

TOOL KIT 4

WATER EFFICIENCY



Kenya Agribusiness
and Agroindustry
Alliance

Transforming Kenya's Agribusiness

Let's grow your business, one Tool Kit at a time!

WATER EFFICIENCY

Recording and maintaining an accurate and reliable data of water used per processing batch and of course checking for any significant variances and always identifying the reasons attributable to such variances. That way, agro-processing enterprises should be able to identify the hot spots and make necessary actions to improve on water use efficiency.

Understand Your Water Flow

- To establish a baseline in your business
- Monitor water using tracking forms and records of water used for a period of time to a certain work
- Identify areas where water use can be reduced, keeping in mind that water use may differ between shifts.
- Install flow meters, which can quickly indicate water overuse.
- Work on reducing the water wasted in your processing flow



Pamat foods sub meter for the processing unit.

- Avoid using running tap water to clean, wash and rinse farm produce. For conservation and later use, it's advisable to use a cleaning pan, trough or jelicans. This way, it is possible to trace accurately how much water each processing batch consumes and how to make changes over time.

Improve Rinsing Systems

- Rinsing products and equipment including cleaning basins help reduce
 - Introduce taps hence reducing leakages
 - Bulk processing hence cleaning once rather than piecemeal basis which would consume lots of water
 - Continuous-flow to an intermittent-flow system
- Keep water leaks in check-water leakages which go unchecked over time constitute to unnecessary operational costs to the agro-processor within a given time frame. This is particularly because of the natural assumption that the trickle or leak is not significant in quantity but over time however, it constitutes a huge quantity with cost implications.



Cleaning bay with fitted taps



Leaking pipes

Locate and Fix Leaks

Water leaks in your system can be costing you significant money. You can prevent unnecessary water loss at your facility by finding and repairing all leaks and developing a preventive maintenance program. Part of this program should be to make a checklist of all potential sources of leaks and conduct weekly inspections of equipment.

Water harvesting: Ordinarily, rain falls and enterprises can collect and harness the vast amounts of water by using water reservoirs for their agro-processing needs. Even though the quality may not always be assured, general less-sensitive water requirements {such as washing floors or equipment} can be met by the harvested water which saves on water bills.

Reuse or Recycle Water

Reusing water is the act of using wastewater or reclaimed water from one application for use in another, which recycling your water is when you use again in the original application. In this case for MSMEs in agro processing can use the water for cleaning the premises or put up a treatment plant where the water used can be treated and used again.



Use High-pressure, Low-volume Wet Cleaning Systems

Before using wet cleaning methods, dry clean as much as possible to recover excess product and by-products. However, when you do use wet cleanup methods, a high-pressure, low-volume cleaning system can help you cut the amount of wastewater at your facility.

Optimize Nozzle Use and Install Valves

Automatic shutoff nozzles can reduce water use by preventing water from flowing when it is not needed. Also, you can optimize the fitting sizes of nozzles to reduce flow rates and use the smallest nozzle needed to maximize efficiency. Additionally, using control valves will help stop water flow when production stops.

Engage Employees in Water Conservation

Implement a water conservation program at your facility to educate and engage employees in water conservation. Employees may need to be shown how to use water efficiently so implementing a training program to induct employees through the topic will be useful. The training should include information in on current water use and water costs. Creating incentives for employees may help motivate them to identify ways to reduce water use.