

Advanced technology for active hail suppression in the Republic of Moldova

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Abstract

Hail suppression activity based on the rocket technology of transportation and dissemination of a nucleating reagent into hail-producing clouds in the Republic of Moldova is presented. At the moment the agricultural area being under the hail protection is about 1.5 million hectares, i.e., 50% of the territory of the Republic of Moldova.

The basic elements of the hail protection technology in the Republic of Moldova up to now are a specialized antihail rocket system «Alazan-6» for cloud seeding with hail-watch radar signal returns from cloudy cells and a specialized automatic control system ACS-MRL. The system provides collection and processing of the radar-tracking data about clouds with hail-watch radar return signal and gives information about the type of falling precipitation. The system allows control of the cloudy atmosphere for checking the probability of hail formation over the whole territory of the Republic of Moldova as well as over a border-part territory of Romania and Ukraine (up to 100 km from the border) in a *non-stop* mode. The applied technology of hail protection provides high operating efficiency, $84 \% \leq E \leq 92 \%$.

Key words: hail suppression, rocket technology, agricultural area protection

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