Cultivation, Processing & Uses of Jatropha (Bio-Diesel) with Ashwagandha, Stevia, Brahmi & Jatamansi Herbs

(Jatropha, Bio Diesel, Stevia, Ashwagandha, Brahmi, Jatamansi, Safed Musli, Sarpagandha, Shatavari, Senna, Business Opportunities, Shelf Life, Cultivation)
Jatropha is a genus of flowering plants in the spurge family, Euphorbiaceae. Another common name is nettles purge. It contains approximately 170 species of succulent plants, shrubs and trees (some are deciduous, like Jatropha curcas). Most of these are native to the Americas, with 66 species found in the Old World. Plants produce separate male and female flowers.
As with many members of the family Euphorbiaceae, Jatropha contains compounds that are highly toxic. Jatropha species have traditionally been used in basket making, tanning and dye production. In the 2000s, one species, Jatropha curcas, generated interest as an oil crop for biodiesel production.
Ashwagandha (also called as, Indian Ginseng), Stevia a natural non caloric sweetener, Brahmi (brain tonic) and Jatamansi are the important herbs which have very good medicinal values. Ashwagandha increases the count of white blood cells and prepares the body to produce antigens against various infections and allergies. It is also considered as a tonic for the heart and lungs as its regular intake controls the blood pressure and regulates the heartbeat. It has a strong nourishing and protective effect on the nervous system.
Ashwagandha has been used as a sedative, a diuretic, a rejuvenating tonic, an anti-inflammatory agent, aphrodisiac and an immune booster. It is especially beneficial in stress related disorders such as arthritis, hypertension, diabetes, general debility, etc. It has also shown impressive results when used as stimulants for the immune system. It is considered as an adaptogen that stimulates the immune system and improves the memory. Stevia also known as the sweet leaf which is an all-natural sweetener, derived from a plant called stevia rebaudiana.
It has no calories, no carbohydrates, and it has a glycemic index of zero, which makes it the sweetener of choice for many diabetics all over the world. The herbs are carefully nurtured and harvested at only certain times of the year. Stevia comes in many forms; stevia supreme, stevita ultimate stevia, stevita liquid stevia, fruit flavoured stevia and many more. Brahmi is used as an herbal brain tonic, to rejuvenate the body, as a promoter of memory and as a nerve tonic. It improves memory and helps overcome the negative effects of stress. It is unique in its ability to invigorate mental processes whilst reducing the effects of stress and nervous anxiety.
Brahmi induces a sense of calm and peace. Brahmi has gain worldwide fame as a memory booster and mind alertness promoter. Jatamansi has the power to promote awareness and calm the mind. It is a very useful herb for palpitation, tension, headaches, and restlessness and is used for promoting awareness and strengthening the mind. It aids in balancing the body of all three Ayurvedic doshas.
This herbs sedative properties increase awareness, as opposed to valerian that dulls the mind. Aromatic, antispasmodic, diuretic, emmenagogue, nervine, tonic, carminative, deobstruent, digestive stimulant, reproductive some of the properties of Jatamansi herb.
Market Outlook

India’s biofuel policy is mostly confined to Jatropha based biodiesel, as the demand for diesel in India is five times more than the demand for petrol. The policy seeks to increase the demand for biodiesel to 16.72 million tons by 2017 and encourages 20% blending of biodiesel with other fuels. This is a major challenge as Jatropha is a new perennial crop for the farmers, who see considerable risk and uncertainty in its production, profitability and employment generation.
The present study tries to investigate the supply chain network and related problems of the biodiesel industry in North East India. The Jatropha based biodiesel supply chain includes stages like feedstock production.
### Projected Share of Jatropha Biodiesel in Total Biodiesel Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Supply of Jatropha (MMT)</th>
<th>Projected Production of Jatropha (MMT)</th>
<th>Total Biodiesel Production (MMT)</th>
<th>% of Biodiesel Supplied by Jatropha</th>
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</thead>
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<tr>
<td>2009</td>
<td>0.5</td>
<td>0.5</td>
<td>16.9</td>
<td>3.0</td>
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<tr>
<td>2010</td>
<td>2.1</td>
<td>2.1</td>
<td>20.2</td>
<td>10.4</td>
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<tr>
<td>2012</td>
<td>6.5</td>
<td>6.5</td>
<td>29.2</td>
<td>22.3</td>
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<tr>
<td>2015</td>
<td>15.5</td>
<td>15.5</td>
<td>50.3</td>
<td>30.8</td>
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The global stevia market is projected to multiply at a CAGR of nearly 9% during the forecast period. The global stevia market is expected to reach USD 556.7 million by 2024.
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