

**Ya. HRYHORIV, O. STELMAKH**

Precarpathian State Agricultural Experiment Station  
of Institute of Agriculture of Carpathian Region of NAAS

## **EFFECT OF WEATHER CONDITIONS ON FORMATION OF RAPE PRODUCTIVITY IN PRECARPATHIANS**

Rape today is one of the main oilseeds from the cabbage family in many countries and deserves its rightful place in increasing the volume of seeds production and vegetable oil in Ukraine. Recently canola acreage is rapidly expanding both in the world and in Ukraine. In the global agriculture in 2011 rape occupied an area of 33,6 million hectares, in Europe – 8.8 million hectares. It is known that the main crops of this culture are in Canada – 7,4 million hectares, China – 7,3 million hectares, India – 6,5 million hectares, Australia – 2,1 million hectares, France – 1,5 million hectares, Germany – 1,3 million hectares and to 0,8 million hectares in Ukraine, Russia, Poland and the UK.

Despite the rapid expansion of acreage under rapeseed, its yield in Ukraine is somewhat lower (1,7 t/ha) than in Belgium (4,7 t/ha), Ireland (4,5 t/ha), the UK (3,9 t/ha), France (3,4 t/ha), Germany (2,9 t/ha), Austria (3,3 t/ha) and Czech Republic (2,8 t/ha).

Analytical analysis rapeseed yield showed that the last decade marked tendency to increase beyond those years have been extreme weather conditions and characterized by high temperatures and lack of rain during the growing season.

There are noted that the extreme conditions, composed during the autumn-winter-early spring period of some years, sometimes leading to the death of large areas of rape.

The value of winter rape plant response to the effect of meteorological factors (average temperature and rainfall) in the Precarpathians, which is set using regression analysis, had some differences.

As a result of conducted studies was established that in a Precarpathians, the weather conditions of 5 months of active vegetation had a strong correlation with the level of productivity culture. First of all, it's September, October, March and May, about that evidenced the level of correlation coefficients and coefficient of determination.

Although at present the production of winter rape yield is only 25–30 % of the potential and 35–40 % of the European-average, and high and sustainable yields can be achieved only when each culture will be placed in the most favorable region for it, that is when there are enough direct

coordination between the needs of plants in each phase of development and local climatic resources.