

## Income Diversification Through High Value Crops In Sasumua Watershed

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Farming activities and income diversification in Sasumua has greatly evolved over the last decade. Improved road networks, advanced communication platforms and modern technology which were unavailable in the past rendered farming a poor man's career. Mainly, farming was left with the aged while the young generation recamped to the urban centres to look for more paying jobs.

Ms. Mary Gichuhi is a 48 year old farmer, married, and a mother of 5. She is a resident of Njambini ward Sasumua watershed. Her farm is 1 acres in size. Before the inception of the Upper Tana Nairobi Water Fund project, she was growing traditional crops like potatoes and cabbages whose market is highly exploited by middle men.

The farmer was experiencing low farm outputs with a total monthly income of Ksh 23,000 due to soil erosion, unsustainable farming methods, unreliable water sources and pasture for her livestock. These contributed challenges in having enough food to feed her family and one dairy cow and one sheep. Her income was also low leading to challenges in meeting her financial obligations.

Ms. Mary joined the upper Tana Nairobi Water Fund project in 2018 where she has been working to conserve her land against soil erosion with resources and expertise offered by project's implementing partner SACDEP and the Nyandarua County Extension Assistant.

The farmer has conserved 58 meters of riparian conservation by planting Dombeya and Bamboo trees. She has also established a wood lot on the area touching the stream with gravillea and Rosewood trees. The trees are fast growing owing to the fact that her farm neighbors Kiburu forest and has the advantage of rich soils and a favorable climate. Occasionally, Ms. Mary does pruning to the trees in the woodlot to regulate their growth. This is a good source of fuel wood for the family and she also sells the surplus at Ksh. 25,000 per lorry load. In 2019 she sold 2 lorries of firewood earning her Ksh 50,000.

To prevent nutrient and soil loss from her land, Mary constructed 120 meters of terraces which are stabilized with Napier grass.



Photo 1: A fanya juu terrace that has been stabilized on Mary's farm

The Napier and the undergrowth from the woodlot supplies the livestock with fodder.

In the year 2019, Ms. Mary excavated a 100 Meter cubic water pan which was lined. The water pan is strategically located to harvest run off water from a nearby road and the homestead.

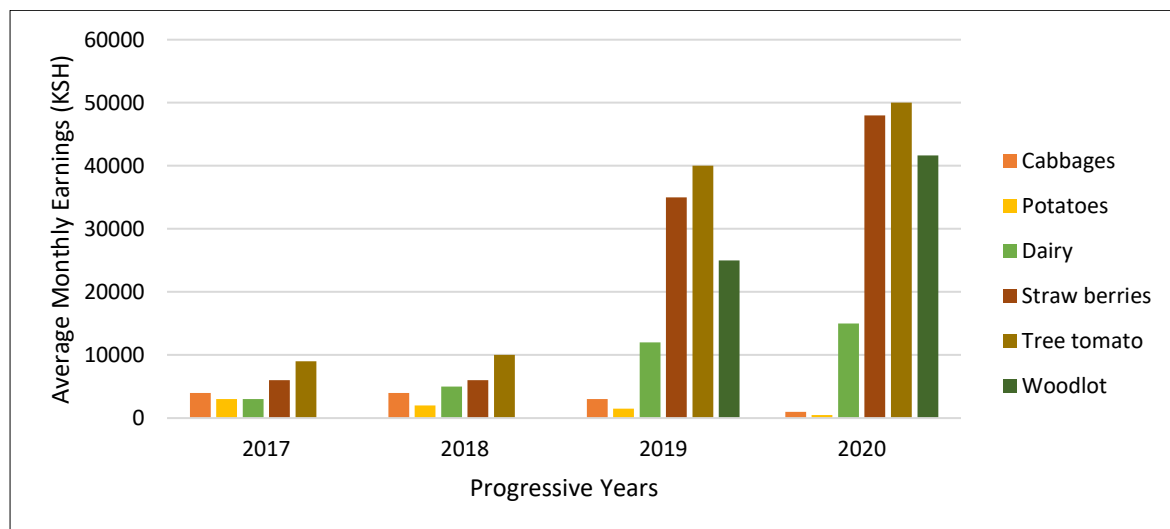
She uses siphoning method to irrigate her farm during dry spell. This has reduced water run off that would have caused erosion hence deteriorate quality and quantity of farm outputs.

In the farm Ms. Mary has established a strawberry and tree tomato orchard. She also does horticultural crop farming covering cauliflower, spring onions and spinach in her kitchen garden. The farmer embraces biological pest control technique of incorporating the spring onion in every crop stand as a repellent of pests.

Mary is able to sell 20 litres of milk per day from the previous 5 litres. With a litre of milk selling at 25 the farmer earns Kshs 15,000 per month. Her woodlot supplement the family's fuel wood as well as provide the surplus for sale at an average of 25,000 per lorry load. Pruning is done twice per year translating to 50,000 per year.

The farmer has an orchard with tree tomatoes and strawberry fruits that she irrigates using the rain water harvested on her water pan. This replaced potatoes and cabbages previously earning her an average of Kshs. 12,000 (12 bags in ¼ an acre in 3 months) and Kshs 10,000 per month (30,000/= per quarter of an acre in 3 months) respectively. On average, her 200 tree tomato yields 5000 Kilograms per month. Each kilogram is sold at Ksh.100 translating to Ksh. 50,000 per month. The strawberry enterprise also performs excellently. On average she harvests 120 punnets per week. Each punnet sells at Ksh. 100. This totals to Ksh.48,000 per month.

“As a matter of fact had I known that I was sitting on gold I would be millionaire. I have really seen the benefits of conserving lands to enhance my personal income” said a motivated Mary.



Following the sales of her new high value crops, she has recently installed a shade net over her strawberry crop to keep off birds and also reduce the impact of frost. The table below shows the farmer's income increase in a great percentage

The income from Mary's farm has enabled her to pay for her children's school fees as well as replace her previous local breed of dairy cattle to high yielding Holstein Fresian breed.

The farmers in the neighbourhood are currently considering the farm as a learning point owing to the small size and the high production.