



اَوْنُوْرَسِيْتِي تِيْكْنُوْلُوْجِي مَارَا
UNIVERSITI
TEKNOLOGI
MARA



**TECHNOLOGY ENTREPRENEURSHIP
(ENT600)**

**TECHNOLOGY-BASED BUSINESS IDEA
BLUEPRINT**

Group members:

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1.0 EXECUTIVE SUMMARY

Jagat kencana Sdn Bhd consist of board director that lead by Ahmad Syakir Yaqzan as Chief Executive Officer (CEO) and being help by four others. First, Muhd Arieff Saiful Bahar, Chief Operating Officer (COO) followed by Muhd Ariff Khalid as Chief Production Officer. Next is Mohd Akmal Mislán, our Chief Marketing Officer and of course we have one that managing our financial, Amira Izzah as Chief Financial Officer. Each of us are share holder to this company of our own. Below are organization chart:



2.0 PRODUCT DESCRIPTION

2.1 Product feature and detail

Kencana plastic is an environmental friendly type of plastic which biodegradable and made up from natural renewable bio-based resources. Kencana plastic is partially bio-based which made up from the mixture of 50 percent (50%) starch from corn kernel and 50 percent (50%) crude oil. The ratio of 1:1 mixture of starch to crude oil is one the approach to reduce the usage of crude oil which is a non-renewable source. This plastic can be degraded only when the plastic in contact with sea water by decomposition process carried out by microorganisms. The decomposition process takes about 6 months to completely be degraded.

2.2 Application of product

There are two types Kencana Plastic which are carry bag and garbage bag which available in three different sizes categorized as small, medium and large for both types.

| Type of product | Application | Size | Quantity per packet |
|-----------------|--|--|---------------------|
| 1) Carry bag | <ul style="list-style-type: none">- Shopping carry bag- Groceries carry bag | Small: 10"×15"×18" Medium: 11"×17"×21" Large: 18"×19" ×23" | 50 sheets/pcs |
| 2) Garbage bag | <ul style="list-style-type: none">- Waste disposal bag | Small: 47cm x 54cm Medium: 56cm x 84cm Large: 75cm x 90cm | 30 sheets/pcs |

2.3 Unique feature of the product

The unique feature of Kencana plastic from other conventional plastic product is that it is biodegradable which means it can be degraded and will reduce the pollution to the environment. It will be degraded when in contact with soil and sea water. Microorganisms in the soil and in the sea water are the mechanisms in that will carry out the decomposition process. Besides that, Kencana plastic can be degraded in shorter time (6 months) compare to other partially bio-based plastic which biodegrade within 20 – 36 months. The shorter degradation period of Kencana plastic will prevent the plastic to contaminate the water source.

2.4 Product differences with existing product in the market

Our product is different from the other bioplastic production company in Malaysia as we use different natural material which is corn starch while other company use palm oil such as crude palm kernel oil or palm oil mill effluent as the source of natural. Other than natural material, our company bioplastic is also different in term of the mixture of material ratio. Our bioplastic has the mixture of material of 50:50 corn starch and petroleum oil. Other companies mostly used higher percentage or ratio of petroleum than the natural sources. Our product is also different from other bioplastics produced by other company in Malaysia in terms of the biodegradation process. Kencana plastic will efficiently be degraded when it in contact with the sea water while the other bioplastic from other companies will degrade when in contact with soil. It also can be degraded when in contact with sunlight (photodegradable) and air (oxydegradable) but it does not degrade as faster as when it in contact with seawater. The ability of our bioplastic to degrade in the seawater will help to reduce the environmental impact towards the marine life.

2.5 Product development state

Kencana Plastic has been patent and the product patent has been filed under technological invention (Utility Patent) on March 2014 according to Patent Act 1983. Kencana Plastic has been an intellectual property which enables our company to manufacture, gain benefit or sell an invention for 20 years. In order to make our product is legal and safe to the customer, our company has been registered at Suruhanjaya Syarikat Malaysia (SSM).

3.0 TECHNOLOGY DESCRIPTION

3.1 The evolution of the industry in the manufacture of biodegradable bioplastics

Bioplastics have changed over time due to both technical developments and market demand. The evolution of the industry reflects in large part the emergence of new plastics and applications and can be envisaged in terms of three phases:

3.1.1 First Phase

The first phase was characterised by a single focus on biodegradable and compostable plastics, primarily intended for simple packaging applications.

3.1.2 Second Phase

The second phase had an increasing focus on so-called/second generation bio-based plastics (which are essentially improvements on the first generation in terms of performance and are broadly comparable to the bulk production plastics that are used in packaging applications). Second generation bioplastics have reached industrial scale production but are still at a price disadvantage relative to petro-plastics.

3.1.3 Third Phase

The third phase and latest phase has seen the advent of third generation bio-based plastics (or bioplastics) that are far more durable. Third generation bioplastics are generally bio-based equivalents of the major thermoplastics that dominate the market like polyethylene (PE), polypropylene (PP) and polyethylene terephthalate (PET), with bio-based equivalents of