

# Overcoming Space Barriers to Maximize Kale Production

## PIGOHEVECO CBO Embraces Urban Farming Techniques



PIGOHEVECO is a community-based organisation (CBO) with diverse interests in livestock and crop production. The acronym PIGOHEVECO is derived from the nature of its agricultural activities which include Pig, Goat, Hen, Vegetable and Cow milk production. However, not all the activities are collectively undertaken by the members. Founded in 2018, the CBO's goal is to improve the socio-economic status of its members through investment in agribusiness for income and food security. It has 42 registered members, 36 percent of which are youth. The organisation is based in Matopeni/Spring Valley Ward, Embakasi Central Sub-county.

The CBO began its agricultural activities from a church compound in Matopeni/Spring Valley area. This is where it established its first kale demonstration garden for learning by the members. Equipped with knowledge from the demonstration site, some of the members were able to replicate the activity in their individual homes. Over time, the CBO started aggregating kale from the members and selling to the local community at a profit. Members of the church became a key customer base for the vegetable. Although majority of PIGOHEVECO members had expressed interest in the kale business, lack of land for agricultural production was a major deterrent to expansion of production activities.

The group's activities picked up at a time when the Nairobi City County Government (NCCG) had rolled out the second phase of the Agricultural Sector Development Support Programme (ASDSP II), with a goal of transforming the crop, livestock and fishery production into commercially oriented enterprises that ensure sustainable food and nutrition security. Using the value chain development approach, the programme pursues commercial efficiency by addressing inherent barriers to effective commercialisation of priority value chains. In Nairobi County, the kale, broiler and cow milk, had been identified as the priority value chains.

PIGOHEVECO CBO was among the 33 organisations mapped out as key actors in the kale value chain, and enlisted for capacity development under the ASDSP II. The interventions that followed primarily focused on: increasing productivity by scaling up urban farming technologies with high prospects for women and youth empowerment; improving business skills through basic entrepreneurship training; enhancing market access by creating relevant market linkages; and strengthening structures and systems for effective consultation and coordination among stakeholders in the development of the value chain.

**By embracing urban farming techniques, the CBO has increased kale production volumes from 20 kilograms to 50 kilograms daily and improved monthly income from the enterprise by 150%.**



**A section of PIGOHEVECO members at their kale hydroponic unit**

Consequently, in May 2023, PIGOHEVECO CBO members were facilitated by the ASDSP II to attend a three-day field training at Nakuru Agricultural Training Centre (ATC). The training focused on urban farming techniques including: cone gardens, storey gardens, hanging gardens, rooftop gardens, hydroponics and green houses. They also learnt about drip irrigation, use of sprinklers, shade nets and plastic sheets mulching. Furthermore, the members were exposed to various conservation agriculture technologies such as composting, production and use of liquid manure, bio slurry and use of herbs as pest repellents.

Following the trainings, the CBO completely changed its approach to kale production by adopting the modern farming techniques with high potential in its locality. With technical support from the county extension staff and ASDSP champions in the kale value chain, the CBO has been able to set up cone gardens, multi storey gardens and hanging gardens, where it grows kale. It has also improved management of the vegetable at the original demonstration site. The CBO currently makes cone gardens using locally available materials such as old carpets. To leverage these efforts, the ASDSP II has supported the group with two hydroponic units, a solar drier and a package sealer.

The innovations have created a major ripple effect in the membership base, as a good number of the members have been able to replicate them in their respective residential areas to grow kale. This includes even those members who had previously cited lack of space as a reason for non-participation in the kale business. Since the innovations are simple, cost-effective and less labour intensive,

they have attracted more participation by women and youth in the business. It is not surprising, therefore, that even a grade one pupil has joined kale production activities and supplies the CBO with the vegetable through his mother who is a registered member.

A major outcome of the innovations is a drastic increase in the volume of kale aggregated by the CBO from the members daily, from 20 kilograms to an average of 50 kilograms. This represents a 150% rise in productivity. The quality of the vegetable has also improved. 'Our customers have been asking us about what we put in our kale since they appear leafier than before', remarks Beth Njeri, the CBO's chairlady. She further explains that the use of compost manure and organic pest control methods have worked well for the CBO, since consumers generally associate organic farming with food safety. The CBO's kale customer base has since expanded to include wholesalers in the neighbouring Kayole Corner food market.

These developments have meant increased income for the members. The CBO sells kale from its demonstration sites and members' farms at Ksh.52 per kilogram. All sales from the demonstrations farms directly accrue to the CBO's account. For the kale from members' farms, the CBO retains Ksh.5 per kilogram. Every member is paid for the produce according to volume supplied. With a gross margin of Ksh.35 per every kilogram of kale sold, the CBO earns Ksh.1,750 daily, the benefits of which accrue directly to the members. This translates to a monthly income of Ksh.52,000 up from Ksh.21,000 at the start of production activities. Currently, 21 members of the CBO are directly engaged in the kale business.

To leverage the income, the CBO has ventured into kale value addition using the solar dryer provided by the ASDSP II. The programme has also supported the CBO with a sealing machine to complete the packaging of the dried vegetable, and trained the members on how to use the technologies. The product is packaged in 100gm and 500gm containers and sold at Ksh.150 and Ksh.700, respectively. The dryer has the capacity to dry 30 kilograms of kale daily, which results in an average of 8 kilograms of dried kale.

The 8 kilograms of dried kale, when packed in the 500gm packaging units, produces a total of 16 units of the dried product. With a gross margin of Ksh.600 per unit, the CBO has the potential to



**Members of PIGOHEVECO CBO with different dried Kale packages**

earn Ksh.9,600 daily from the business. The figure is based on a projection that there is a ready market for the product, and the dryer is used optimally. The amount is 5.5 times higher than the CBO's daily income from fresh kale sales. The dryer would also go a long way to reduce post-harvest losses, since any unsold fresh kale can be used in the processing unit to create more value.

To augment the innovations and harness the kale business potential, ASDSP II has provided PIGOHEVECO members with basic entrepreneurship training, with emphasis on business planning and record keeping as the important first steps to business success. The members have also been guided on issues of market access and linked with potential local financing opportunities for business development. The CBO is in the process of developing a group business plan, although 8 of the members have used the knowledge acquired from the trainings to develop individual simple business plans. Three out of the 8 members with a simple business plan are using the tool for business development.

Going by the achievements of PIGOHEVECO CBO, there is no doubt that the courage to walk out of the perceived space barriers to embrace urban farming techniques, has paid huge dividends by enabling the members to increase productivity and incomes from the kale business.

Story by Philip K'omolo, Photos by Edwin Osuma, November 2023

**For more information contact:**

Agricultural Sector Development Support Program (ASDSP II)  
The Nairobi City County Government, P.O. Box 30075-00100, Nairobi.  
Email: Nccasdspii@gmail.com

