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SENATE

S. No. 978

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Introduced by Senator Manuel "Lito" M. Lapid

EXPLANATORY NOTE

Energy today has become a matter of national security. For many countries, the question of trying to achieve greater energy independence through the development of biofuels has become an issue of national importance. One of the greatest challenges to the widespread deployment and use of biofuels is developing a dedicated energy crops that are cost-effective, easy to sustain and can produce greater yields. Such energy crop that produces biofuels and holds particular promise for sustainable development and a sustainable environment is *Jatropha*.

Jatropha can grow in various areas in the Philippines. It is known locally as *tuba-tuba*. Others call it *tagumbao*, *tawa-tawa*, *kalunay*, *kasla* and *tangan-tangan*. Botanist Carl Von Linne first classified the plant in 1753 and named it *Jatropha curcas*. *Jatropha* comes from the Greek words: *jatros* (doctor) and *trophe* (nutrition). It belongs to the family *Euphorbiaceae*. *Jatropha curcas* is a drought-resistant perennial, growing well in marginal or poor soil. It is easy to establish, grows relatively quickly and lives, producing seeds for 50 years. *Jatropha* produces seeds with an oil content of 37%. The oil can be combusted as fuel without being refined. It burns with clear smoke-free flame, tested successfully as fuel for simple diesel engine. The by-products are press cake a good organic fertilizer, oil contains also insecticide. Currently the oil from *Jatropha curcas* seeds is used for making biodiesel fuel in Philippines. Likewise, *jatropha* oil is being promoted as an easily grown biofuel crop in hundreds of projects throughout other developing countries.

In recent years, the Philippine government has shown a major interest in *Jatropha*, and alongside other developing countries, a number of international groups are now sharing this interest. There have been substantial political and social pressures to promote the growing of *jatropha* crops in the Philippines, as a means of economic empowerment, social upliftment and poverty alleviation within marginalized communities. *Jatropha* is a valuable multi-purpose crop which can be used for bio-energy to replace petro-diesel, for soap production and climatic protection. When the seeds are crushed, the resulting *jatropha* oil can be used in a standard diesel car, while the residue can also be processed into biomass to power electricity plants.

This proposed measure envisions the creation of a *Jatropha* Research and Development (R&d) and Extension center that will be in the forefront of conducting relevant researches, scientific study and feasible marketing strategies for the use of *jatropha* by-products for bio-diesel and alternative energy source. The Center shall educate and train all stakeholders of the *jatropha* farming industry, extend technical assistance and technology transfer to *jatropha* farmers, and provide linkages with international organizations and other *jatropha* development centers in other countries.


In view of the foregoing, approval of this bill is earnestly requested.


MANUEL "LITO" M. LAPID
Senator

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**AN ACT
ESTABLISHING AND INSTITUTIONALIZING THE JATROPHA RESEARCH
AND DEVELOPMENT (R&D) AND EXTENSION CENTER, AUTHORIZING
THE APPROPRIATION OF FUNDS THEREFOR, AND FOR OTHER
PURPOSES**

*Be it enacted by the Senate and the House of Representatives of the Philippines
in Congress assembled:*

SECTION 1. Short Title. – This Act shall be known as the "**Jatropha
Research and Development (R&D) and Extension Act of 2010**".

**SEC. 2. Establishment of the Jatropha Research and Development and
Extension Center.** – There is hereby established a Jatropha Research and
Development and Extension Center (JRDEC), hereinafter referred to as the Center,
which shall be under the supervision and control of the Secretary of the Department of
Agriculture (DA).

SEC. 2. Powers and Functions. - The Center shall have the following
general powers and functions in line with the research, development and extension
programs of the Department of Agriculture - Bureau of Agricultural Research (DA-BAR),
Department of Science and Technology (DOST), Department of Trade and Industry
(DTI), and the National Economic and Development Authority (NEDA).

- a. Educate and train all stakeholders of the jatropha farming industry;
- b. Conduct relevant researches, scientific study and feasible marketing strategies for the use of jatropha as alternative renewable energy source;
- c. Extend technical assistance and technology transfer to jatropha farmers;
and
- d. Provide linkages with international organizations and other jatropha development centers in other countries.

SEC. 3. The Center shall have the specific powers and functions:

- a. Develop productive, high yielding, good quality varieties of jatropha in the country;
- b. Develop efficient, economic and productive jatropha production technologies;
- c. Develop effective and feasible jatropha processing technologies for the production of alternative and renewable energy sources;
- d. Develop effective production systems for all jatropha varieties;
- e. Establish and maintain germplasm collection and gene bank for jatropha;
- f. Develop effective and efficient marketing systems for jatropha by products;
- g. Develop and promote market efficient jatropha-based farming systems;
- h. Develop and implement appropriate and suitable technology packages and effective technology transfer schemes, especially the conduct of training programs;
- i. Upgrade the skills of development facilitators and farmers through trainings, seminars and workshop on jatropha production and postharvest handling and processing;
- j. Establish national and international linkages for jatropha research, development, extension and production activities; and
- k. Coordinate with other government/non-government agencies involved in the development of the jatropha industry.

SEC. 4. *Qualifications of the Executive Director.* - The Center shall be headed by an Executive Director who shall be responsible for the planning, implementation, and supervision of the Center's program of activities.

The Executive Director shall possess the following qualifications:

- a. Must not be more than fifty (50) years of age;
- b. Must have completed substantial and relevant education and experience on jatropha research and development; and
- c. Must be of good moral character and has not been involved in a legal case involving moral turpitude.

All other officers and employees of the Center shall be appointed by the Executive Director consistent with the provisions of the Civil Service laws, rules and regulations.

SEC. 5. *Advisory Board.* - The plans and programs of the Center shall be reviewed annually by the Advisory Board composed of:

- a. The Secretary of the Department of Agriculture (DA), as Chairman;
- b. The Secretary of the Department of Science and Technology (DOST), as Vice Chairman;
- c. The Secretary of the Department of Energy (DOE), as Member;
- d. The Secretary of the Department of Trade and Industry (DTI), as Member;
- e. One (1) representative from a non-governmental organization (NGO) working on jatropha production, research and development and processing;
- f. One (1) representative from the group of jatropha processors; and
- g. One (1) representative from the group of jatropha marketers.

SEC. 6. *Quorum.* - The presence of at least four (4) members at the time of the meeting shall constitute the quorum: *Provided, however,* That the Chairman, in his/her absence, the Vice Chairman, shall preside.

SEC. 7. The Center is hereby authorized to plan, construct, develop, improve, acquire, or lease buildings, farms, fields and other facilities, to purchase machineries, equipment, materials and supplies locally or abroad as may be necessary to carry out its functions and objectives.

Moreover, the Center shall enjoy exemption from taxes and other duties in the importation of such machineries, development and extension programs, subject to the provisions of Section 105(s) of the Tariff and Customs Code, Section 103(f) of the National Internal Revenue Code and to the provisions on Automatic Appropriations under the General Appropriations Act.

SEC. 8. *Comprehensive Research on Jatropha By-Products for Renewable Energy Source.* - For purposes of this Act, the Secretary of the Department of Agriculture (DA) is hereby mandated to conduct a comprehensive research and information drive on Jatropha by-products applied for the production of bio-diesel as renewable energy source.

It shall support research activities to expand the knowledge and understanding of jatropha by-products to be used in the production of bio-diesel as alternative and renewable energy source, including a renewed investment into advance technology research in order to adopt state-of-the-art technologies to promote agricultural production jatropha in the country.

SEC. 9. *Appropriation.* - The amount of Fifty Million Pesos (Php50,000,000.00) is hereby authorized to be appropriated from the Social Fund of the President of the Republic of the Philippines, or from any other sources that may be identified for the purpose. Thereafter, such sum required for its operation, maintenance, research, development and extension activities shall be included in the annual General Appropriations of the Department of Agriculture (DA).

SEC. 10. *Revolving Fund.* - Any and all savings and income of the Center shall constitute a revolving fund which shall not be reverted to the General Fund and which shall be used by the Center in the furtherance of its goals and objectives.

SEC. 11. *Implementing Rules and Regulations (IRR).* - Within six (6) months from the date of effectivity of this Act, the DA, in consultation with the Department of Science and Technology (DOST), shall promulgate the necessary implementing rules and regulations to implement the provisions of this Act.

SEC. 12. *Separability Clause* - If any provision or part hereof is held invalid or unconstitutional, the remainder of the law or the provision not otherwise affected shall remain valid and subsisting.

SEC. 13. *Repealing Clause.* - All laws, decrees, executive orders, rules and regulations or parts thereof, which are inconsistent with this Act, are hereby repealed, amended or modified accordingly.

SEC. 14. *Effectivity Clause.* - This Act shall take effect fifteen (15) days of its complete publications in the Official Gazette or in at least two (2) newspapers of national circulation.

Approved,