

часові серії з інтервалом в одну, дві, чотири, шість, дванадцять та двадцять чотири години. Врівноваження мережі виконано відносно станції SULP в програмному пакеті TERSUS Geomatics Office.

Тенденція дослідження висот GNSS-станцій обумовлена тим, що за даними референсних станцій можна встановити певну систематичну похибку визначення висот супутниковими методами позиціонування, або ж дослідити, так зване, коливання даної величини в часі. З отриманих результатів зроблено відповідні висновки.

**EFFECTS OF ORGANIC COMPOST AND NPK
FERTILIZER ON SOIL FERTILITY, YIELD AND QUALITY
OF AMARANTH IN SOUTHWEST NIGERIA**

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The need for an increased production of vegetables to meet the dietary vitamin requirements of the people had necessitated a research in the use of manure in improving the soil fertility for an improved yield and quality of amaranth. The research was conducted in Obasoto Farm (latitude 7°10'N and longitude 5°37'E) in Owo Local Government Area of Ondo State, Nigeria in the early and late seasons of 2007, 2008 and 2009. The experimental design was a randomized complete block with three treatments replicated three times. The three treatments were 0 kg/ha manure, 2t/ha organic compost and 200 kg/ha NPK 15-15-15. *Amaranthus cruentus* seeds obtained from the Ondo State Agricultural Development Project were raised in the nursery and transplanted at a spacing of 10 x 20 cm into 1 x 3 meter manually prepared beds. Each manure type was incorporated by ploughing it in while preparing the bed at 600 g organic compost and 60 g NPK 15-15-15 fertilizer per the 1 x 3 meter bed respectively. Pre-treatment and post planting soil samples were taken for laboratory soil analysis of soil chemical properties for a comparison of the assessment of the cumulative effects of organic compost and inorganic fertilizer in improving soil fertility over a period of three years. The organic matter increased by 23.3% and 0.6% in the second and third year respectively in the plot treated with organic compost, while there was no such increase trend in the plot treated with 200 kg NPK/ha. The organic matter content correlated positively with the yield and vitamin C content of amaranth.
