

VicSport Update

Drought Resistant Turf

Robert Sundblom is Secretary of the Turf Grass Association of Australia Victoria Branch and has provided some insight into the processes and issues that arise when changing a ground from cool season to warm season grasses. Warm grasses generally use approx 70% less water than cool season grass; as such the decision to convert grounds is logical, especially considering the capital infrastructure and difficulty associated with obtaining more water. Some councils now have programs in place to convert their sporting grounds from cool season grasses to the more drought resistant warm season grasses.

The majority of sporting fields are covered with predominately cool season grasses – mainly Poa annua, Fescue and Rye varieties. These types of grasses tend to have finer blades, which retain their deep green colour throughout the year (provided it is maintained and watered). In summer it requires watering 2-3 times per week and has moderate to low tolerance to drought. These grasses may need to be watered daily in temperatures above 35 degrees. Given the high reliance on water, these grasses have been the first to die off, as water restrictions have been implemented. In order to assist with the repairs to these grounds as winter approaches they may benefit from aerating and top dressing to even out the surface.

Warm season grasses are grass known as Kikuyu grass and couch.- the common and hybrids being the most popular to date, of which there are a number of different varieties, the most popular being Santa Ana couch which is widely used on golf courses, sport fields etc. The warm season use approx 70% less water than the traditional cool season grass. They have excellent drought tolerance and have very good wear capability. They handle the heat well but have poor shade tolerance. Consequently in the winter months, couch grasses go dormant and can brown off due to the lack of sunlight and temperature. The warm season grasses can go a pale colour.

There are a number of ways that a ground can be converted from winter to summer grass. The most costly is a full ground renovation. This generally involves starting with no grass cover. In this situation it would be common to install drainage, irrigation and top dress with the appropriate soil. The sports field would then be seed or sprigged. This is the most expensive means of introduction and requires a ground to be out of use for approximately 12 months.

Another method of introducing summer grass into a ground is via line planting (sprigging). In this process the existing winter grass is left in place and summer grass sprigs are inserted into the ground with a line-planting machine. As a rough estimate the cost of this process can be approximately \$10,000 per hectare. The Sprigging must be completed in spring - summer and must be well watered. It can take 3 months for the sprigs to establish a good hold. The warmer season grass doesn't like too much competition; consequently the sideways spread will be slow. An example of line seeding can be found at the following website <http://www.ancoturf.com.au/Photos.htm>

Another method is to spread the vegetation (sprigs) of an existing summer grass over the winter grass. Transport sprigs to the selected ground, the sprigs should be scattered over the ground surface and then a 5mm top dressing of sand applied. This is the most cost effective method. Again the process must be completed in spring and the summer grass watered in enough to take hold. Within 3 months the root system of the summer grass should become established.

The major issue that arises is the requirement to have access to water in spring to assist in the new grass to become established. Councils must either rely on healthy spring rain, no water restrictions or having access to alternative water sources such as recycled water. The other issue to address is the need to limit ground access for approx 3 months whilst the summer grasses establish.

The over seeding of Couch or Kikuyu into existing sports surfaces in Oct/Jan will get a warm season program started but is very slow. Most Couch and Kikuyu varieties will survive with no irrigation installed. These fields will have low tolerance to wear but should survive with fertilising at the right time in conjunction with a good rainfall.

The approximate costs per Hectare:

- Line planting + Topdressing \$20,000 ---\$30,000
- Sprigging + Topdressing \$8,000---\$12,000.
- Plus nutrient correction and irrigation for both methods