# Continental Tire finds alternative rubber source for future tire production

*Special to The Clinton Courier*

Most people view dandelions as a nuisance. But Continental Tire embraces the flowering weed as a key component to the future of tires. In conjunction with The Fraunhofer Institute for Molecular Biology and Applied Ecology, Julius Kuehn-Institute, and EKUSA, Continental Tire has produced and tested the first tires where the tread is made one hundred percent out of dandelion natural rubber as a polymer. Plans are in place to begin manufacturing consumer road tires made from dandelion-derived rubber in five to ten years.

Between ten and thirty percent of a car tire includes natural rubber, while truck tires can include proportionally higher amounts. Today, natural rubber is still obtained almost exclusively from the rubber tree (Hevea brasiliensis), which can only be cultivated in what is referred to as the "rubber belt" around the equator, a fraction of the world's land surface. Global demand for natural rubber is set to rise in the next few years and, at the same time, the changing world makes it challenging to meet this demand.

The growth cycle of a rubber tree is roughly seven years before it can start producing latex that can be used in rubber production. The rubber made from this latex is key, as it has unique performance attributes that can't be replicated in synthetic rubber, making natural rubber a must for tire production. Therefore, market demand is outpacing production capacities, a situation that, in the past, has led to unpredictable price volatility.


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Enter the dandelion. The team at Continental Tire looked to the dandelion as an alternative source of natural rubber. Continental isn't using just any old dandelion, but a specific Russian species, the only dandelion that can be used as an alternative source for natural rubber production. The roots of this dandelion species contain the natural rubber latex (the source for natural rubber used in tires), meaning supply will be steadier and easier to control, leading to greater price stability. This crop is also much less sensitive to weather than the rubber tree.

"In agricultural terms, dandelions are an undemanding plant, growing in moderate climates, even in the northern hemisphere, and can be cultivated on land not suitable for food production," according to Dr. Carla Recker, who heads the Continental team involved in the development of this super material. "This means that rubber production is conceivable near our tire factories, for instance, and the significantly shorter transport routes would also reduce $CO_2$ emissions."

Transporting rubber from South America or West Africa to North America and Europe for manufacturing is a long and costly journey that also contributes significantly to the output of $CO_2$. If this part of the process can be consolidated

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