POLLEN

AVERAGE QUANTITY SYSTEM (AQS)

REDUCING THE GIVEAWAY USING THE AQS MEASUREMENT METHOD

DECEMBER 2019

INTRODUCTION
BACKGROUND

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In the last decades we've seen a massive increase in trade of pre-packed goods, resulting in increased related issues such as accuracy of measurement.
With a net weight method of measurement, giveaway of goods is unavoidable and can sometime result in a significant additional cost of materials for businesses. AQS is a solution to reduce the giveaway by taking into consideration the difficulty to systematically reach an accurate measurement, while providing a 97.5% assurance to the consumer that goods are in a tolerable range, defined by the AQS requirements.

AQS is applicable for all goods with a 'constant nominal content', which means any goods sold by measure (weight, volume, length or area) or count (number of items).

AQS was introduced in Europe in 1971 and has now become the norm.
With a very late introduction in Australia in July 2010, AQS hasn't been adopted by many Australian manufacturers and packers yet.
The lack of knowledge and methodology to implement it is the main obstacle to what can be a huge savings opportunity for businesses,

SIZE OF THE PRIZE

Not all categories will see the same benefits from an AQS implementation, this is dependant on current targeted levels and process variability. Products using the latest filling technology should already have a low giveaway but can still benefit from AQS.

Improvements usually range from 25% to 75% giveaway reduction.

*Target giveaway is determined by multiple criteria such as product size, accuracy of packing/filling machines, moisture loss etc...

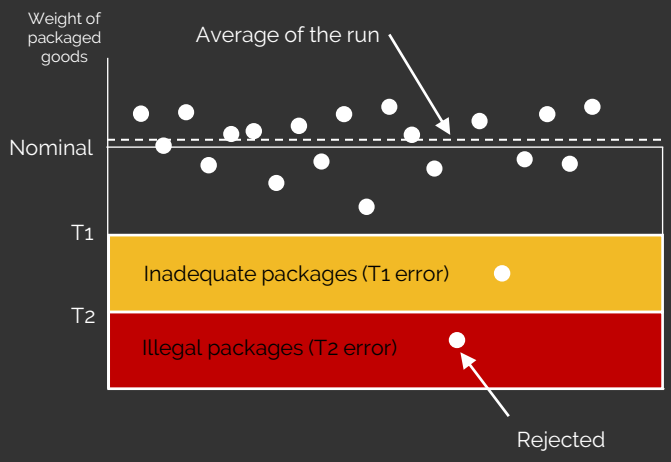
AQS VS MIN WEIGHT

When packing on minimum weight, any pack with a deficiency as little as 1g under the declared net weight on the pack is an offence and generates a risk of being fined of up to $210K per offence.
When packing on average quantity, there is an acceptable deficiency range and therefore the risk of not being compliant is significantly reduced.

Minimum Weight:
When packing to minimum weight, ALL products MUST weigh equal to or greater than the weight declared on the pack.

Average Quantity System:
The weight statistics of a production run must meet the **3 AQS rules:**

1. The **average weight** of a run must be above nominal
2. The number of inadequate packages with a deficiency greater than the **tolerable deficiency* does not exceed 2.5%**
3. None of the pre-packages in the sample can have **more than twice the tolerable deficiency**.



Example:

If you're packing goods with an average weight labelled at 2kg, your production run will be compliant if:

1. The average weight of the entire run is above 2000g
2. There is a maximum of 2.5% of the run between T1 and T2 (1970g and 1940g)
3. There is no pack under 1940g

*Tolerable deficiency will vary based on nominal weight range.
List available on www.industry.gov.au

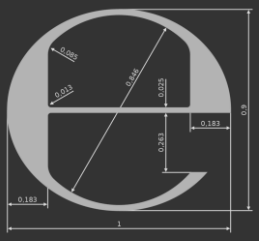
THE AQS E-MARK

Because the average quantity and the net weight packaging systems will operate concurrently, trade measurement inspectors need to be able to identify which measurement system has been used.

If you choose to adopt the AQS in your business, you must mark the pre-packed articles with the AQS e-mark which is defined in the regulations as the letter 'e'.

The shape, size and location of the e-mark must be:

- at least 3 mm high
- close in position to the stated quantity, and
- in the same field of vision.



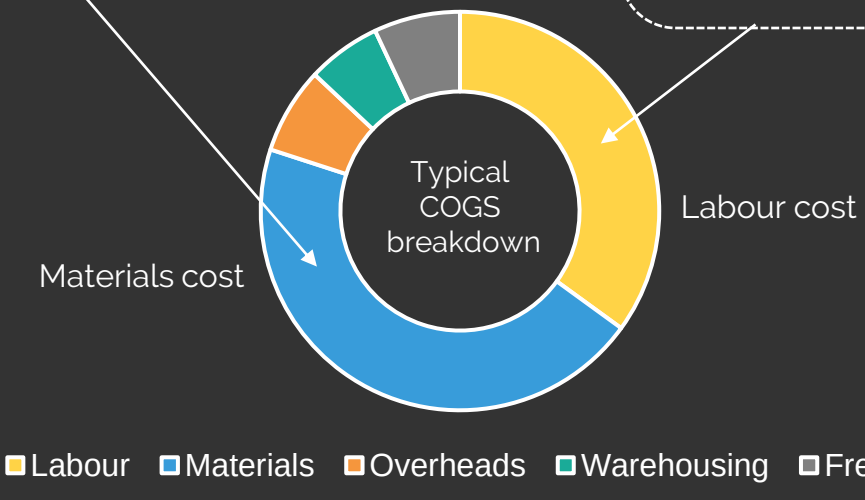
BENEFITS ON COST OF GOODS SOLD

AQS generates DIRECT SAVINGS on materials cost through:

- Overfill reduction
- Packaging savings from less rejects

AQS generates INDIRECT SAVINGS on labour cost through:

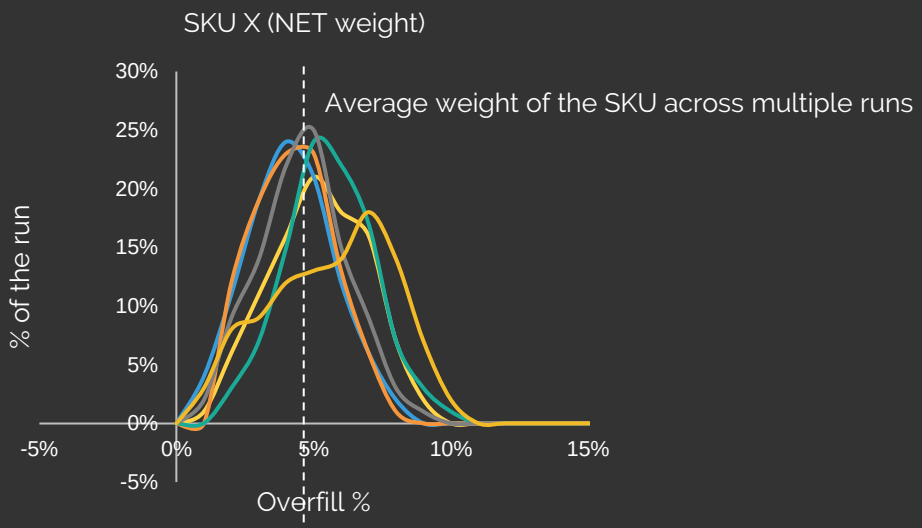
- Increase of labour efficiency (more units accepted per hour)



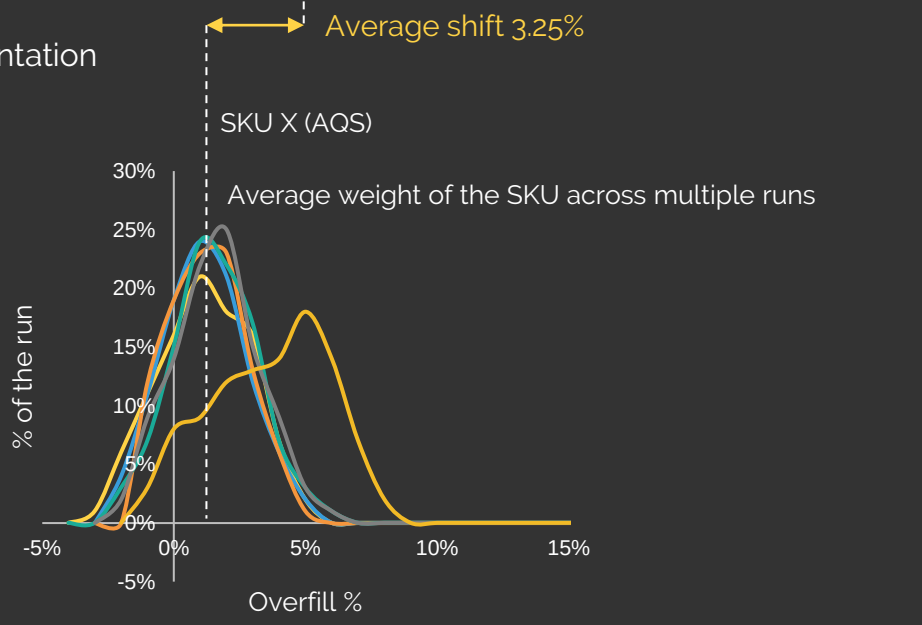
SHIFTING THE DISTRIBUTION

The process of packing goods differs based on the nature of the goods (for example, packing a liquid would have a better measurement accuracy than packing meatballs), as well as the equipment technology.
AQS DOES NOT increase the accuracy of filling/packing, it allows us to reduce the giveaway by moving the weight distribution down provided that the 3 AQS rules are met.

Example of distribution
BEFORE AQS implementation



and **AFTER** AQS implementation



HOW TO IMPLEMENT AQS?

An AQS implementation always needs to be tailored based on different criteria such as:

- Number of sites going through the implementation
- Number of SKUs
- Nature of the goods
- Accuracy of filling/packing of machines
- Model of checkweighers
- Current processes and procedures

That said, there are **4 main and common steps** to follow to ensure a smooth implementation:

1. Determine feasibility, savings opportunity and ROI (if capital investment required and/or packaging write off)

   It is crucial to start with a thorough assessment of the equipment feasibility to run on AQS but mainly to achieve the target giveaway and confirm that the expected savings will cover any required investment (in time and money).

2. Train the management team on AQS regulations and required actions

   A successful implementation means a full understanding of the AQS rules, how it works and what to do in any circumstances.

3. Ensure business readiness (packaging change, new procedures and processes, checkweighers readiness, operators training)

   Despite increasing the flexibility and compliance of prepacked goods, AQS follows strict regulations and packers/manufacturers need to prove compliance in case of inspection from the NMI (National Measurement Institute).

4. Provide support on the lines during go-live to the operators and packers

   Empowering operators by training them, explaining what to do in every possible situation; will not only ensure the successful transition to AQS, it will ensure the savings are sustained weeks, months, years after the implementation.

CONTACT

Why Pollen Consulting Group?

Being a fresh and new business, allows us to challenge the consultancy model, building a new level of competency. Pollen is driven to make a difference.

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