



# Global Funding for Rubber Innovation

*Nurturing Ideas for the Rubber Industry Globally*



## UPSTREAM RUBBER SECTOR

## 1. Shortening of Rubber Tree Maturity Period

- ❑ Rubber tree in general need maturation period of 7 years before it can produce latex
- ❑ Fertilizer demand during the maturation period is essential to build up the biomass
- ❑ Thus, if the maturation period is reduced, the fertilizer consumption is also reduced while the rubber tree can also be tapered sooner

## 2. Maximize the Potential Latex Output

- ❑ Typically, the annual latex output is around 1,500 kg/hectare depending on the density of rubber trees per hectare
- ❑ A single rubber tree can produce around 60-150 kg of latex during its lifetime
- ❑ Currently there are steps to improve the latex output per hectare by introducing terrace planting for rubber tree. By doing this, the density of rubber trees per hectare can be increased and at the same time the latex output is also increased.
- ❑ Maximizing the latex output will surely help to improve the rubber industry in many ways

## 3. New Type of Chemical or New Method of Fertilization/Weeding/Pest and Disease Control of Rubber Tree

- ❑ There are several activities that can interrupt rubber tree from growing healthily and producing latex consistently throughout its life such as insufficient nutrient through fertilization, competition with invasive plant species and tree diseases.
- ❑ Thus, steps to improve the type of chemicals used by making it more potent or less dangerous is highly sought. Besides that, new methods for fertilization, weeding, disease control and methods to ensure their effectiveness is also essential to keep steady production of latex.

## 4. Introduction of High-end By-product for Commercialization

- ❑ Rubber tree can produce latex over period of 20 to 30 years. After serving its purpose, the rubber wood can be salvaged either to make furniture or as a source of renewable energy
- ❑ There are several other by-product can be obtained from rubber plantation such as rubber seed, leaves and serum water
- ❑ Research to improve the value of the by-product through the introduction of high-demand or high-end application is favorable.

## 5. Mechanization or Improvement in Tapping Activity/Collection/Preservation of Latex

- ❑ Currently, most rubber tree tapping activity was done early in the morning before the day's temperature rises, so the latex will drip longer before coagulating and seal the cut. Besides that, tapping in the morning will requires less force due to the rubber tree bark have less torque pressure.
- ❑ After several hours, latex coming out from the tree will be collected. Depending on the required final products, additional chemicals added to the collection container to prevent the latex from coagulating.
- ❑ The activity of rubber tree-tapping and rubber collection is slow and labor-intensive due majority of it was done manually