

**1902**

**RESEARCHES AND DEVELOPMENT IN THE FIELD  
OF TECHNOLOGIES OF PRODUCTION OF THE  
MIXED FODDERS IN UKRAINE**

**Bogdan Iegorov**  
Doctor of Science, prof.,  
Rector

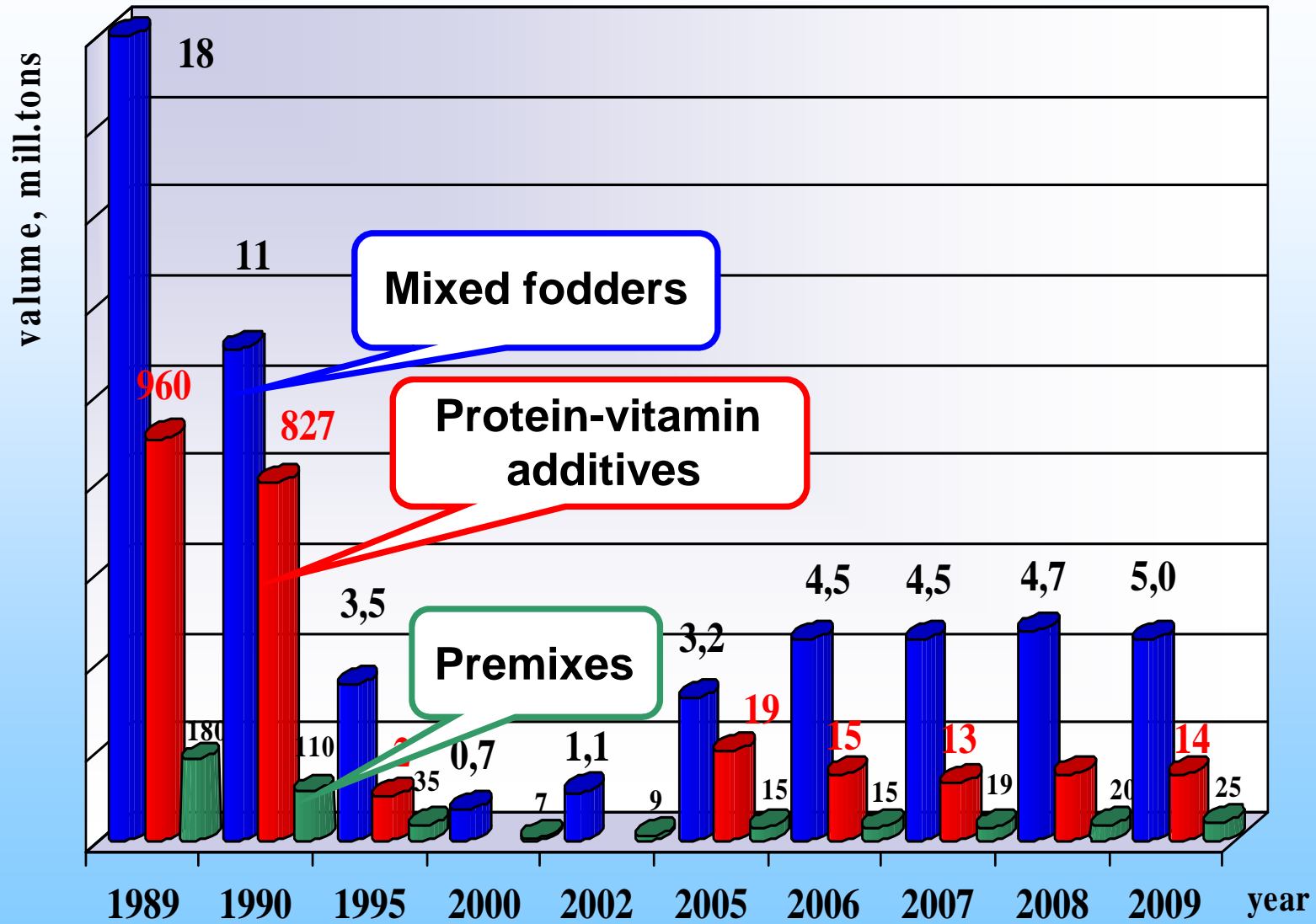
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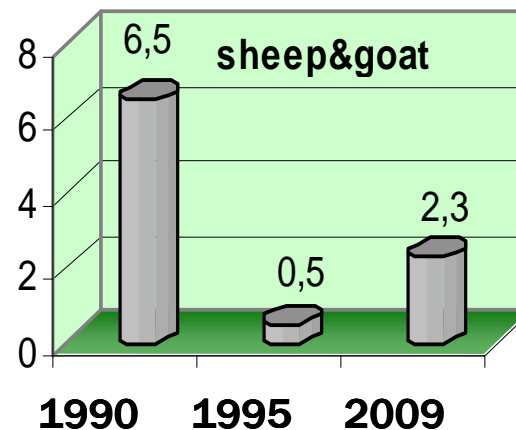
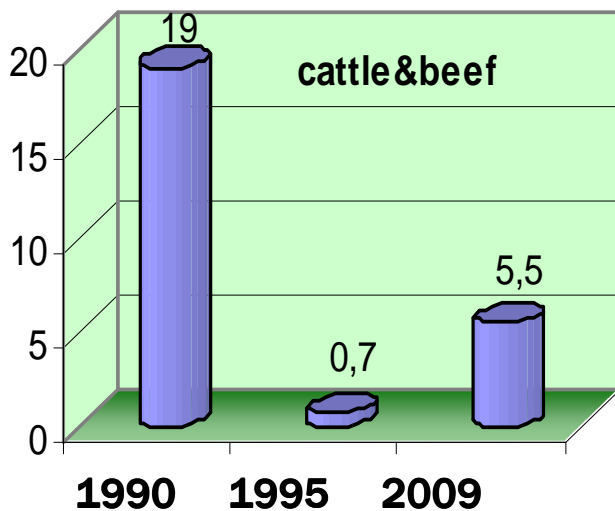
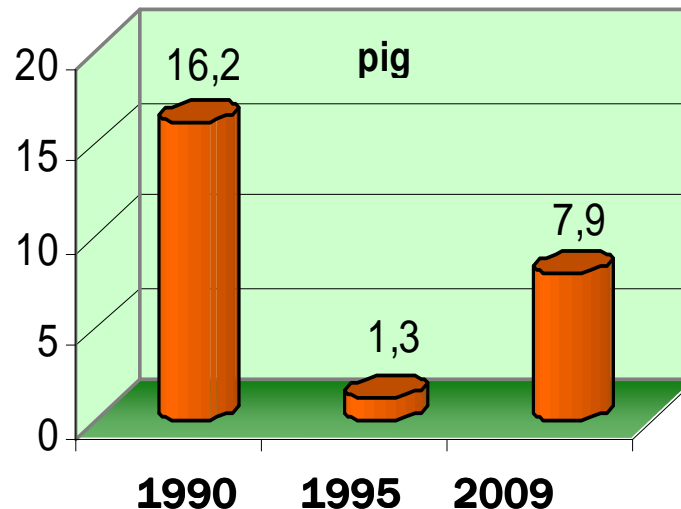
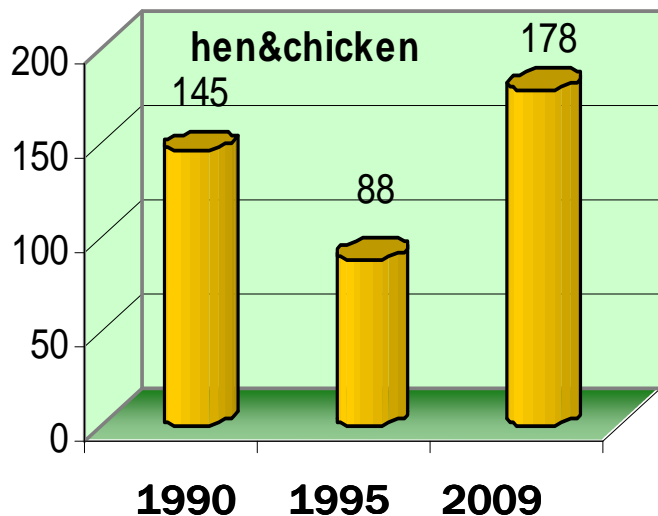
**The first experience of industrial production of the mixed fodders in Ukraine dates to 1928. Then the first mixed fodder factory was built under Kharkov city.**

# Mixed fodders production in Ukraine, million tons

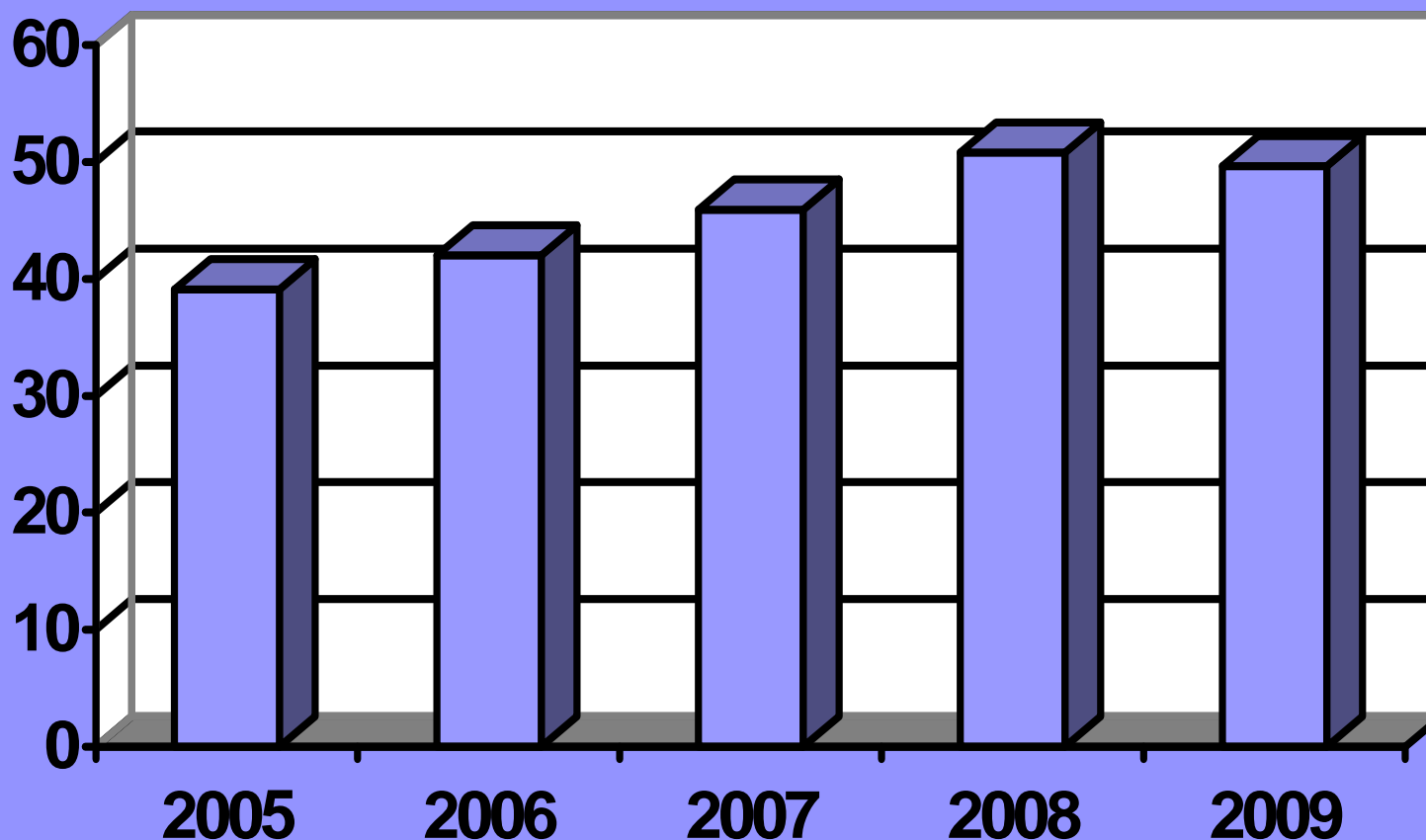


# The changing of the livestock in Ukraine

(million heads)

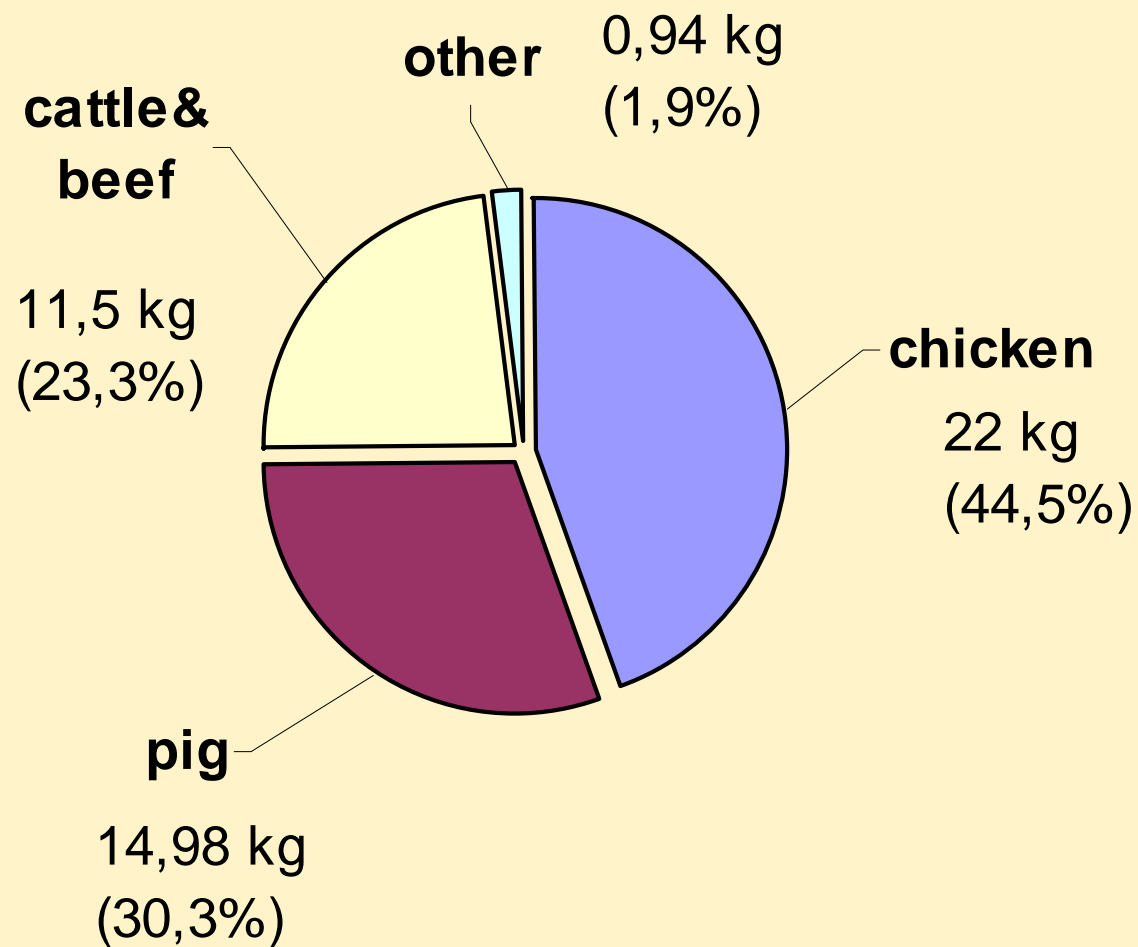


Today in Ukraine average consumption of meat has increased from 40 to 49,42 kg per 1 person per year



# A structure of meat ration of Ukraine

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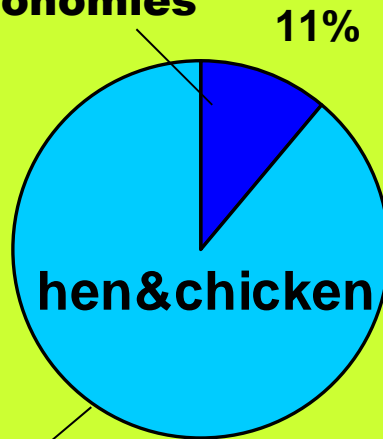


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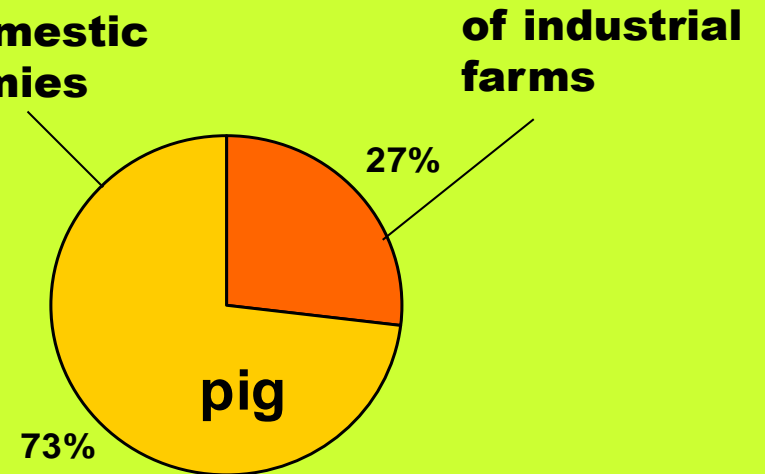
# The animals are kept in the conditions:

7

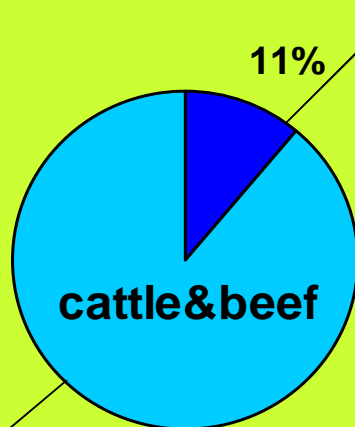
of farm  
and domestic  
economies



of farm  
and domestic  
economies

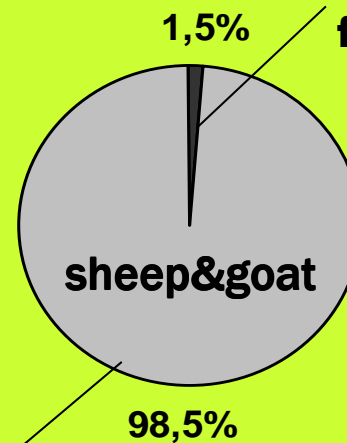


of industrial  
farms



of industrial  
farms

of industrial  
farms



of farm  
and domestic  
economies

of farm  
and domestic  
economies



# THE HARVEST OF GRAIN IN UKRAINE

8

**27**  
million tons of grain

**18**  
million tons of  
mixed fodders

**1990**


**48**  
million tons of grain

**5**  
million tons of  
mixed fodders

**2009**

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**The Chair of the Mixed Fodders Technology of Odessa National Academy of Food Technologies has trained engineers-technologists for mixed fodders plants since 1947.**

# Research institute in Ukraine:

10

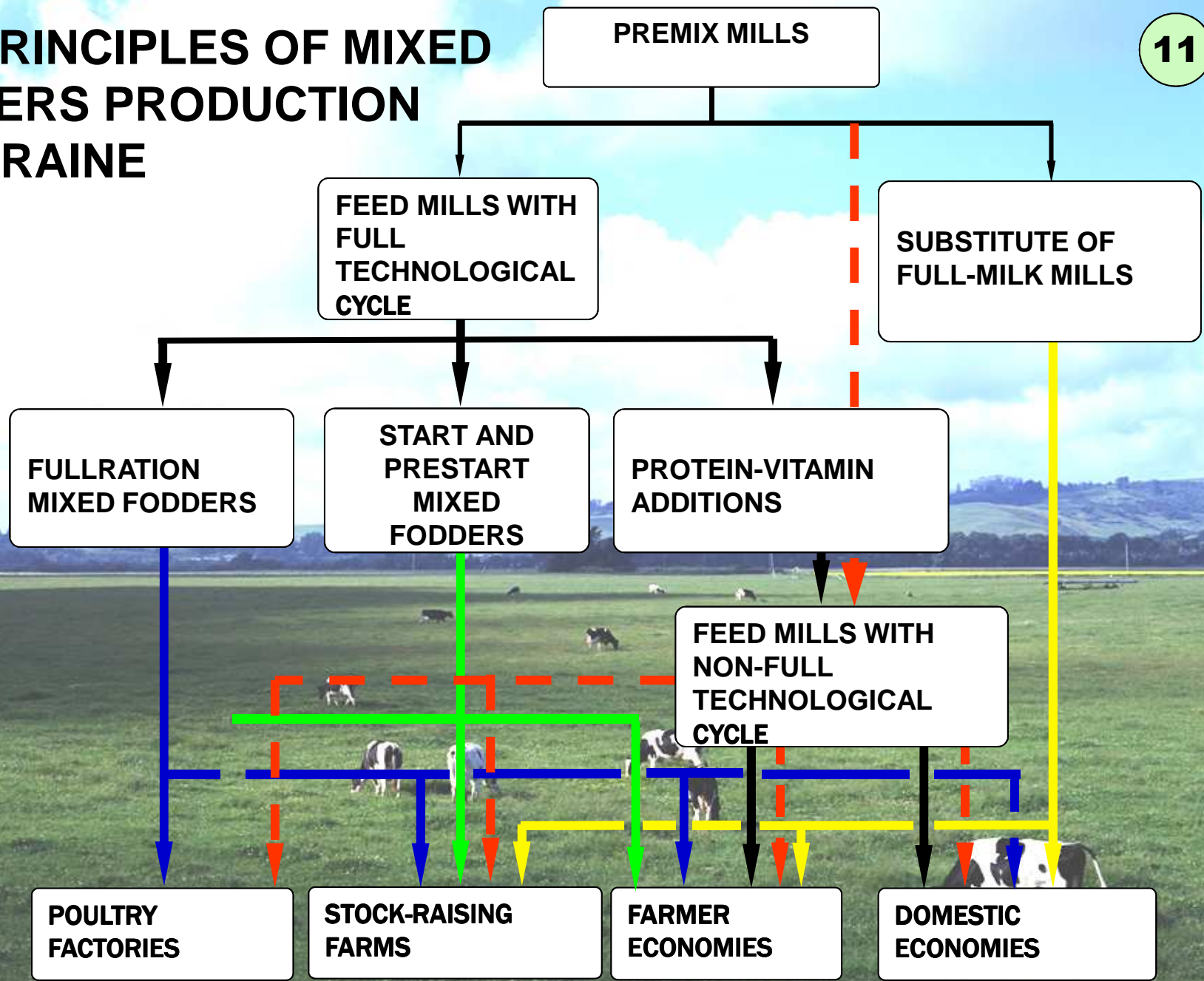
Research institute of the poultry farming  
in Borki city,  
Research institute of the pig breeding  
in Poltava city,  
Research institute of forages  
in Winnitsa city,  
Research institute of control  
of veterinary preparations and  
forage additives in Lvov city

Research

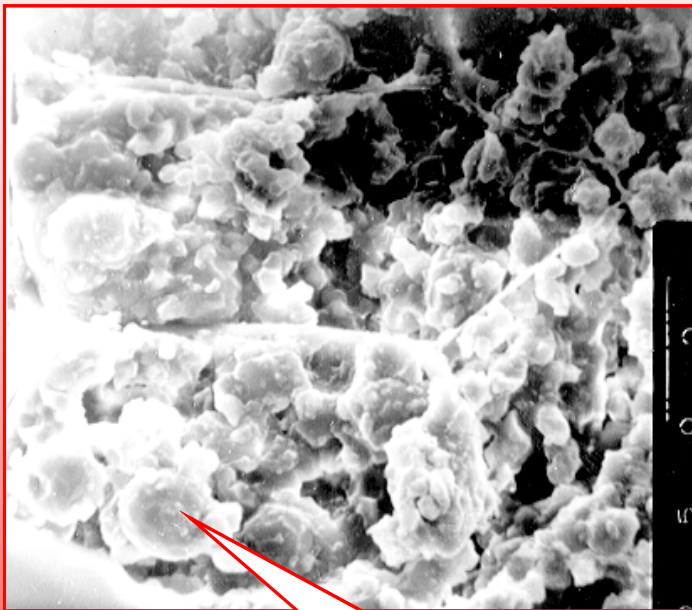
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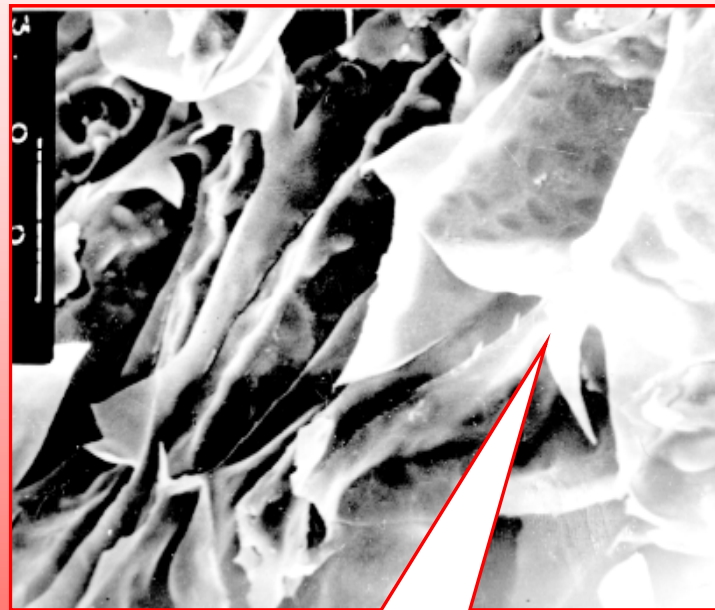
# THE PRINCIPLES OF MIXED FODDERS PRODUCTION IN UKRAINE



**To increase the efficiency of the use of grain  
we have developed  
the technology of treatment of grain with steam.**



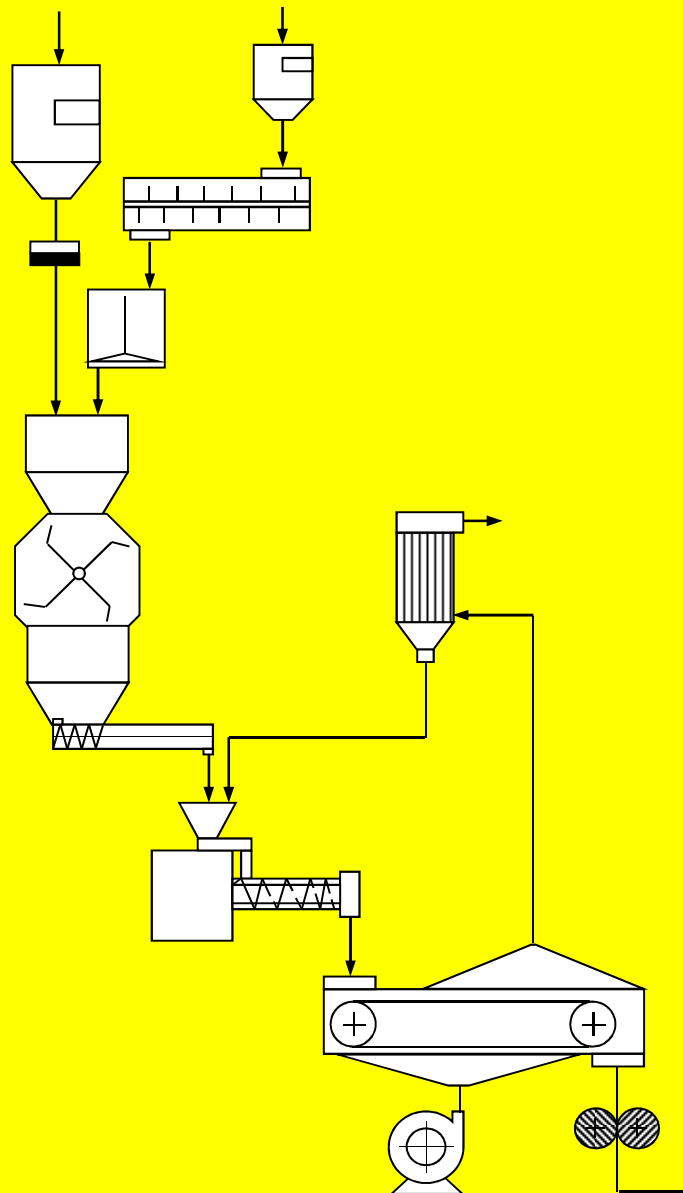
**Whole starch  
grains**



**Broken starch  
grains**

**We have developed the technologies of extruding of grain with the different components of high humidity.**

**The specific expenses of energy which was used on drying of these components before, go down as a result.**



FOR MIXED FODDER  
PRODUCTION

**Even the most modern technologies often show unstable job performances. Foremost it is connected with the variety of the properties of the raw material. Therefore it is very important to provide the modes of functioning of the technological processes in such a way as to provide high stability of quality of the finished mixed fodders.**



Buslenko N.P., 1973 :

$$\Delta R = R^o - R^*$$

$R^o$  – index of efficiency (for normal conditions of the system):

$$R^o = R(\alpha_1^o, \alpha_2^o \dots \alpha_n^o; \beta_1^o, \beta_2^o \dots \beta_m^o),$$

$R^*$  – index of efficiency (where the external and internal factors influence the system):

$$R^* = R(\alpha_1^*, \alpha_2^* \dots \alpha_n^*; \beta_1^*, \beta_2^* \dots \beta_m^*),$$

Panfilov V.A., 1980 :

$$St = 1 - \frac{H}{H_{max}},$$

$H$  – an entropy, which corresponds to this distributing of values of analyzed index quantity;

$H_{max}$  – a maximum possible entropy, which corresponds to normal distribution law.

Kafarov V.V. et.c., 1985 :

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$$D[X] = \sum_{i=1}^n p_i (X_i - m_x),$$

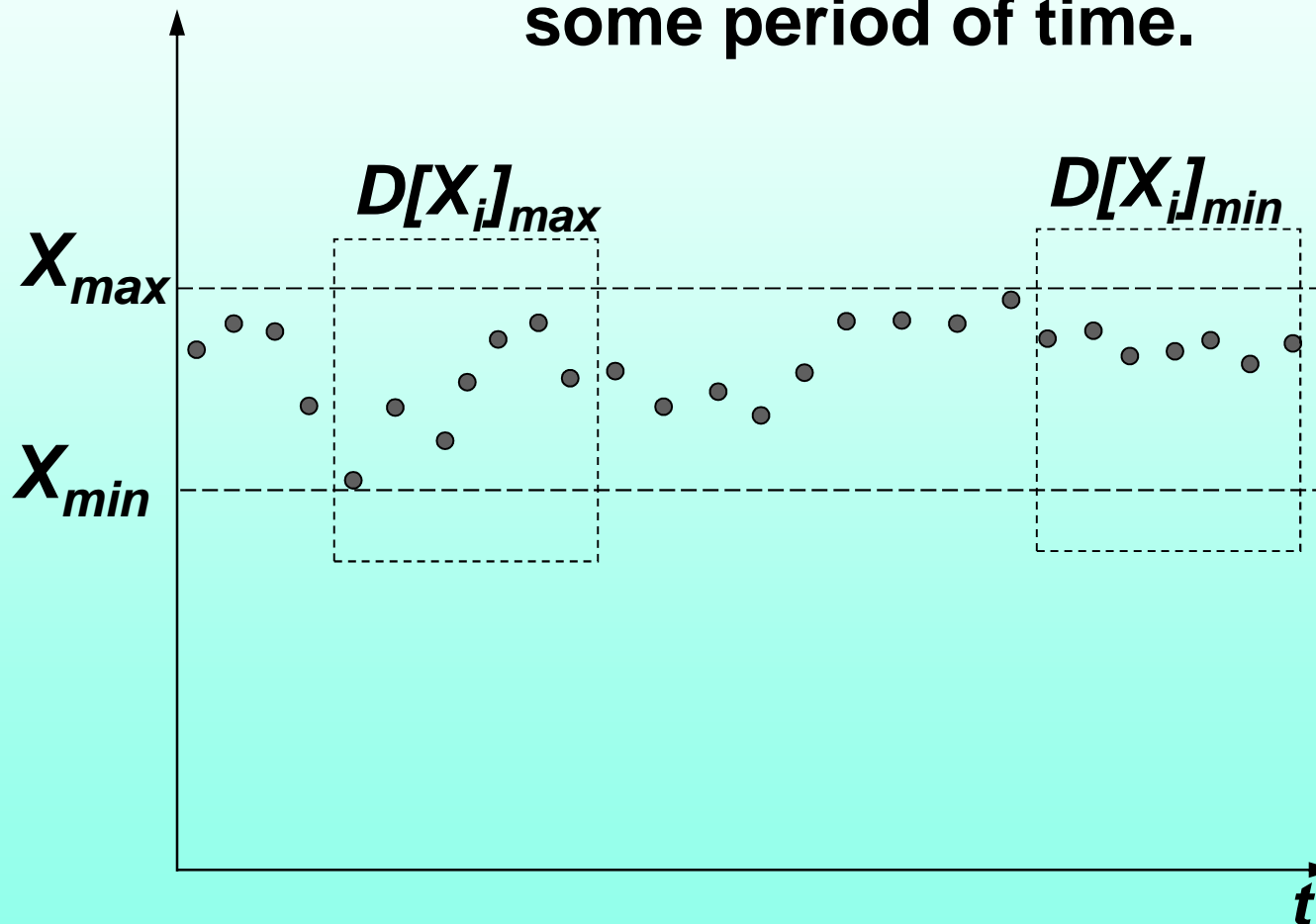
$m_x$  – mathematical expectation of the odd value  $X_i$ .

**Iegorov B.V., 2008 :**

$$St = \frac{D[X_i]_{min}}{D[X_i]_{max}},$$

**$D[X_i]$  – maximum and minimum dispersion of distributing of odd values of  $X_i$ , as a parameter of estimation of efficiency of technological system functioning.**

Thus, stability of functioning of the technological system in fact represents stability of distribution of probabilities of parameters of technological process or system during some period of time.



# THE NEW FEEDMILL IN RAZDELNAJA, UKRAINE

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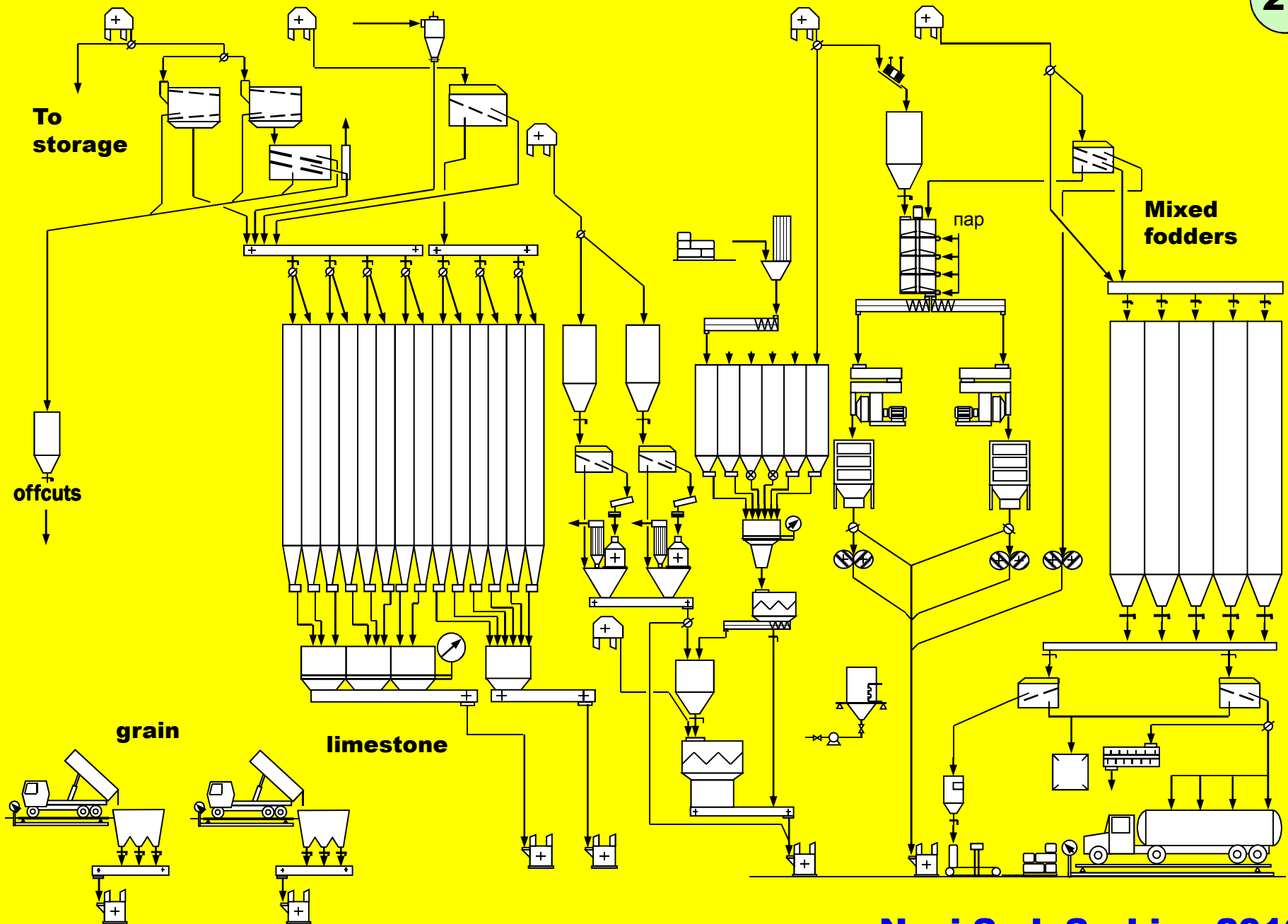


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# THE NEW MIXED FODDER FACTORY OF FOURTH-GENERATION

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**Odessa National Academy of Food Technologies:  
475 – doctor and candidate of sciences;  
109 – graduates students;  
78 – master's degrees;  
225 from 10000 students**

**We hope that combined efforts  
of the Ukrainian specialists, wide study  
of experience of our foreign  
colleagues will allow us  
to develop quicker...**

**Thank you for your attention!**



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