ADVANTAGES OF AUTOMATIC EGG GRADING AND PACKING

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MOBA

E G G G R A D I N G

IS A PROCESS OF

I D E N T I F I C A T I O N

C L A S S I F I C A T I O N

and

S E P A R A T I O N

THE ADVANTAGES OF GRADING EGGS CAN BE LISTED AS FOLLOWS

1) ADVANTAGES FOR THE CONSUMER

A) HE/SHE GETS WHAT IT PAYS FOR

* When buying, for instance, one chicken (1 piece), the consumer pays accerding to its weight

ex: 1 chicken weighing 800 grms
price per kilogram Hf1. 6,--
price to be paid Hf1. 4,80

The customer does not pay the price per unit, independently of its weight.

When buying eggs the same is applicable:

10 eggs of classe 3 (60-65 grms) total average weight 630 grms must cost more than:
10 eggs of classe 4 (55-60 grms) total avarage weight 580 grms and must cost less than:
10 eggs of classe 2 (65-70 grms) total average weight 680 grms

Eventually the consumer can feed bigger portions with the last classe (2), than with the other 2 classes mentioned.

It is therefore fair that it is paid accordingly.

B) THE CONSUMER HAS THE WARANTY THAT HE IS GIVEN A PRODUCT OF HIGH QUALITY + HEALTHY

When grading eggs one usually sorts them according to certain specifications that are inherent to the quality of the eggs.

Egg grading is also a from of Q U A L I T Y C O N T R O L

We can mantion the following specifications:

SHELL AND CUTICULE	must be: normal, clean, undamaged.
AIR SPACE	must: not exosed 9 mm in height.
WHITE	must: clear, limpid, of gelatinous consistancy and free of extraneous matters of any kind.
YOLK	must be: visible on candling as a shadow only. without clearly discernible outline, not moving appreciably away from the centre of the egg on rotation and free of extraneous matters of any kind.
GERM CELL	must be: not discernible (impercetible) develompment.
ODOUR	must be: free of extraneous odour.

Egg complying with the above specifications are EDIBLE i.e. proper for humen consumption.

Unfortunately there is always a certain percentage of eggs that presenting the following variations, present a negative effect to the purse of the customer if paid for as EDIBLE and mostly possible to his/her health as well, if eaten:

Re: SHELL AND CUTICULE	eggs can be disform (slabsided, ball type, wrinkled) present soft shell, thin spot, body check be stained (blood) dirty (shavings, dust, faeces), present caloium deposits, present hair cracks. Be badly cracked (impact cracks, too punched)
AIR SPACE	Egg can present an airspace exceeding more than 9 mm in height.

The height of the airspace is an indication of the age (freshness) of the egg.

Eggs with symtoms as to th SHELL AND CUTICULE and height of air space are still EDIBLE and therefore can be commercialized. But it is fair that the consumer pays less for them. Eventually he gets less quantity and quality!

WHITE AND YOLK eggs can persent:

- blood spots, meat spots
- mould growth (grey and black spots mainly on the border of the air space on shell cracks.
- a discoloured appearance (yolk and white are mixed up) content is striped and slimy.
- large blood spots - (mixed yolk and white, which is dark red coloured - the air space is often unsetled.
- dark colour and not be stationary at all. The airspace is destroyed - Rot egg!
- a red colour (blood egg).

Eggs presenting this type of problems are not EDIBLE.

As sarlier mentioned begin egg grading a form of QUALITY CONTROL. The customer is given the guarantee that he gets a product of high quality and at the right quantity!

2) ADVANTAGES FOR THE PRODUCER

A) THE PRODUCER GETS PAID FOR WHAT HE PRODUCES.
RE: QUANTITY (WEIGHT)
QUALITY

A) 1) Generally the heavier the gg produced
the higher is the income
Eventually there is a premium on heavier eggs
The more eggs the higher the income.

A) 2) The higher the quality of the produced eggs i.e. the less the eggs are off-graded.
Complying with the specifications (quality control) sarlier mentioned
the higher is the number of SELLABLE eggs and the higher the income

Ex: if out of a total production of 10,000 eggs the % off graded is reduced from 20% to 15% your actual number of sellable eggs jumps from 8,000 to 8,500, that is 500 extra sellable eggs.

"Quality helps establish a reliable standard which gives confidences in the product, establishes a favourable representation and increases your marketing advantages".

"The preference of the consumer in relation to quality may in turn stimulate increased prices and sales"

B) PRODUCER MAY COLLECT EXTREMELY VALUABLE DATA THAT ARE THE TOOLS TO IMPROVE THE MANAGEMENT (AND PROFITABILITY) OF HIS OPERATION.

As an example of the specific ddta that can be collected, we mention:

- No. of eggs collected (per flock, house) - gives the average production per flock/bird.

- distribution of eggs per weight classe,
- average weight per grade,
- total weight per grade,

helps controling the performance of the flock plus feed, water, light, etc. supply.

- No. of off grades,
- distribution of off grades per classes.

Ex: dirty - dirty on collection belts/cages.
health of birds - (blood stained/faeces)

Ex: cracks,
leakers
- settings and adjustments cages, egg collection system, eventual machinery
- management of birds in cages
(high number - slao sided/body checks)
(stress - body checks)
(feed - calcium deposits etc.)
heat stress, etc. diseases.

C) PACKAGING

EGG PACKING MATERIAL

- SHAPE
- PRESENTATION
- EGG PROIECTION
- QUALITY PRESERVATION OF EGGS
- EASY HANDLING
- STRENGTH / STABILITY
- ECOLOGICAL SOUNDNESS
- SALES PROMOTION
- ATTRACTIVITY

PROPER STORAGE PAYS ITSELF

A) STORAGE OF TABLE EGGS:
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- SEPARATE ROOM
- SMOOTH FLOOR/CEILING/WALLS
- TEMPERATURE 12 - 16 C.
- RELATIVE HUNIDITY 75%
- NO DIRECT FLOOR/WALL CONTACT
- SPACE REQUIREMENT:
  * NUMBER OF EGGS/DAY
  * NUMBER OF EGGS/TROLLEY OR PALLET
  * DAYS OF STORAGE
  * 20% SURPLUS SPACE

EXAMPLE

* 20,000 LAYERS
* PRODUCTION 95%
* STORAGE 7 DAYS
* CONTAINER 5,400 EGGS

$$\frac{20{,}000 \times 0.95}{5{,}400} = 3^5 \times 7 \times 120 = 30\ m^2$$

B) STORAGE PERIOD OF -5- DAYS, AT TEMPERATURE OF 21℃ AND RELATIVE HUMIDITY AT 65% AN EGG LOSES 0,5 GRAM ON WEIGHT:

30,000 LAYERS A PRODUCTION LOSS of 3,000 KGS!

AVERAGE EGG PRICE / KG . . . . .
IS TOTAL OF . . . . . .
OR . . . . . PER BIRD!

NOT ONLY PRODUCERS OF TABLE EGGS CAN HARVEST BENEFITS FROM GRADING EGGS.

HATCHERY PROFESSOINALS can also pick their profits.

The purpose of grading hatching eggs is sifferent from what the layman would think. Smaller eggs do not result in light-weight-brollers or layers. It is only during the first few days that the chicks are slightly smaller. But when you mix them with their sturdier brothers or sisters they might just lose out in the packing order when its feeding time, diminishing their chance of survival.
And survival is what the hatching business is all about. a few percentage may mean the difference between profit and loss.

CONCLUSION: EGG GRADING IS A PROFITABLE OPERATION

"No wonder it is a general practice in the majority of the world"

EGG GRADING CAN BE DONE

* Manually, based on 2 or 3 classes (visually determined)
* and with the help of machines
  - providing an higher accuracy
  - usually equipped with a candling systam to improve the quality of the identification and classification of the sggs.
  - requiring lower oparation costs (lsss no. of operators)
  - eventually damaging less eggs through the while egg handling.

Nowadays more sophisticated equipment even provide the producers with data that help improve the management and profitability of the egg grading operation in itsslf.

MOBA HAS THE EQUIPMENT TO ASSIST YOU

SEMI-AUTOMATICS:

TYPE	CAP./HOUR
MOBANETTE/3	1,600
TYPE 68	3,000
TYPE 88	4,500
TYPE 5	6,000
TYPE 6	8,000
TYPE 8	11,500
TYPE 9	13,600

EGG PACKING

TYPE	CAP./HOUR
MOPACK 55	20,000
MOPACK 70	25,000
MOPACK 85	30,000
MOPACK 100	36,000

EGG GRADING AND PACKING

FULLY AUTOMATIC

TYPE	CAP./HOUR
1000	10,000-14,400
1500	14,400-17,200
3000	25,000
5000*	45,000
6000*	75,000
8000*	90,000

* COMPUTER CONTROLLED