



Jurg Magg, from Fischer, showing the Pflücher under-vine weeder, showing the nylon flails that remove the weeds. The unit looks to be the best solution yet for the mechanical removal of under-vine weeds without damaging vines.

FISCHER TWISTER TRAILING UNDER-VINE SLASHER-WEEDER

For the past 30 years the industry has sought to develop a mechanical under-vine weeding system that eliminates competitive weeds without damaging vines, especially young vines.

The Pflücher Australia weeder and mower unit looks to be the best solution yet, claiming to eliminate competitive weeds while bypassing vines, leaving them unharmed, or at least minimising any damage.

The Twister machine has two weed brushes with detour 'fingers' that rotate to clear up weeds while dodging around obstacles, including vines.

The main mower cuts the inter-row grass and free trailing mulchers chop up the weeds, giving growers a weed-free under-vine area.

One question you need to use this machine regularly to maintain the weed-



A pilot-scale Pellicent Dynamosiex filtration system – possibly the best breakthrough in the filtration of juice bottles and less in many years.

free zone, but according to Jurg Magg, from Fischer Australia, you can travel at quite high clearing speeds and still remove most of the weeds successfully. He says the mower can handle wide prunings left in the mid-row as well. It is available in different configurations to suit various vineyard terrain and layouts.

PELLICENT EXTRACT'R CRUSHER

Pellicent, which developed one of the first computer-aided photographic fruit sorting machines, has now re-invented the basic crusher.

Compact and uncomplicated, the Extract'R crusher has a spinning wheel that throws berries against the sides of the crusher, breaking the berries without crushing seeds or crushing skins.

The rotation speed of the wheel can be adjusted to change the crushing intensity and Pellicent believes the result



Paul McNicholas, from 3M, with the 3M High Flow Sanitary Filter Housing. The machine is open to show the single large filter cartridge.

is better extraction of juices and phenolic compounds, with less bitterness and less stem probability flavors.

It can be fed with destemmed fruit or whole bunches and can be adapted to fit different desecuring systems. The technical specifications claim a crushing rate of up to 25 tonnes per hour.

SCHAFFENBERGER EUROSELECT DESTEMMER

While there was a revolutionary new crusher from Pellicent, there was also a new destemmer from the Russian company Schaffenberg. This machine offers a new solution for the destemming process.

The basic principle is that whole fruit is moved along an inclined perforated belt with gentle impact from destemming fingers that are mounted above the belt. As the fruit is impacted by the fingers, the berries fall off the bunch and through the belt into a catching bin.

Stalks, leaves and material other than grapes (MOG) simply travel along the belt and are dumped into a collection bin. Speed and impact can be varied to suit the fruit conditions. The machine is called a Euroselect Destemmer and there are various models available with capacities of up to five tonnes per hour.

The name 3M, which conjures up images of 3M tape in all its forms, appears to be the new name for Cape Pacific, which was once AMP, 'I'll admit that that language American sounding appeals to Australia many years ago, but it is a story for another day.

3M has introduced a high flow-rate coarse filtration system that it claims is ideal for feeding export tanks and bulk containers. The machine looks like something you



Fischer de Bruin, representing Dönergic, shows a wine bottle with the new Glasstop closure.

might like to see when it launches into the night sky. The sleek, space-age exterior hides some neat state-of-the-art technology that makes the 3M High Flow filter very compact – up to 50 per cent smaller than equivalent competitors, says 3M.

The specifications state it will filter up to 30,000 litres of wine per hour at up to 1300kpa pressure with viscosity of 1 micron. The capital cost is just over \$1,000 and it is recommended for pre-filtration on bottling lines and as an alternative to crossflow filtration.

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While it looks impressive and sounds as if it might be a good solution, it would be prudent to test this machine thoroughly and do a cost-benefit analysis on a crossflow filter, which has been the popular option for this type of filtration over recent years.

PAHIAN DYNAMOS ROTARY CROSSFLOW FILTER

I wrote about this technology in the Journal earlier this year, in Australia & New Zealand Agriweek & WineMaker, after the 2008 SIMF event in Italy and it seems to have been some time coming to Australia.

The machine in the photo is only a small trial version – but to be frank, at \$40k, the filter is up to 80 per cent smaller than at \$400k.

The genius of this machine is that the filter medium is built in the form of hollow metal discs, which rotate at high speed through the liquid to be filtered and the rate of rotation provides the fluid speed that we need viscosity observe in a normal crossflow filter.

Because the discs can cut through the semi-solid medium so easily and it is under pressure, the filtrate moves easily through the discs which are cleaned as they spin – three pressure, even though somewhat expensive.

By the way, this is the way of the future



The Justas Mastermind automated cartridge filtration system incorporates an automatic back flush and can be used for filtration of still and sparkling wines.

and potentially the best breakthrough in the filtration of juice bottles and less in many years.

JULIAS MASTERMIND FILTRATION SYSTEM

This automated cartridge filtration system incorporates an automatic back flush and can be used for filtration of still and sparkling wines.

The fully automated system has a built-in back flush and a control system that allows operators to set the flow rate and volume and sets away. It's not sure if I'd be comfortable with this approach, but it does sound great and I would be interested to see it in action.

There are five different sized units and all use 20-inch or 24-inch, the smallest has eight cartridges for a maximum flow rate of 200L/hr, while the largest has 30 cartridges and is capable of flow rates up to 7000L/hr.

The mid-range MPF 12, with 12 cartridges, can handle up to 3000L/hr and costs around \$30,000.

Advised as ideal for premium wines "where only a polishing filtration is required", the Mastermind filtration system was only a small part of total capacity and with wine under 180cpl, operators can get straight to 4-5 micron level filtration.

ONOLOGIS GLASSTOP

This new glass stopper makes grand claims to be "the stopper of the future" and is certainly a rethink of at least some aspects of the wine closure.

Set in development, Onologis aims to launch the Glasstop in mid-2014. It will be the culmination of years of research and development by at least eight companies, and involves around the world, including the Australian Wine Research Institute,



The Taransauk Caperage oak egg, which the company has named Owen II and has a capacity of around 2000 litres, which is listed as a 'technical partner' in the project.

The Glasstop will come in three versions – the basic, white and clear. All feature a glass top and can, the latter surrounded by a polymer seal that forms a secure closure in the bottle neck. A decorative 'cap' inserted in the top can be customised with branding.

The basic closure has a recess under the removable cap which can hold a fitted pamphlet with information about the wine and producer or other marketing material.

The clear incorporates all the above plus a device that the manufacturer claims allows a controlled rate of oxygen transmission for premium wines designed with ageing potential.

Onologis also claims its machinery can be incorporated into, and keep pace with, existing bottling lines.

The Glasstop does look classy and it offers new marketing opportunities, but whether the substance of its product is equal to its style can only be determined after release, when we can assess the wines on which it has been used and its ease of use. Its price point will also be a significant factor in its potential appeal to the wine industry.

TARANSOUK OVEN II

On a closing note, I have to mention the latest in wine fermentation vessels – the magnificent crafted Taransauk Oven II, a 2000-litre winemaking tub made by

Wine Tech 2013 provided the usual impressive array of equipment for the visit and the winery and while they may have made some exciting things, this small sample is certainly worth investigating as you consider making your vineyard or winery more efficient and easier to operate in the future.

See you in Adelaide in 2014!



Peter Bambetta (left), from Yalumba Wines, with Frank O'Neil and Louise Fraser, from Pellicent Australia, admiring the new Pellicent Extract'R crusher, which features a spinning wheel that throws berries against the sides of the crusher, breaking the berries without damaging seeds or crushing skins.