



CASE STUDY

AVOCADO FACTORY

Coolnomix® Report,

Report compiled by David Groves 23/11/2022

tutumenergy.es





Annual Savings for the Avocado Factory from this pilot:



kWh

15,014.54 kWh representing a reduction of 22% per year in energy consumption



CO2

3,978.85 kg or 3.9 tonnes



Financial Savings

based on 0.25 € per kWh are 3,753.63 €



Coolnomix®

Reduce the energy consumption of your air conditioning and refrigeration without affecting the output you need. Our technology is maintenance free and can be easily installed by our qualified engineers with no disruption to your operation.

We keep your people, equipment and produce cool, and your energy budget from overheating.



OVERVIEW

Emissis and Tutum Health agreed with the customer to install Coolnomix to two air conditioning units in an Avocado Factory on the south coast of Spain

TRIAL

- In order to accurately measure the kWh consumption of these units, smart meters were connected to the system compressor of the Air conditioning units
- These readings are downloaded in half hourly segments and analysed as four hourly data intervals
- The units were installed and activated on the 3rd October 2022, set to run in weekly cycles of Coolnomix® OFF followed by Coolnomix® ON for 4 weeks or 28 days in total.
- There were a few days during the trial period where the readings were unusable, as such we ran the trial a bit longer to make up for the lost data days.





RESULTS

for Avocado Factory, Spain

- Coolnomix® active (ON) reduced daily energy consumption by 22% reducing kWh consumption across the AC unit by 41.14 kWh per day.
- This saving is based on average daily consumption of electricity with Coolnomix® ON and Coolnomix® OFF over the trial week period.
- Consumption across pilot at Avocado Factory, Spain per day (kWh):



CONSUMPTION ACROSS PILOT AT AVOCADO FACTORY, SPAIN PER DAY (KWH)				
Site	Daily consumption (kWh)		Daily savings (kWh)	Daily savings (%)
	OFF	ON		
Avocado Farm 1	102.52	69.96	32.56	32%
Avocado Farm 2	86.49	77.91	8.58	10%
			41.14	22%

ANNUAL ENERGY REDUCTION & SAVINGS FORECAST (2 AC UNITS)			
	kWh	Financial savings	CO2 (kg)
Daily	41.14	10.28 €	10.9
Weekly	287.95	71.99 €	76.31
Monthly	1,251.21	312.8 €	331.57
Annually	15,014.54	3,753.63 €	3,978.85



CONCLUSION

The pilot accurately confirms energy savings for kWh and CO2 reductions with Coolnomix® installed on the Air conditioning unit. The financial savings have been based on an electricity supply cost of 0.25 € per kWh. With average electricity prices expected to rise over the coming months and further inflation forecast for over the coming years, the savings model and Coolnomix® payback period will only improve.

Spread over an AC estate across similar factories, consisting of 100 suitable units, the annual benefits of installing Coolnomix® based on these pilot results will be as follows:



Energy Reduction & Savings Forecast (based on 100 Coolnomix® units installations)

Year 1

kWh = 750,726.79 kWh per year
CO2 savings = 198.942.60 kg or 198.9 tonnes
Financial savings = 187,681.70 €

(based on this pilot average savings of 20.57 kWh per day)

After 5 years

kWh = potentially over 3.7 Million kWh saved
CO2 = 990+ tonnes saved
Financial savings = over 930,000 €

After 10 years

kWh = potentially over 7.5 million+ kWh saved
CO2 = 1.9 million+ tonnes saved
Financial savings = over 1.87 million €

WE'RE AHEAD OF THE GAME

We deliver a powerful suite of solutions that reduce your carbon emissions, save you money with lower energy bills and generate revenue from being a more flexible energy user with the help of today's leading technology.

[See our Coolnomix® brochure and videos](#) / [See our other solutions](#)



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