



DREADED DANDELIONS NOW IN DEMAND

Dandelions with their long deep tap roots are one of the most tenacious weeds of sports turf. Dandelion's low profile means the growing points 'duck under' the mower's blades making herbicide sprays essential. However, every 'dandelion has its day' with a close relative of English dandelion now a strong candidate to become a source of European-grown natural rubber for tyres.

With natural rubber (tapped from rubber trees [Hevea brasiliensis] on huge plantations in West Africa and South East Asia) now in short supply, international consortia are considering alternative sources, including the milky glutinous sap (latex) in the roots of a 'Russian' dandelion (*Taraxacum kok-saghz*). First prototype tyres made from European sourced rubber were rolled out in July 2012 by 'Apollo Vredstein' an Indian Dutch Company.

T. kok-saghz is a 12-inch tall yellow-flowered dandelion native to Uzbekistan and Kazakhstan. It will grow in

a range of soils and climatic conditions but prefers the cool conditions in its native homeland and areas of northern Europe with a similar climate.

In addition, to its tolerance of cool climates *T. kok-saghz* can be farmed as a short term annual crop according to need. The tropical rubber tree requires at least 10 years of growth before being tapped for latex. Furthermore the dandelion's roots are rich in inulin, a polysaccharide of fructose sugar units. Inulin is peculiar to the dandelions (including English dandelion) and other members of the plant family Asteraceae (Compositae) such as the Dahlia, and is under investigation for use as biofuel.

So where does the English dandelion (*Taraxacum officinalis*), originally called 'Dente-de-lion' in Norman French ('lion's teeth' after its jagged leaves) stand in all this development? Apparently nowhere is the answer. English dandelion contains the 'same' glutinous

sap in its roots but there is insufficient to make extraction commercially worthwhile.

Not to worry because English dandelion has drawn its teeth in different directions. Japanese scientists complain how English dandelion, having got into Japan, is spreading like fury and hybridising with another close relative, the native Japanese dandelion *Taraxacum japonicum* called 'Kansai tampopo'. The more vigorous English dandelion is overwhelming its Japanese 'cousin' and the hybrid plants are infertile. However, perhaps Japan is being paid back for giving us 'Japanese Knotweed' currently spreading across the UK environment including golf courses.

Come spring when greenkeepers deliver the first dose of herbicide to dandelions across the green they should spare a thought for the *Taraxacum* genus in general, which could soon be supplying the rubber to make the tyres on their wheeled sprayers.

Dr Terry Mabbett



MG SCOOPS GCSAA AWARD

In recognition of their commitment to environmental stewardship, Golf Park Nuolen in Wangen, Switzerland, and its golf course superintendent, Steven Tierney, MG, an international superintendent member of the Golf Course Superintendents Association of America (GCSAA) have been named the overall winners of the 2012 GCSAA/Golf Digest Environmental Leaders in Golf Awards (ELGA).

Steven, an International BIGGA member, is superintendent at Golfpark Nuolen. He masterminded a water-farming project that featured seven miles of drains to divert run-off into irrigation ponds. The facility no longer needs water from nearby Lake Zurich, and it has saved the course \$20,000 a year in electricity. The new maintenance facility, due to open in 2015, will be almost completely self-efficient from solar panels and deep-drilled pilings to utilize natural heat. The local wildlife benefits from a tunnel built underneath the main road leading to the golf course. Constructed by Tierney and his crew, the tunnel allows amphibians to safely take advantage of the course's natural areas.

"This year's winners are to be commended for their commitment to environmental stewardship on the golf course," GCSAA President Sandy G. Queen, CGCS, said. "It is evidenced by our overall winner that the idea that golf courses can be compatible with the environment, and in many cases enhance it, is seen around the world."