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Jackbean in Nepal

Product Description

The Jackbean (*Canavalia ensiformis*) is quite large in size within the Legume family (*Tropical Legumes*, 1979). The pods that the Jackbean creates can grow to be 30 cm long as well as 3 ½ cm wide (*Tropical Legumes*, 1979). While growing, the Jackbean plant has a shrubby look to it and has the ability to grow about 1 m tall (*Tropical Legumes*, 1979). However, there does exist climbing types of Jackbeans (*Tropical Legumes*, 1979), but there is very limited available knowledge on these types.

The Jackbean can be eaten for its pods, which are similar to eating a green vegetable, or for its seeds, which are used specifically for protein intake (*Tropical Legumes*, 1979). With a growing population of vegetarians in developed countries, alternative protein options are growing, and the Jackbean could be a part of that growth. However, that market is competitive, and the Jackbean would need to have other favourable qualities to compete. Furthermore, aside from human consumption, the Jackbean can be used for other purposes such as green manure, animal feed, or assisting the growth of other plants (*Tropical Legumes*, 1979).

Growing Conditions of Product

The Jackbean is extremely adaptable and therefore the growing conditions it requires can be quite diverse (*Tropical Legumes*, 1979). The variety of growing conditions include, “tropical lowlands with depleted soils to areas with unpredictable climate or varying soil types, high altitudes, and [areas

with] pest infestation" (*Tropical Legumes*, 1979). Ultimately, the diverse requirements to grow the Jackbean are an exceptional basis for Nepal to consider growing it in their hillside regions. The Jackbean's ability to grow in a variety of climates is the most promising characteristic of the bean.

Sustainability and Agronomic Issues

Though the Jackbean has had great success in regards to adaptability, "insect, fungus, and bacterial and viral infestations have been recorded, [though] they do not seriously reduce the plant vigor or yields. A stem borer and a fungal root disease sometimes cause more serious losses..." (*Tropical Legumes*, 1979). These infestations must be taken into consideration and the potential hillside location Nepal may use to plant the Jackbean must be examined. However, the fact that most infestations do not impact the Jackbean severely is very beneficial for a potential product that Nepal could produce.

As well, the bean within the pod of the Jackbean is toxic and therefore must be boiled several times before it is consumed (*Tropical Legumes*, 1979). Unfortunately, the toxicity of the bean lowers its export potential. As well, it would require Nepalese farmers to attain large amounts of water for detoxifying the beans when water is not necessarily an easily attainable resource.

Economic Benefits to Nepal

Economically, producing the Jackbean alone would not create many benefits. However, potential economic benefits would arise if either Nepal was able to detoxify the bean before export. Furthermore, since the Jackbean can be used as a crop to aid in the production of other crops by acting as a cover, Nepal could gain benefits by producing the Jackbean alongside other crops (*Tropical Legumes*, 1979).

Practical "Getting Started" Information

Export Potential

If the Jackbean is going to be used to generate income for Nepal through exports to Canada, the first step would be to create a business in Nepal dedicated to detoxifying the Jackbeans. Once the Jackbeans are no longer toxic, their export potential rises and Canadian businesses such as grocery stores like Zehrs, or Sobeys, may be interested in implementing the bean into their stores. Secondary to detoxification, the Jackbean is relatively tasteless and therefore it may hold more potential as a nutritious animal feed (*Tropical Legumes*, 1979). Other possibilities could include using the bean as a cover crop to enhance the growth of other crops and in turn benefit other crops economically through export. As well, the Jackbeans potential to be involved in the production of green manure could also be thoroughly analyzed.

References

1. Pulses, Jackbean and Swordbean. (1979). In *Tropical Legumes: Resources for the Future* (pp. 54-58). Washington D.C: National Academy of Sciences.

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