1) Grain Amaranth

Grain amaranth (*A. hypodriacus*), is a pseudo-cereal and has multiple uses as a vegetable, nutrient rich grains and, livestock feed. It has industrial use as well. It is hardy, can withstand low soil fertility, early maturing (75-90 days), requires minimal attention and is susceptible to few pests and diseases. Once established it can withstand acute drought conditions. Grain amaranth is nutritious and contains 16-20% protein and 5-10% oil. It also contains reasonable amounts of phosphorus, calcium, zinc, vitamins B, C and E and dietary fibre. It contains two times the amount of calcium found in milk and is particularly rich in the amino acid lysine, which is low in cereals like maize and wheat. Nutritive values of cereals are enriched when blended with amaranth grain. The cooked grain is up to 90% digestible making it an excellent weaning diet and a recommended food for the elderly and people who have been through a long fast or starvation. It is an immune booster and is good for those with compromised immunity. Production of grain amaranth is still at its infancy in Kenya and the demand outstrips supply making it one of the crops with great commercial potential in the country. Currently, grain amaranth is grown on an estimated 389 Ha producing 2,057 tonnes of grain valued at about KES 70 million. Kenya imports nearly 10,000 tonnes of grain amaranth annually from Uganda and India to meet the shortfall in demand. This is 80% over the quantities produced in the country. Work under ASAL APRP showed that the main challenge faced by farmers is lack of certified seed, inadequate information on production and management of the crop and poor linkage to markets. A market led approach to production of grain amaranth is expected to play a major role in the success of the sub sector. There is need to empower farmers with grain amaranth farming skills and organise them into collective and marketing groups so that they can take full advantage of the existing market demand for the crop. Diversification of the market through value added products by the use of simple techniques and technologies can help in solving the marketing problem. Farmers can also be encouraged to venture into contract farming with the buyers. Two varieties of grain amaranth together with agronomic practices and post-harvest technologies were developed during the ASAL APRP and are ready for upscaling