

The pine was recognized as the best carbon absorbiator in the Urals

Scientists of the Ural Federal University have found that pine is better than other coniferous trees absorbs carbon dioxide from the atmosphere. Studies have shown that it accumulates 15-20% more carbon than spruce or fir.

The secret of pine is in a high lignin content (up to 50% of the dry mass of the barrel). This substance decomposes slowly, preserving the carbon for a long time. In addition, pine is better adapted to climate changes – with an increase in the temperature of its photosynthesis, it increases more efficiently than that of other conifers.

Scientists watched the growth of young trees for four years. It turned out that the pine is accumulating biomass faster: its shoots are harder than that of spruce and fir, 1.3-1.5 times. Especially actively, trees absorb  $\text{CO}_2$  at a young age, but retain carbon in wood for decades.

Even after the death of the tree, carbon remains “locked” if the wood is not burned. For example, when used in construction, it can persist for many years.

The study was conducted at the Department of Experimental Biology of the URFU. Scientists studied the three main types of Ural forests: pine, spruce and fir.