Bridgestone tests Russian dandelion as raw material for tire rubber

Taraxacum officinale, or dandelion, the herb used for tea and salads, is an excellent liver tonic and diuretic. But there's another variety of dandelion known as Russian dandelion, aka Taraxacum kok-saghyz, which Bridgestone Americas is researching as raw material to make high-quality rubber for car tires. After preliminary tests, the company said it will continue to assess the material at its technical laboratories in Akron and Tokyo in coming months, and will follow that with larger-scale testing in 2014. The experiment is part of the Russian dandelion project, headed by the Program for Excellence in Natural Rubber Alternatives at Ohio State University. Bridgestone's role in the project is to test the performance of the material. Russian dandelion has qualities very similar to those of natural rubber harvested from the Hevea tree, which currently is the main source of natural rubber used in tires. Taraxacum kok-saghyz has been known to be a source of rubber since the 1930s, when the Soviet Union discovered it in Kazakhstan in 1932. At the time, it was trying to find a domestic source of rubber, as supplies of Hevea brasiliensis in Southeast Asia were threatened. However, when the latter became affordable again after the Second World War, Russian dandelion programs were discontinued. One of the main two reasons the Russian dandelion has attracted interest again echoes the motivations of the Soviets before WWII. For one, the industry needs to find new materials to meet increasing demand. This should not be too difficult, since there are around 1,200 plant types from which natural rubber could be harvested, although not all of them meet industrial requirements. Secondly, the industry wants to make this quest for new materials as sustainable as possible, in order to boost the car industry's green credentials as well as securing a stable, renewable supply of raw material. Parallel to the dandelion research, Bridgestone is also researching another source of natural rubber called Guayule, which is native to the southwest of the U.S. and northern Mexico. On top of that, the company has developed a non-pneumatic concept tire which replaces air with spokes that stretch the inner surfaces of the tires to support the weight of the vehicle. This type of tire requires less maintenance and drivers will finally be able to say au revoir to punctures.