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## Exploring the health benefits of *Solanum nigrum L*; a wild vegetable as a remedy in the face of climate change

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**Statement of the Problem:** Food insecurity and malnutrition which could be as a result of climate change is an existing menace in developing countries. One of the approaches of combating this menace has been through domesticating wild vegetables. *Solanum nigrum*, a wild vegetable in most African countries has been identified as a potential source in combating this scourge. It is a gregarious plant which could withstand varying environmental conditions. Its fast-growing nature ensures its maturity under a short period of time irrespective of the environmental conditions. Being considered a weed, little attention was given for its domestication and its survival is becoming more precarious. Hence, its potential in combating food insecurity is being eroded. This study focuses on quantitative exploration of the performance and health benefits of *S. nigrum* cultivated on different soil texture types with a view to domesticate and make it readily available all year round.

**Methodology:** Seeds of *S. nigrum* were raised in nursery trays and transplanted into pots filled with different soil types at 4-leaf stage in the greenhouse. Harvesting was done at 4 weeks after transplanting. Nutritional and pharmacological studies were carried out on micromorphology, proximate/nutritional composition, phytochemical constituents/antioxidants properties and essential oil extraction using documented procedures.

**Findings:** The outcome of this study revealed that domestication of *S. nigrum* under controlled environment encourages several (8 times) production cycles within a year as against the wild species that wither under extreme heat and cold. The different soil types influenced the growth and pharmacological performance to some extent, but generally *S. nigrum* in this study showed remarkable nutraceutical potential with high nutrients and food materials. It acted as a significant natural radical scavenger. The integration in dietary supplement will not only alleviate the effect of climate change on food security but also serves as immune booster.

### Biography

Adijat Funke Ogundola focuses her research findings on evaluation of health benefits and improving the production of economic important wild vegetables. Currently, she based her studies on *Solanum nigrum L*. She has publications on micro-morphological studies, phytochemical constituents and antioxidant properties, also on essential oil chemical compounds and antioxidant property aspects. Her study was based on how best the wild vegetables could be explored to alleviate food insecurity and likely problems. The primary step was to bring them to cultivation and their integration in food data base. Continuous production in the face of climate change, fire hazard, and natural disaster such as flood to explore the health benefits from wild vegetables was considered necessary by her. Therefore, she evaluates the health benefits and performances of these vegetables with the aim of improving on their production using green revolution system and in controlled environment.

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