Effects of using organic fertilizers on quality and quantity of fodder sorghum

In Sudan, forage production is very important for livestock production due to the facts that the Sudan has a huge number of animals. The main forage grown under Sudan conditions is *Sorghum bicolor* (var. *Sudan grass*),in This study Two experiments were carried out for two seasons to measuring the effect of organic amendments on quality of (Sudan grass). Fodder quality is determined by characterization of chemical composition and extent of digestibility.

All forages should be analyzed for nutrient composition prior to feeding. An actual laboratory analysis is the only way to properly judge the quality or feeding value of forage. Forages should at least be analyzed for dry matter (DM), crude protein (CP), fiber (acid detergent [ADF] or neutral detergent [NDF]).

in This study Generally, CP content is positively correlated with quality. In other words, high-protein forages generally are high-quality forages. The **Neutral detergent fiber** NDF value is the total cell wall, which is comprised of the acid detergent fiber (ADF) . ADF values are important in ration formulation because they reflect the amount of forage the animal can consume. As NDF percentages increase, dry matter intake will generally decrease.

Also at two seasons organic amendment Chicken manure (CM), Farm Yard Manure( FYM) and CM+FYM gave taller plants , higher number of green leaves ,compared to the inorganic fertilizer(F) and control treatment. In general, plant height, increased with use of organic amendments and inorganic fertilizer at tow seasons.

In general, all organic treatments and inorganic fertilizers had no significant effect on plant density.

Generally, at all organic amendments and inorganic fertilizer significantly increased fresh yield.

The data indicated that all fertilizers (organic and inorganic) were decreasing the NDF % compared to control treatment. Generally all organic amendment gave lower (NDF) contents than inorganic fertilizers.

The data also indicated that all organic amendment gave higher CP% content compared to inorganic fertilizers and control. Generally all organic amendment (CM, FYM, CM+FYM) at first and second seasons were increased the CP % content compared to inorganic fertilizers and control.