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- Home
- Journals
 - Browse by subject
 - A to Z Journals
- Aims & Scope
- Online First
- Current Issue
- Previous Issues
- Editorial Board
- Guide to Authors

[Journals](#) > [American Journal of Food Technology](#) > [Abstract](#)

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Nutritional Evaluation of Wild Sicklepod (*Senna obtusifolia*) Seeds from Obanliku, Eastern Nigeria

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Abstract: The study evaluated the nutritive value of seeds of wild *Senna obtusifolia* as an alternative plant protein source in livestock diets. Proximate composition results showed high dry matter (92.50%), crude protein (29.54%) and crude fiber (10.11%). The study also determined ether extract, nitrogen free extract, ash and calorific values. The vitamin content showed poor vitamins B₂, B₁, C and A but the seeds were rich in vitamin B₃ (1.8 mg/100 g) values compared to other seeds. The seeds were also abundant in calcium (960 mg/100 g), potassium (1,200 mg/100 g), phosphorus (810 mg/100 g), sodium (600 mg/100 g), iron (234.60 mg/100 g), zinc (53.12 mg/100 g) and copper (10.4 mg/100 g) but low in molybdenum, cobalt, chromium, selenium, sulphur and fluorine. The amino acid profile reveals a high concentration of leucine (7.60 g/100 g protein), histidine (2.33 g/100 g protein), proline (2.33 g/100 g protein) and glycine (4.11 g/100 g protein) while the amino acids were of low concentration in the raw seed. The concentration of anti-nutrients in the legume seeds recorded high values (260, 185, 388.50 and 83.25 mg/100 g) for alkaloid, saponin, tannin and oxalate respectively, while phytate, hydrocyanic acid and phytohaemagglutinin levels were low. The high level of most anti-nutrients indicates a potential for interfering with the utilization of the nutrients by the animals. This finding creates a need for detoxification of the seeds through processing before using in livestock feeds.

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12
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