises one aspect of their product which may be better environmentally, while the product in its entirety is not environmentally friendly. Greenwashing confuses consumers and can lead to frustrating experiences. Countering greenwashing takes up valuable resources in the battle to better our environment.