

# **Expected Changes of Farmers Innovation Activity in 2014-2020**

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# **1. Introduction**

The study aims to reveal the intentions of innovative farmers for the next period 2014-2020. In the study we research the relationship between the level of actual and potential innovation activities in several innovation directions and motivating factors of innovation implementation.

## 2. Theoretical Issues

### ➤ **Relationship between the concepts of real and potential innovation**

*Real innovation activity:* Purchase of a new product or service is already a fact.

*Potential innovation activity:* The intention of the farmer to own the new product.

*Definitions of innovation activity:*

Rogers and Shoemaker (1971); Schwartz (1992);  
Folax, Goldsmith and Braun (1998);  
Fishbein, (1967)

### **3. Methodology and data**

- Conducted *a survey* in 2013, which includes 333 farmers from 28 districts in the country;

#### ***Used Methods:***

- - Method of weighted averages;
- - Method of metric scaling;
- - Method of statistical groupings;
- - Descriptive analysis and others.

### **3. Methodology and data**

- The farmers' intentions have been analyzed in the following *innovation areas*:
  - Agricultural machinery, technique, equipment;
  - Production technologies;
  - Crop varieties;
  - Animal breeds;
  - Biological methods to fight diseases and pests;
  - Methods and medicines for animals' treatment;
  - Irrigation methods;
  - Information technologies.

# 3. Methodology and data

## Motivating factors of innovation activity:

### 1) *Production:*

- Higher yields;
- Higher productivity of the livestock;

### 2) *Economic (financial):*

- Higher profit;

### 3) *Social:*

- Save time;

### 4) *Environmental:*

- Less environmental pollution and nature protection

### **3. Methodology and data**

**The research examines the level of expected activity in the innovative farmers groups differentiated by the following indicators:**

- *Socio- demographic* - age, level of education, sex;
- *Sources of the revenues* - from mainly agricultural, activities related to farming or mainly of activities outside agriculture;
- *Legal status*- individuals, agricultural cooperatives, trade companies and others.



### 3. Methodology and data

- *Economic size*- Standard Volume Output;
- *Production specialization*- crop farms, livestock and mixed;
- *Type production system*- traditional or prevailing conventional, organic or predominant biological

### 3. Methodology and data

For the assessment of the single potential innovation activity is used the formula of the average weighted value. After the obtainment of the single potential innovation activity for each kind of innovation and farm, the size of the total potential activity is evaluated using the following formula:

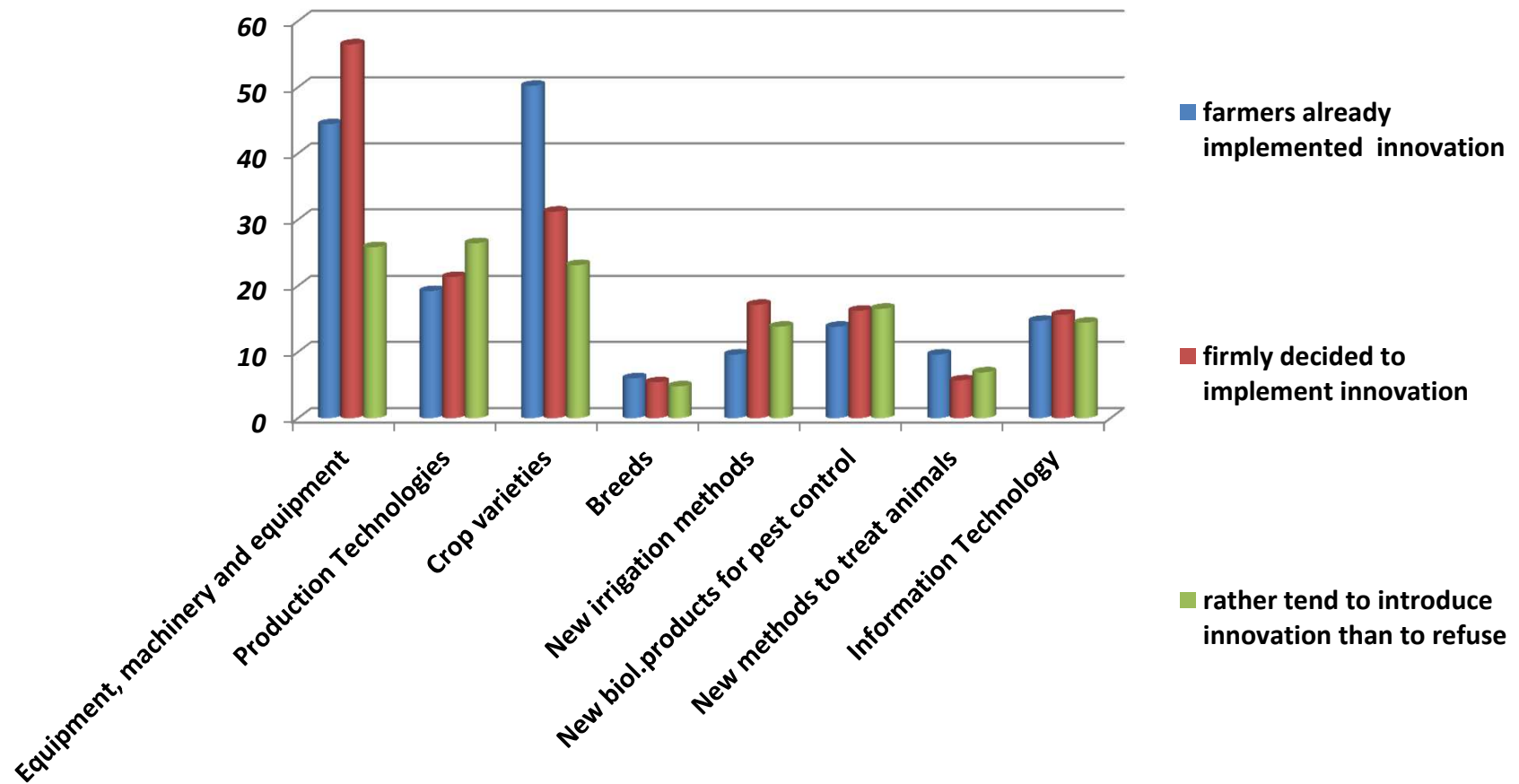
- $I_{PA}^k = (\sum_j i_{pa}^{jk})/n$  , where
- $I_{PA}^k$  - coefficient of total potential activity of **k**-th farmer;
- $i_{pa}^{jk}$  - coefficient of single potential innovation activity of **k**-th farmer compared to the **j**- th innovative area of agricultural production;
- **n** - number of innovative areas;
- **j, k** - indicators of the consecutive number of innovation areas and farmers.

# 3. Methodology and data

- As a result of obtained levels of total potential innovation activity agricultural producers are divided in the following three groups:
  - I) The first group includes farms having coefficient of total potential activity from 0 to 0,33. This is the group of farms with low level of innovation activity;
  - II) The second group includes farms with values of the coefficient of total potential innovation activity from 0,34 to 0,66. This group is characterized by medium degree of innovation activity;
  - III) The last, third group includes farms with coefficient of total potential innovation activity within 0,67 and 1. These are farms having high degree of innovation activity.

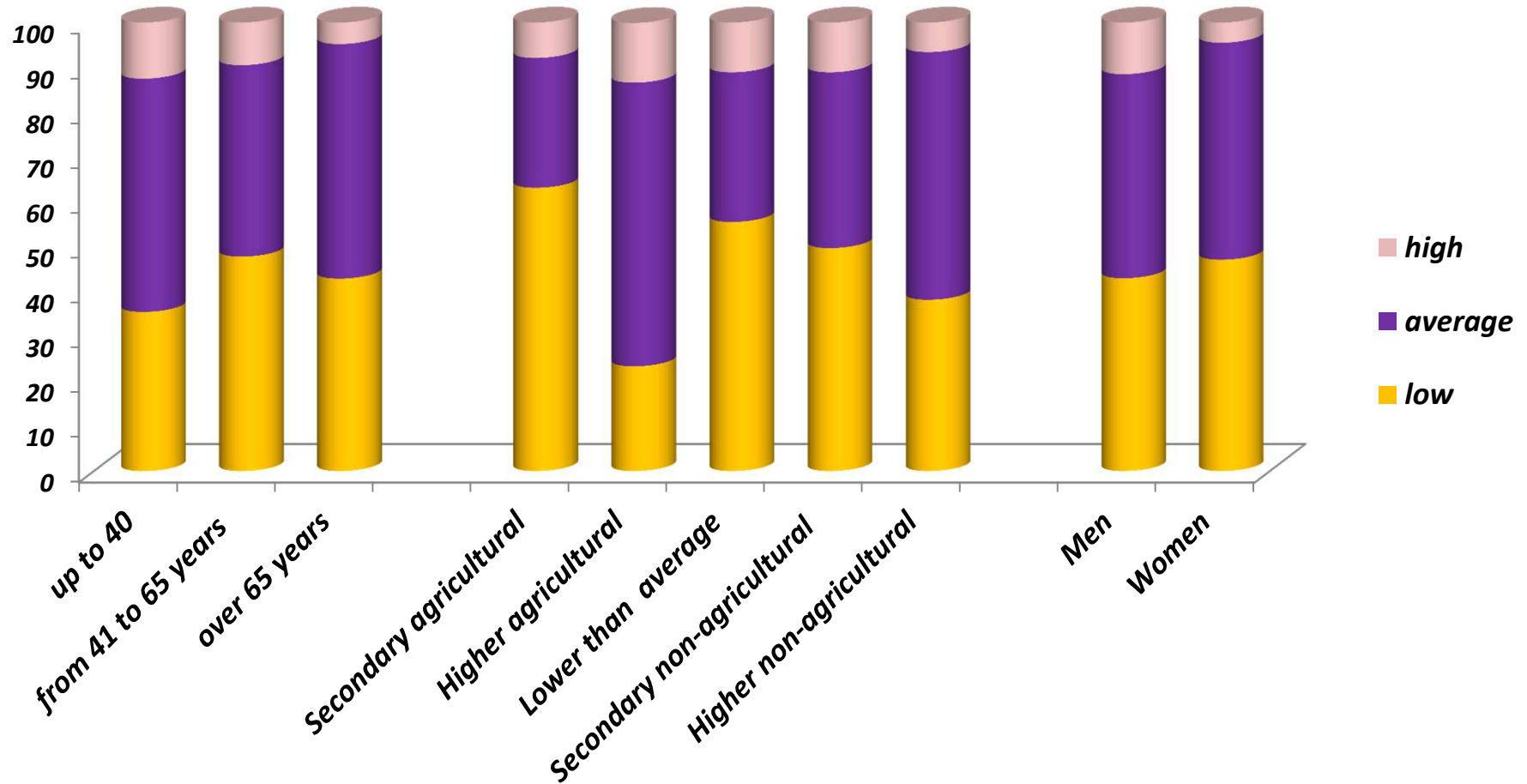
# 4. Survey Results

## Relation between real and potential innovation activity



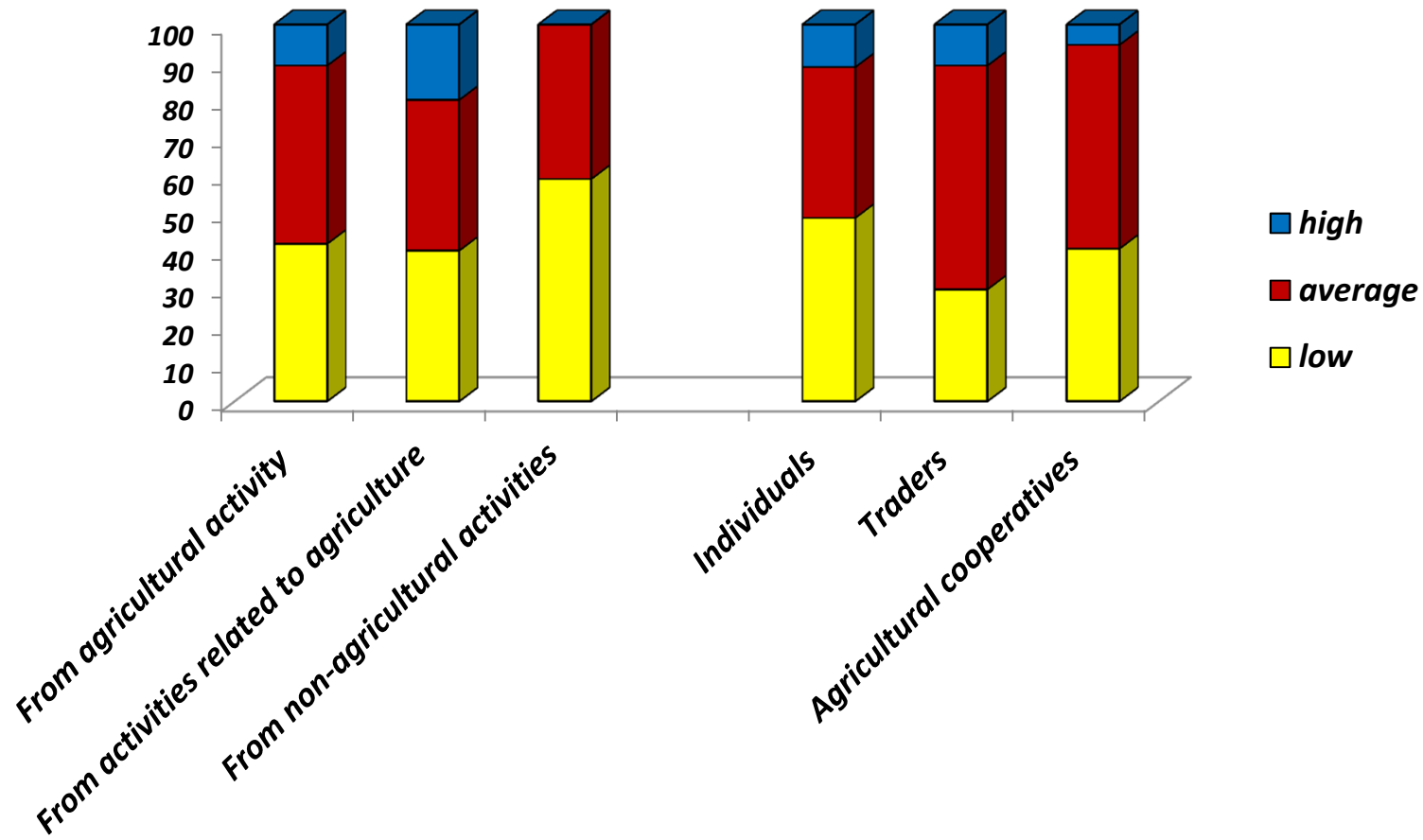
# 4. Survey Results

## Level of farmers' innovation activity according to their socio-demographic profile



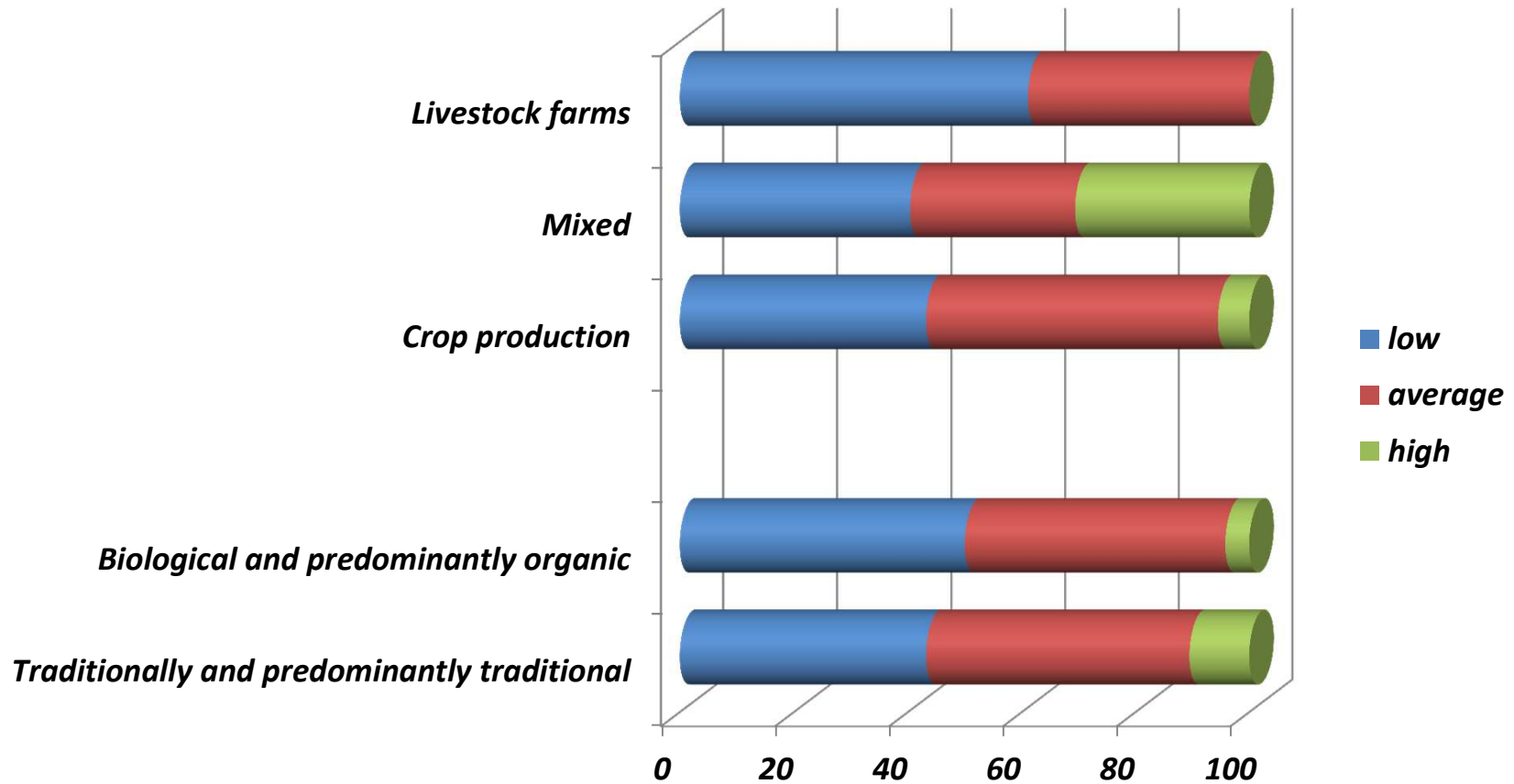
# 4. Survey Results

## Level of farmers' innovation activity according to the legal status and sources of income



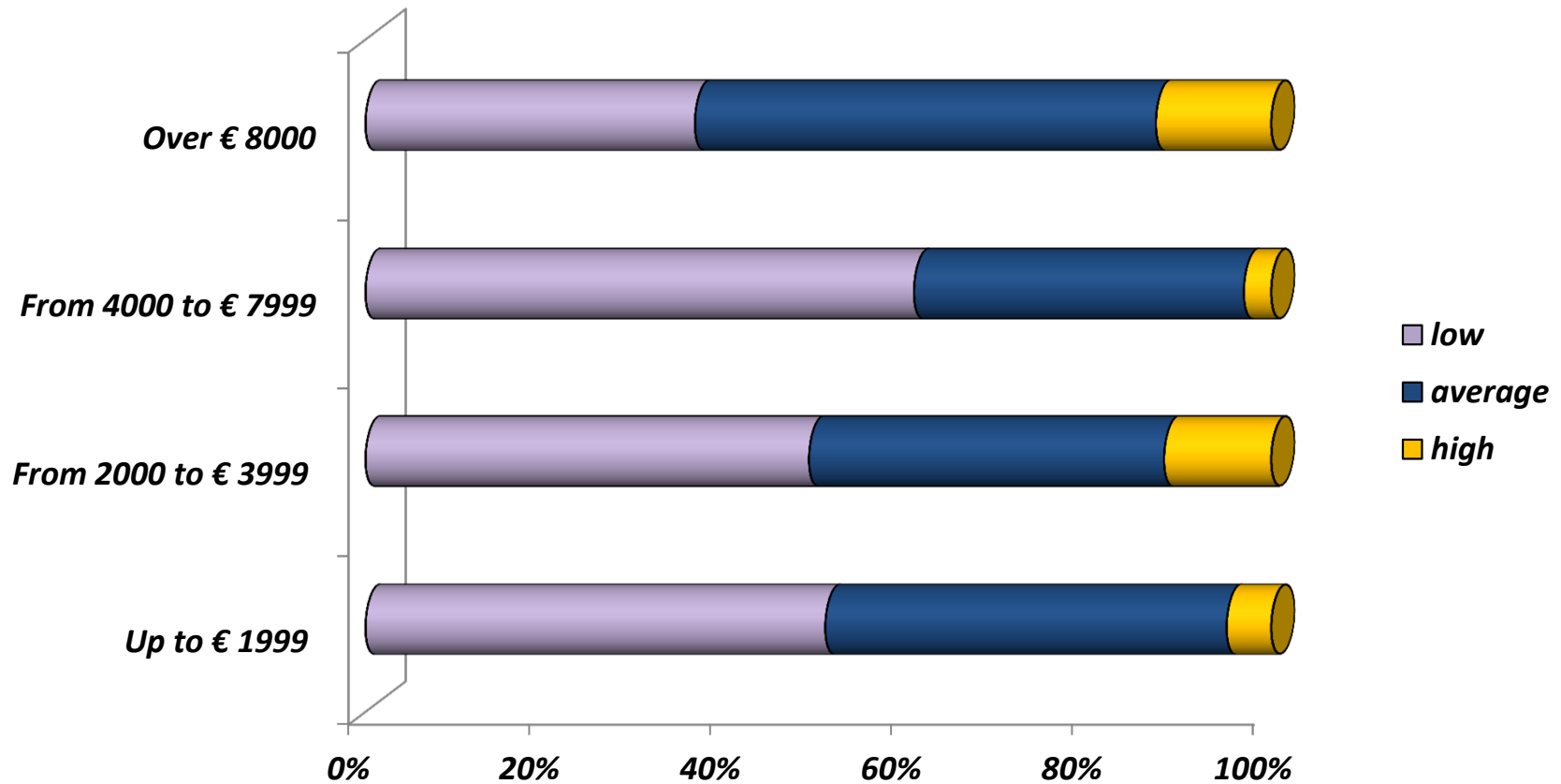
# 4. Survey Results

## Level of farmers' innovation activity according to production method and specialization



# 4. Survey Results

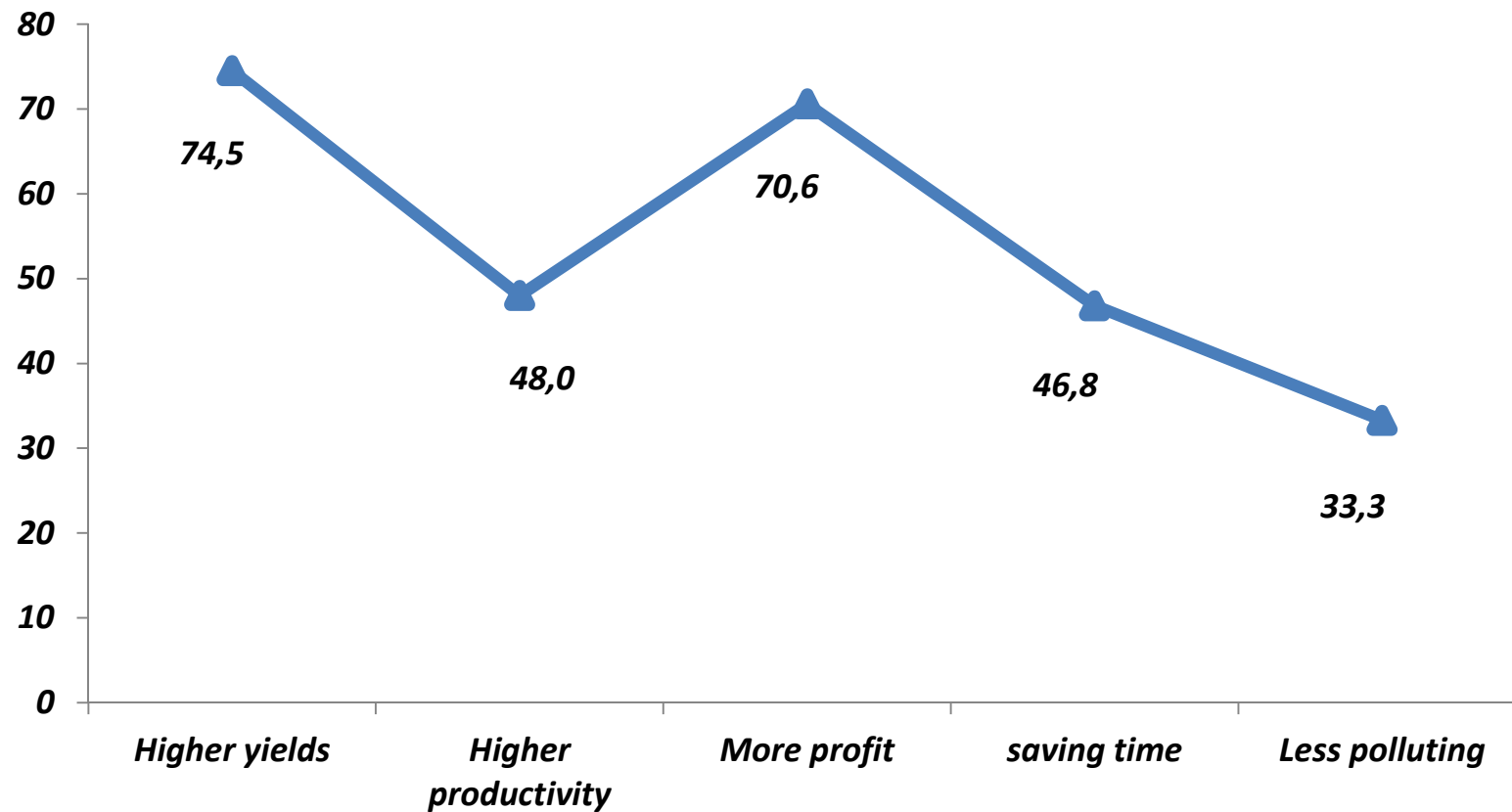
## Level of farmers' innovation activity according to economic size





## 4. Survey Results

Share of persons which have indicated above mentioned factors as motives for innovations (%)



## **5. Conclusions**

- In the new program period it is expected farmers to be more active in implementation of different kinds of innovations, in comparison to the past period;
- The affirmation above is valid particularly for the use of new machinery, equipment and the implementation of new technologies;
- Livestock farms are expected to keep their low innovative activity also in the period 2014-2020;

## 5. Conclusions

- The biggest activity is expected from young farmers having agricultural education and which farms are between 2000 and 4000 EUR and more 8000 EUR economic size;
- The farms with diversified profile manifest stronger interest to innovations;
- The production-economic factors related to the obtainment of increasing yields and profit have the most stimulating impact on the decision making for innovations implementation;
- The impact of the ecological factor is nearly symbolic.

## **5. Conclusion**

The received results give reason to expect that farmers search opportunities to increase their production effectiveness and have intentions for farms' modernization through the implementation of particular innovations.

**Thank you for your attention!**