

# EGG PRODUCT SOLUTIONS OVOSTAR



# **ABOUT US**



**OVOSTAR UNION Group** is one of the leading agricultural companies and is among five largest producers of eggs in Europe. Our advantage is the vertical integration, which provides thorough quality control at all stages of production and ensures the optimal resource usage.

We produce shell eggs at two poultry farms with the overall capacity of more than 8 million poultry places. They are located in Ukraine in close proximity to our own parent stock, hatchery and pullet rearing farms.

Since 2011 the company's shares have been traded on the Warsaw Stock Exchange.

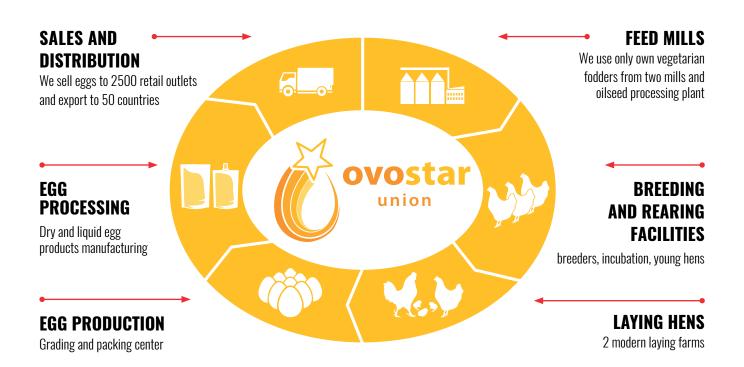
Our mission: we work and improve in order to produce environmentally friendly and healthy food for global markets.

## **OVOSTAR UNION TODAY**

- 7 production sites
- 21% share in industrial egg production of Ukraine
- Ukrainian market maker in egg products
- Export to 50+ countries
- 44% share of export in sales volume of eggs
- Over 1400 employees



# THE MAIN BUSINESS AREAS ARE:





We produce and sell eggs under the national trademark **YASENSVIT** 



Our premium quality egg products are recognized both in Ukraine and abroad under the trademark **OVOSTAR** 

# We are in **TOP-5**European egg producers

# **OUR ACHIEVEMENTS**



Permission to **export** shell eggs of A class **to the EU** 



1,7 We produced billion eggs in 2017

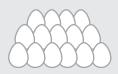


7.7 million hens

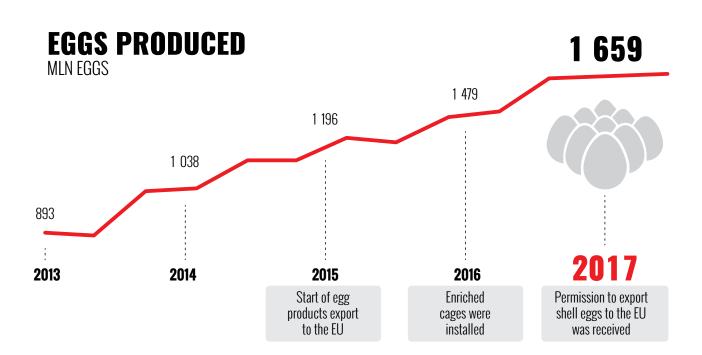
Exported in 2017

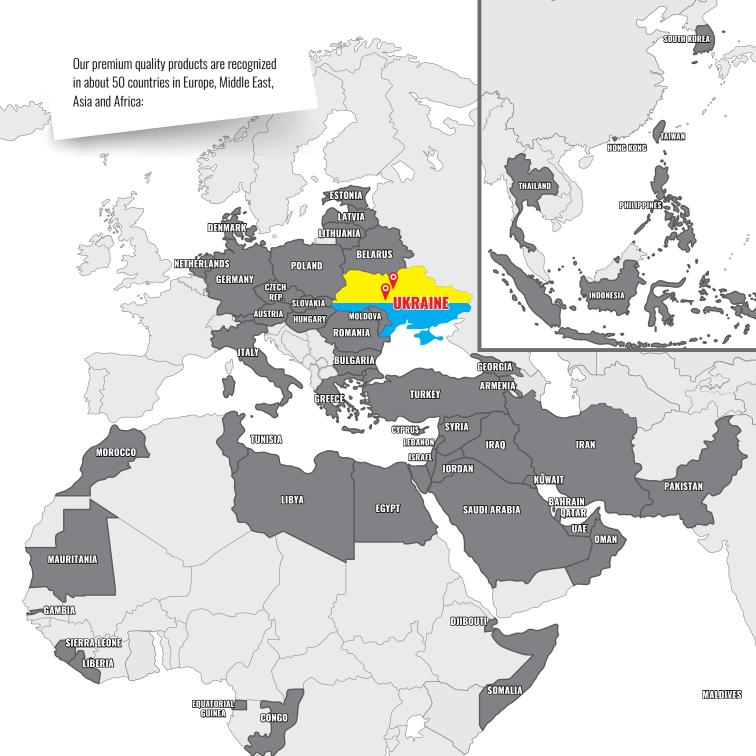


**7400** tons of egg products



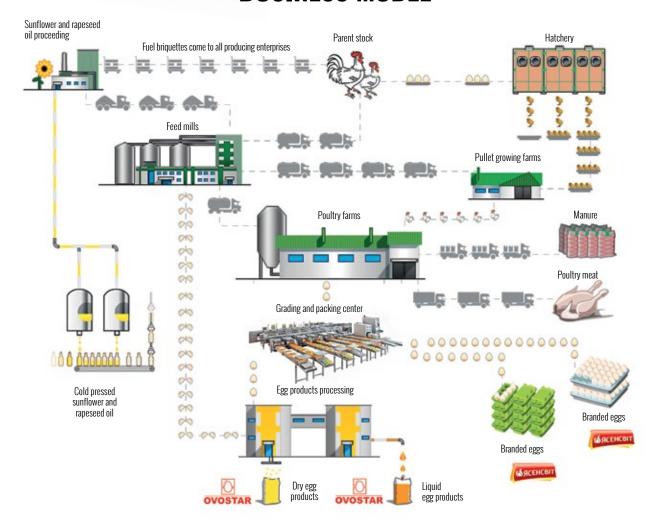
**529** million eggs



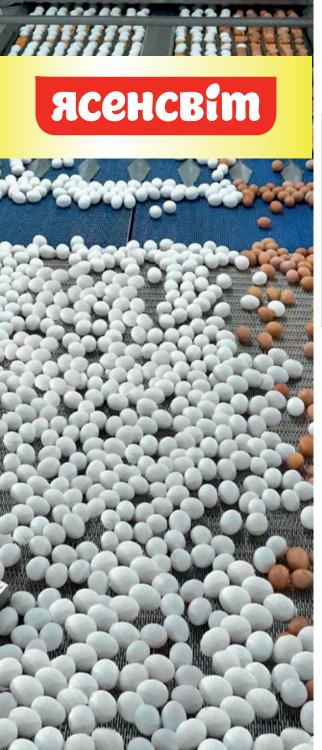


# **PRODUCTION**

## **BUSINESS MODEL**



- All production facilities are located in central Ukraine in close proximity to each other.
- There is full production cycle from hen breeder flock to high quality shell eggs and egg products manufacturing.
- High level of vertical integration lets control costs and quality at all stages of production process.



### SHELL EGG PRODUCTION

- Two modern poultry farms in the heart of Ukraine
- European standards of poultry farming
- Up-to-date grading machines MOBA i NABEL sort out 5 million eggs daily
- The food safety and quality assurance management systems
- EU approved (approval veterinary number a-UA-10-12-06-X-PC,PP)
- Proven experience in packing and shipping shell eggs for long distances (Africa, Far East, Middle East)

The poultry farms are equipped with up-to-date egg production equipment. High level of in-house automation including feed and water supply as well as manure disposal systems together with the automated collection of eggs, their transportation, grading and packing ensure the biosecurity of the poultry and the finished products.

Grading machines with three-stage detection system control the quality and cleanliness of the eggshell, additionally process the eggs with UV-light and precisely grade them by weight.

After inspection the sorted eggs are transported to the automatic packing line. Each egg is marked with a numerical code of the quality control, a mandatory attribute of the company's food safety system.

We have our own certified laboratory that continuously performs the whole range of physical, chemical, and microbiological tests of the fodder and the finished products. Additionally, the eggs are regularly tested by the state authorities for the microbiological safety indicators, the absence of dioxins and GMO.

The high quality of products is the key element of Ovostar Union strategy. During the production process we use NO antibiotics, hormones and other growth additives, and NO fodder components of animal origin.

#### EGG PRODUCTS PROCESSING

- OVOSTAR is the leading egg processing plant in Ukraine that offers a wide range of liquid and dry egg products
- OVOSTAR plant processes over 2 million eggs daily
- The food safety and quality assurance management system, Halal certificate
- Fresh eggs processing in 1-2 days after laying
- More than 20 types of egg products and mixes with specific properties
- EU approved (approval veterinary number 10-03-14 EGG)

OVOSTAR egg processing plant holds a leading position in Ukraine by volume and product range of egg products produced. The plant is completed with the modern equipment of egg separation, pasteurization, fermentation, desugarization, drying and finished goods packaging.

Both Ukrainian and global companies of food industry such as producers of confectionary, bakery, meat and fish products, mayonnaise and various sauces, purchase OVOSTAR egg products. The production capacity and flexible manufacturing processes are able to satisfy the needs of our customers in any amounts and any product range, which includes pasteurized and fermented dry and liquid egg products both chilled and frozen.

More than 300 tons of different egg powders and 1000 tons of liquid egg products are produced monthly. We offer a great variety of packaging solutions depending on demands of our customers.

OVOSTAR plant successfully completed the process of integration the system of products quality and safety control according to ISO 9001 and FSSC 22000 (HACCP). As a result of continuous growth and the systemic quality control of the products the company is increasing the export volumes, becoming a recognizable player in Europe, Middle East, Asia and Africa.





### STAGES OF EGG PRODUCTS PROCESSING

The state-of-the-art machine designed by Pelbo® permits to obtain the best possible perfomance such as: highest product yeld, cleanest egg white, driest yolk.

#### EGGS BREAKING AND SEPARATING

The revolutionary egg white inspection system ALBUCHECKER is capable of detecting even the smallest egg yolk stain and garantees the highest quality of egg white.

#### FERMENTATION SECTION

The fermentation of yolk provides the product with enhanced emulsifying properties and thermostability.

#### PASTEURIZATION SECTION

The pasteurization provides biological safety of product, removal of pathogenic microflora, ensures long shelf-life of egg products.

#### DESUGARIZATION SECTION

The desugarization enables to get dry sugar-free albumen with prolonged shelf-life.

#### DRYING SECTION

Due to a small-dispersion structure the dry egg products possess high solubility and reviving ability.

#### "HOT ROOMS"

The process of albumen processing occurs in large thermostats.

#### PACKAGING SECTION

Liquid egg products are poured in the aseptic packages and plastic cans. Dry egg products are packed in three layer kraft bags with a polyethylene inner.

# **PRODUCTS**

Our expanding portfolio of products is driven by the needs of our customers and presented by the following products:

### **SHELL EGGS**

We offer shell eggs of premium quality for industrial application and retail. Shell eggs of sizes L, M, S are produced directly on poultry farms of Ovostar Union

#### **DRY EGG PRODUCTS**

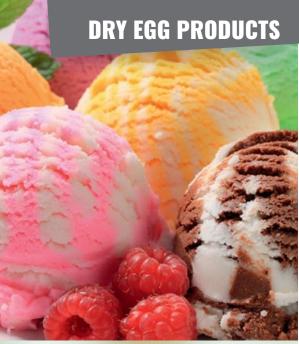
- Whole egg powder
- Egg white powder (albumen)
- Egg yolk powder
- Heat-stable egg yolk powder
- Dry egg product mixes OVOMIX

# **LIQUID EGG PRODUCTS**

- Liquid whole egg
- Liquid egg white
- Liquid egg yolk
- Liquid heat-stable egg yolk
- Salted or sweetened whole egg and egg yolk
- Liquid egg product mixes OVOMIX including LONG LIFE products







#### **WHOLE EGG POWDER**

**Ingredients:** hen whole egg of fresh shell eggs

**Produced** by separation, pasteurization and spray drying

**Properties:** high emulsifying ability, high nutrition value and excellent

solubility

**Application:** confectionery, bakery products, cakes, biscuits, meat industry

Packaging: 20 kg kraft bag with PE insert, 20 or 25 kg card box with PE

insert

**Shelf life:** 24 months



## **EGG WHITE POWDER (ALBUMEN)**

**Ingredients:** hen egg albumen of fresh shell eggs

**Produced** by separation, pasteurization, fermentation and spray drying

**Properties:** depending of the scope of application any of standard or high

whip or high gel albumen can be offered

**Application:** confectionery, bakery products, surimi, sports nutrition

**Packaging:** 20 kg kraft bag with PE insert, 20 or 25 kg card box with PE

insert

**Shelf life:** 24 months

#### **EGG YOLK POWDER**

**Ingredients:** hen egg yolk of fresh shell eggs

**Produced** by separation, pasteurization and spray drying

**Properties:** excellent solubility, emulsifying capacity and high nutritional value

(enriched proteins, lipids, trace elements calcium, magnesium and iron)

**Application:** mayonnaise, dressings, sauces, pasta, confectionery

**Packaging:** 20 kg kraft bag with PE insert, 20 or 25 kg card box with PE insert

**Shelf life:** 24 months

#### **HEAT-STABLE EGG YOLK POWDER**

**Ingredients:** hen egg yolk of fresh shell eggs, salt, enzyme

**Produced** by separation, fermentation, pasteurization and spray drying

**Properties:** high thermal stability and emulsifying ability, provides stable

emulsions in high temperature conditions, long-term storage

Application: mayonnaise, dressings, sauces, pasta

Packaging: 20 kg kraft bag with PE insert, 20 or 25 kg card box with PE insert

**Shelf life:** 24 months

#### DRY EGG PRODUCTS OVOMIX

We understand that the needs of our customers are different in each market. That's why we launched new egg products line OVOMIX, which is tailor-made to meet specific needs of our customers. Under OVOMIX product line we offer product mixes for different food sectors, like special mix for mayonnaise producers - Mayomix.





## **LIQUID WHOLE EGG (CHILLED/ FROZEN)**

**Ingredients:** pasteurized liquid whole egg of fresh shell eggs

**Produced** by separation and pasteurization

**Properties:** physical and chemical properties are identical to a fresh hen egg.

**Application:** direct substitute to a fresh shell egg

**Packaging:** bag in box, 10, 20, 1000 kg aseptic packages.

1 and 5 liter plastic cans.

**Shelf life:** in pure and perfectly ventilated refrigerator or freezer:

 $0 - 4^{\circ}$  C – no more than 40 days

-18 °C - no more than 15 months

## LIQUID EGG WHITE (CHILLED/ FROZEN)

**Ingredients:** pasteurized liquid egg white of fresh shell eggs

**Produced** by separation and pasteurization

**Properties:** excellent whipping ability, foam stability

**Application:** confectionery and bakery industry, sports nutrition

**Packaging:** bag in box, 10, 20, 1000 kg aseptic packages.

1 and 5 liter plastic cans

**Shelf life:** in pure and perfectly ventilated refrigerator or freezer:

0 - +4 °C – no more than 40 days

-18  $^{\circ}\text{C}$  – no more than 15 months

## LIQUID EGG YOLK (CHILLED/FROZEN)

**Ingredients:** pasteurized liquid egg yolk of fresh shell eggs

**Produced** by separation and pasteurization

**Properties:** high emulsifying capacity and nutritional value, long shelf life

**Application:** mayonnaise, dressings, sauces, pasta, confectionery

**Packaging:** bag in box, 10, 20, 1000 kg aseptic packages.

1 and 5 liter plastic cans

**Shelf life:** in pure and perfectly ventilated refrigerator or freezer:

 $0 - 4^{\circ}C - no$  more than 40 days

-18 °C - no more than 15 months

## **HEAT-STABLE LIQUID EGG YOLK (CHILLED/FROZEN)**

Ingredients: pasteurized liquid egg yolk of fresh shell eggs, salt, enzyme

**Produced** by separation, fermentation and pasteurization

**Properties:** high thermal stability and emulsifying ability provides stable emulsions in high temperature conditions, long-term storage

Application: mayonnaise, dressings, sauces, pasta

**Packaging:** bag in box, 10, 20, 1000 kg aseptic packages.

1 and 5 liter plastic cans

**Shelf life:** in pure and perfectly ventilated refrigerator or freezer:

 $0 - 4^{\circ}$  C – no more than 40 days

-18 °C – no more than 15 months



## **LONG LIFE LIQUID EGG PRODUCTS**

OVOMIX portfolio includes variety of products to meet specific customer expectations. LONG LIFE products are suitable for food industry, bakery, confectionary, meat industry, HoReCa. The products are available in multiple formats of customized packaging.

#### **LONG LIFE product line includes:**

LONG LIFE whole egg/egg white/egg yolk

#### **Packaging:**

- 1kg, 5kg plastic cans with cork
- Bag in box, net weight 10kg, 20kg
- 1t one way container, carton box with plastic liner

**Shelf life:** Products must be stored at 0° to + 4 °C during 90 days. After opening can be stored in original packaging with closed cork 28 days at 0° to + 4 °C.

ADVANTAGES OF USING		33330
EGG PRODUCTS OVER SHELL EGGS	LIQUID EGG PRODUCTS	DRY EGG PRODUCTS
Preparation convenience	•	•
Ease to use		
Time and cost saving	•	•
Safety (pasteurization destroys Salmonella and other bacteria)		
No loss at usage (liquid eggs involve a loss of approx. 2-3% of product remaining in the container)	-	•
Easy to store	-	
Long shelf life	•	
Product can be controlled and analysed before purchase	-	
Lower freight charges	-	<b>Ø</b>

## **SHELL EGGS**

We offer shell eggs of premium quality from Ovostar Union's poultries. As we aim to produce health friendly products we control the quality and safety of eggs at each stage of production and can confirm it with relevant certificates and expert reports.

Our production capacity let us offer eggs both to domestic market and international arena. We produce 5 million eggs daily for industrial application and retail.

Grading machines with three-stage detection system control the quality and cleanliness of the eggshell, additionally disinfect the eggs and precisely grade them by weight.

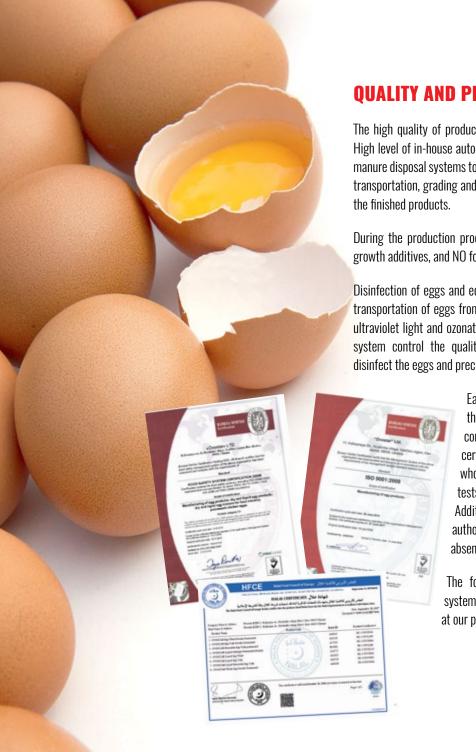
During the production process we use NO antibiotics, hormones and other growth additives, and NO fodder components of animal origin.

Sizes L, M, S are available in carton boxes. Each one contains 360 eggs placed on 12 carton trays.

The product is already recognized at European, Middle Eastern, Asian and African markets. As we strive for sustainable growth we aim to increase in market opportunities.







#### **QUALITY AND PRODUCT SAFETY GUARANTEES**

The high quality of products is the key element of Ovostar Union strategy. High level of in-house automation including feed and water supply as well as manure disposal systems together with the automated collection of eggs, their transportation, grading and packing ensure the biosecurity of the poultry and the finished products.

During the production process we use NO antibiotics, hormones and other growth additives, and NO fodder components of animal origin.

Disinfection of eggs and equipment is carried out at the stage of automatic transportation of eggs from poultry houses to the grading machine by using ultraviolet light and ozonation. Grading machines with three-stage detection system control the quality and cleanliness of the eggshell, additionally disinfect the eggs and precisely grade them by weight.

Each egg is marked with a numerical code of the quality control, a mandatory attribute of the company's food safety system. We have our own certified laboratory that continuously performs the whole range of physical, chemical, and microbiological tests of the fodder and the finished products. Additionally, the eggs are regularly tested by the state authorities for the microbiological safety indicators, the absence of dioxins and GMO.

The food safety and quality assurance management system based on the international standards is integrated at our production sites.

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