

Mini review on two species of garden egg (*S. aethiopicum* L. and *S. macrocarpon* L.) found in Nigeria

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Introduction

Edible fruits and vegetable plants contain natural products known as phytochemicals which are antioxidants derived from plants and other living organisms having the potential to inhibit the formation of free radicals, scavenge free radicals, interrupt free radical chain reaction, and prevent the lipid peroxidation process. They also have therapeutic potentials and the ability to decrease the deleterious effects of oxidative stress-induced pathological conditions.¹

Garden egg also known as eggplant is one of such plan. It consists of over 100 species in Africa mainly used as vegetables of which 25 species are found in Nigeria.^{2,3} The two most widely spread being *Solanum aethiopicum* L. (the green-striped round shaped garden egg) and *Solanum macrocarpon* L. (the white-green striped oval garden egg) are eaten raw, boiled or fried to make vegetable sauce.⁴ Garden eggs are widely used in indigenous medicine for weight reduction, treatment of asthma, nasal catarrh, constipation, gastro-esophageal reflux, glaucoma and skin infection.

Several studies have been carried out to establish the basis for these uses. Researchers reported significant analgesic, anti-inflammatory, anti-asthmatic, anti-glaucoma, hypoglycemic, hypolipidemic and weight reduction effects of garden egg on animals and human.^{5,6} Moreover, these pharmacological properties have been attributed to the presence of certain chemical substances in the plants such as fiber, ascorbic acid, phenols, anthocyanin, glycoalkaloids and alpha-chaconine.⁷

Furthermore, studies have shown higher content of nutrients; fiber, protein, mineral (Calcium, Magnesium and Iron) in *S. aethiopicum* than in *S. macrocarpon* with the later having a higher moisture content and carbohydrate level.⁸⁻¹⁰

Phytochemical screening of the two species of garden egg revealed the presence of alkaloids, flavonoids, phytosterols, saponins, ascorbic acid, cardiac glycosides, tanins and terpenols, with *S. aethiopicum* L. generally having higher levels of the phytochemicals than *S. macrocarpon* L. however, steroids were present in *S. aethiopicum* but absent in *S. macrocarpon*.^{7,10,11}

Investigation of vitamin content of the two species showed that both contain vitamins such as; retinol, thiamine, riboflavin, niacin, ascorbic acid, calciferol and tocopherol with *S. aethiopicum* recording the higher level of vitamins.¹²⁻¹⁵ The use of natural antioxidants for the prevention and cure of human diseases has been practiced for thousands of years prior to the development of modern medicine with synthetic drugs and antioxidants.¹⁶ Most of these natural antioxidants have been scientifically proven as potential therapeutic agents in preclinical studies. Nowadays, an increase in healthy lifestyle has resulted in the routine consumption of natural ingredients over synthetic agents.¹⁷

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Hence, it is recommended that garden egg should be included as part of our daily diets since it has been proven to possess phytochemicals and vitamins with antioxidant and therapeutic potentials.

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Conflict of interest

The author declares that there is no conflict of interest.

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