6th ANNIVERSARY

Marine Newslink

November 2018

FEATURE ARTICLE
Eggs

PHOTO(S) OF THE MONTH
Eggs Accident

BONUS ARTICLE
India's first container movement on inland waterways

BACK TO BASICS
Question of the Month

HALF A DOZEN AND HERE TO STAY

EGGS

Eggs are one of nature's most perfectly balanced food, containing all the protein, vitamins (except vitamin C) and minerals essential for good health.

Today's usual large egg contains only a moderate amount of fat, with about 5 grams in only the egg yolk (1.5 grams saturated), 213 mg of cholesterol and 75 calories. Eggs can easily fit into your daily fat limit. Eggs have a high nutrient density because they provide significant amounts of vitamins and minerals yet contain only 71 calories.

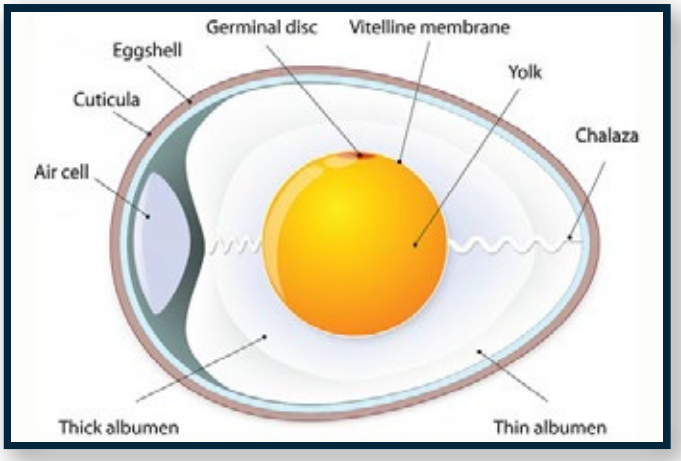
Eggs are laid by females of many different species including birds, reptiles, amphibians and fish. Man has been consuming eggs as food for thousands of years. Popular choices for egg consumption are chicken, duck, quail, roe and caviar, but humans mostly consume the chicken egg by a wide margin.

The shape of an egg resembles a prolate spheroid with one end larger than the other, with cylindrical symmetry along the long axis. An egg is surrounded by a thin, hard shell. Inside, the egg yolk is suspended in the egg white by one or two spiral bands of tissue called the chalazae. Bird and reptile eggs consist of a protective eggshell, albumen (egg white) and vitellus (Egg Yolk), contained within various thin membranes.

Hens and other egg-laying creatures are widely kept throughout the world and mass production of chicken eggs is now a global industry. There are issues of regional variation in demand and expectation, as well as current debates concerning methods of mass production, with the European Unions ban on battery farming of chickens.

Food quality is the characteristics of the food product that is accepted or rejected by the consumer. Eggs are usually graded. Egg grading involves sorting of eggs according to quality, size, shape, weight and other factors. Quality of eggs is determined by both internal and external quality standards. External factors include shell structure, color, shape and texture of eggs. Internal quality includes air cells, egg white, egg yolk etc.

Some tests like sniff test, visual inspection, floating test, candling is done to check whether eggs are of good quality or not.



Anatomy of an egg

HOW EGGS ARE GRADED ACCORDING TO THEIR EXTERNAL & INTERNAL QUALITIES:

• EXTERNAL EGG QUALITY:

External egg quality is determined by its shell, texture, color, shape and soundness. The eggshell should be clean, unbroken and smooth. Surface cracks on the shell are easier to detect during handling. Poor eggshell quality is undesired and causes losses. Total quality management, GMP should be implemented throughout egg production cycle for good eggshell quality. The eggs should be uniform in color, size and shape.

• INTERNAL QUALITY:

Internal examination of an egg is done by candling which evaluate the egg white, yolk, and air cells.

Candling is done by holding the large end of the egg between the thumb and the first two fingers in candle-light in a slanting position and the shell structure, air cells, egg white, and yolk are observed.

Air Cells – Depth of air cells determine its quality. It is the distance from top to its bottom when the egg is held with the air cell up. The air cell is small, not more than 1/8-inch-deep in fresh egg; with time because of evaporation air cell becomes larger and egg quality gets downgraded.

Egg yolk – Fresh and good quality egg yolk is surrounded by a dense layer of albumen or white. So, while candling it moves slightly away from the center and yolk outline is only slightly defined. With aging deterioration occurs, albumen thins, yolk become more visible during candling and tends to move freely.

TRANSPORT OF CONSUMPTION EGGS:

Eggs are sensitive and can be infected by bacteria like Salmonellae. Care should be taken when transporting the eggs.

Transport from the farm to the packing station and from the packing station to the retail is strictly separated. There are no big risks of recontamination during transport to the retail. The main hazard is changes in temperature which may lead to condensation in the egg and this may enable transport of micro-organisms through the shell into the egg.

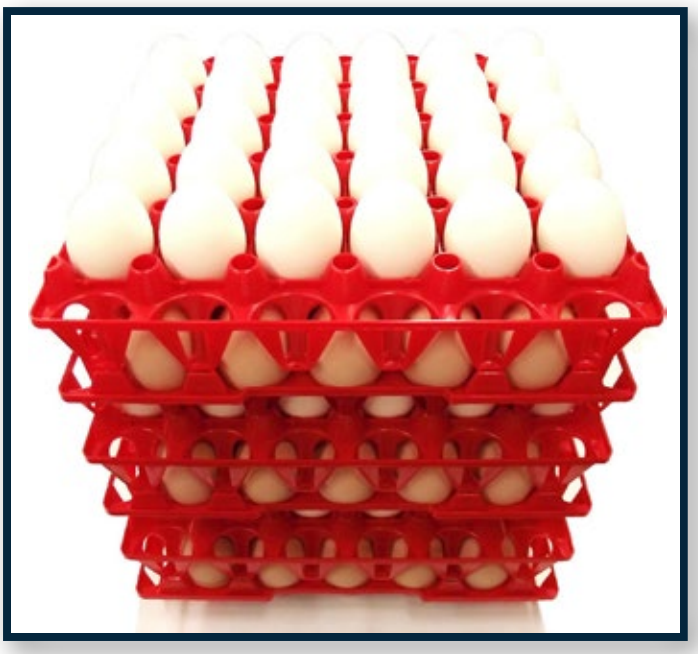
At the layer farm, eggs are placed on either cardboard or plastic trays. Cardboard trays should preferably not be used again. When being reused, they should be checked thoroughly for pollution and damage. At the egg processing plant or packing station, the eggs are unloaded before checking and grading and the containers should be cleaned.

Candling

When eggs are transported to the supermarket they are packed in small sized card board trays. In some parts of the world, it is not permitted to wash the egg before consumption, whereas, in some countries like America this is done on a standard basis. The advantage of keeping the egg dry is that the cuticle stays intact from the egg, so the egg is better protected. The disadvantage is that possible contamination on the shell of the egg is not removed, creating the risk of contaminating the inside of the egg when breaking it. After washing, eggs should be preferably stored at low temperatures as were during transport.

TRANSPORT OF INCUBATION EGGS:

Transportation of incubated eggs is a process that requires expertise from haulers and transport providers to ensure high performance and consistent compliance with all sanitary rules and hygienic requirements. The main condition for the safety of transported eggs is the maintenance of an optimum temperature regime inside the vehicle. Incubation eggs are highly sensitive to climatic conditions. In the case of a temperature excursion and/or sudden fluctuation in air temperature, the egg loses its potential and becomes unsuitable for consumption. Since maintaining the temperature regime is vital for cargo safety, refrigerated vehicles play a key role in the safe transportation of hatching eggs.



The risk of temperature fluctuations remains high, especially during loading and unloading operations. During loading and unloading, loaders should avoid cargo cooling because cold reduces the amount of yolk and protein within the egg and causes the air chamber to increase, thereby increasing the risk of cargo contamination. High temperatures are no less dangerous to the condition and properties of hatchery eggs. If the air inside the vehicle is warmer than on the egg deck, condensation quickly forms and can even lead to fog, especially in warm, moist weather.

To minimize the harmful effects of humidity and temperature fluctuations, refrigerated vehicles and containers with the ability to maintain a temperature regime are used for the transport of eggs for incubation.

The transportation of eggs for incubation requires specially-adapted equipment for sea, rail, air and road transport. Each vehicle must be dry and possess adequate ventilation. For the safety of hatching eggs in the vehicle, it is necessary to

maintain an appropriate temperature. Thermographs – special devices that help monitor air temperature, are used along the entire route. Services for the transportation of chicken eggs by roadways are in demand, as road transport guarantees the fastest delivery. Fast delivery is a necessary component of the proper transportation of hatching eggs, as they are classified as perishable goods that experience negative side effects of long-term storage.

International transportation of incubated eggs by air, by train or sea are less popular, as these modes require transshipment and may experience additional delays during delivery. An important requirement for the safe transportation of eggs is the fastening of cargo on a vehicle. Containers with eggs are fixed in such way as to avoid displacement or slippage during all steps of carriage. Secure fastenings help avoid the loss of cargo. To ensure strong cargo fastenings, the gaskets from damping materials can be laid down. The rules for the transport of fragile cargoes prescribe special labeling for packages. Distinctive marks on boxes and packaging indicate the nature of the goods and may contain spatial reference points and other information that indicates its properties.

RULES & REGULATIONS:

Egg transport vehicles need to meet the following requirements:

- Design and construct transport vehicles to protect food from contamination
- Effectively clean and sanitize (where necessary) transport vehicles to protect food from contamination
- Segregate raw (e.g. cracked eggs) from processed food (e.g. pasteurized pulp) and protect food from contamination by covering or sealing it appropriately

Norms governing process for the safe transportation of eggs are contained in numerous technical regulations, certification rules and documents establishing sanitary, hygienic and technical standards for the transportation of agricultural products. All these regulations establish a complex and detailed procedure for the transport of hatching eggs. Before executing transport, it is necessary to receive several certificates regarding health and animal-breeding to name a few examples, to ensure sanitation and prevent epidemiological threats.

Transporting Eggs

PHOTO OF THE MONTH:
EGG ACCIDENT

Eggs Mishandling

Egg Truck Accident

BONUS ARTICLE:
INDIA'S FIRST CONTAINER MOVEMENT ON INLAND WATERWAYS

The Inland Waterways Authority of India (IWAI) first transported a container cargo belonging to the food and beverage giant PepsiCo (India) from Kolkata to Varanasi on river Ganga (National Waterway-1).

It was the country's first container movement on Inland Vessel post-independence. The food and Beverage giant transported 16 containers from Kolkata to Varanasi. The vessel MV RN TAGORE (IAWI) covered the distance in 12 days. MV RN TAGORE (IAWI) is expected to make its return journey with fertilizers belonging to IFFCO that will be procured from its Phulpur plant near Allahabad.

Container cargo transport comes with several inherent advantages. It reduces the handling cost, allows easier modal shift, reduces pilferages and damage and also enables cargo owners to reduce their carbon footprints.

The government is developing NW-1 (River Ganga) under JMVP from Haldia to Varanasi (1390 Km) with the technical and financial assistance of the World Bank at an estimated cost of Rs. 5,369 crore.

Pilot movements on National Waterways are currently being done on various stretches and more than 15 of them have already been successfully completed, including integrated movements through NW-1 (Ganga), Indo-Bangladesh Protocol Route and NW-2 (Brahmaputra). Shipping Minister is working on a plan to convert more than 100 rivers into national waterways.

BACK TO BASICS

QUESTION OF THE MONTH: (Please submit your replies by 25th of each month)

A machinery was purchased on ex-works basis from Ahmedabad to Nagpur. The buyer had covered the same for all risk + SRCC. The consignment reached the insured's factory. Since the site (where the machinery was to be erected) was not ready and it was an ODC (over dimensional cargo) & OWC (over weight cargo), they requested the transporter to wait for a week and the truck was parked inside the factory compound.

The truck and cargo were completely gutted in a fire on the 6th night. Is the claim payable?

LAST MONTH'S QUESTION:

An export consignment was covered for CIF + 10%, the invoice value was Rs. 1.00 crore. The aircraft carrying the consignment crashed into the sea and the cargo was a total loss.

How much indemnity the insured will get as he didn't incur any additional incidental or overhead expenditure?

LAST MONTH'S ANSWER:

The insured will get entire Rs. 1.10 crores, as marine insurance is an 'agreed value' policy.

CORRECT ANSWERS SENT BY: (In order of replies received)

Rohan Lodaya - Insurance World, Vadodra
Bhavit Acharya - Beacon Insurance Brokers Pvt. Ltd., Vadodra
Kritika Singh - Ideal Insurance Brokers Pvt. Ltd., Gurgaon
Hema Raghav - Optima Insurance Brokers Pvt. Ltd., New Delhi
E. David Theodore Joseph - Paavana Insurance Brokers Pvt. Ltd., Chennai
Tapan Shah - Perfect Insurance Solution, Ahmedabad
Bharat Bhushan - Optima Insurance Brokers Pvt. Ltd., New Delhi

PLEASE SEND YOUR REPLIES/ANSWERS TO ADDRESSES GIVEN ON LAST PAGE OF THE MARINE NEWSLINK

IF YOU HAVE ANY COMMENTS / FEEDBACK PLEASE SEND IT TO

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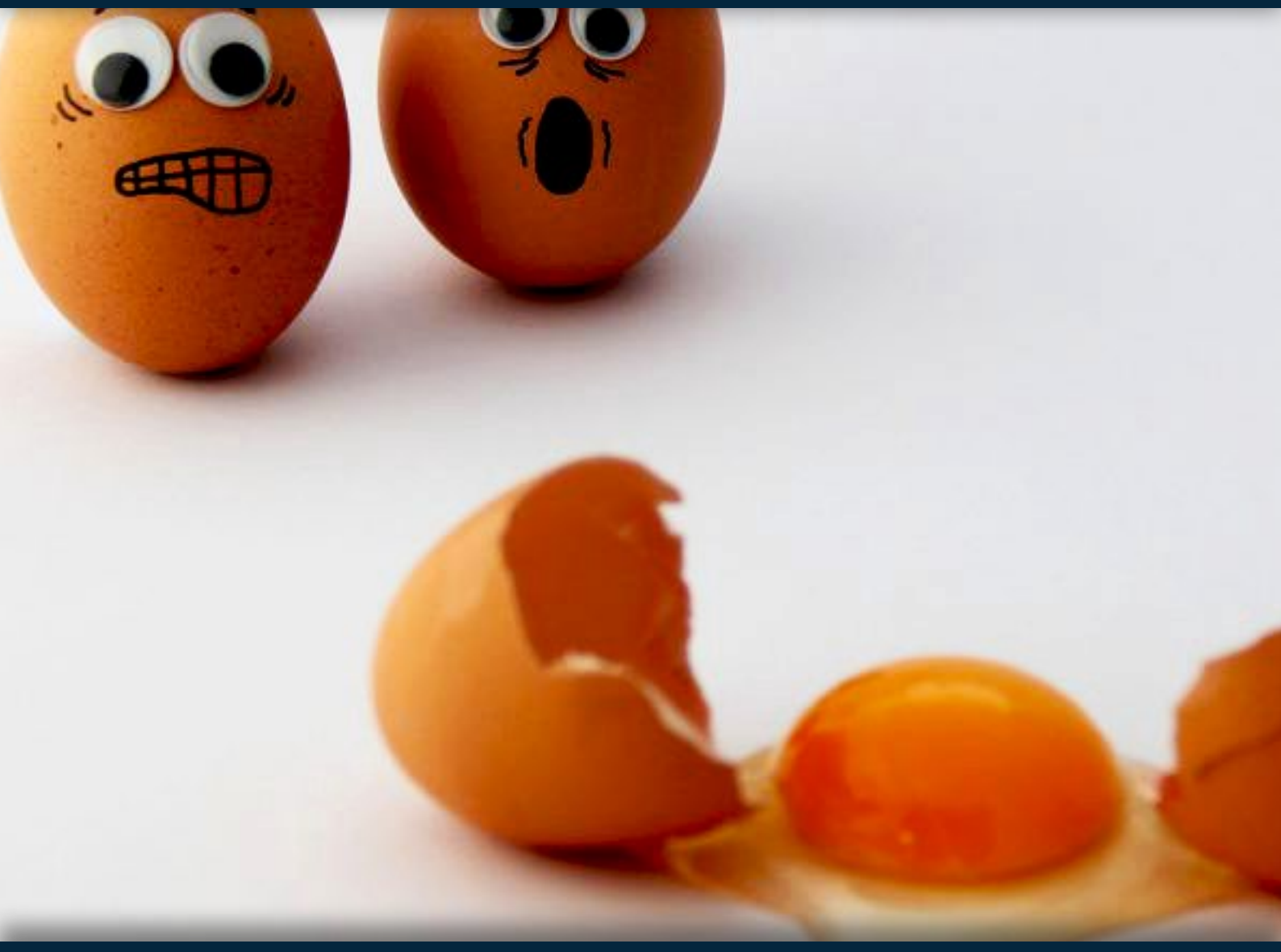

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