March 2018

the spawn run

Journal of the South African Mushroom Farmers Association

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FROM THE EDITOR

Well, the first quarter of 2018 certainly hasn't been dull. Of course I am referring specifically to South African politics, as if mushrooms farmers don't already have enough to keep them up at night. Like it or not the vested interested in what is happening in government has created a bit of a news addiction and with it comes a degree of hope, but also a fair portion of anxiety.

But it is not just government that is keeping South Africa in the news. The local Listeriosis outbreak, the largest in worldwide history, is stamping its authority on the food industry and could easily have an effect on the mushroom industry. For this reason SAMFA hosted a lecture at Highveld Mushrooms presentedby Professor Lise Korsten from the University of Pretoria. The aim of the presentation was to give attendees a bit of insight into the organism in order to facilitate a proactive approach to potential hazards. Whether the true source of the outbreak has been discovered or not remains to be seen, but there are lessons to be learnt and warnings to be heeded. Please make sure you read the article in this issue which covers many of the important aspects of Listeria.

Another significant event, which does have a direct effect on the mushroom industry, is the fact Denny Mushrooms has officially withdrawn as a member of SAMFA. Being the largest mushroom producer in South Africa, this has far reaching implications for SAMFA and what it offers the industry. Mushroom growing is unique and relatively small when compared to other agricultural sectors, it is therefore sad that so much progress that has been made will be slowed down by a lack of unity in the industry. Nonetheless, I am sure the remaining members, and hopefully some new ones will strive to continue developing and nurturing our piece of agriculture.

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the spawn run

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SAMFA

In Memory of Professor Albert Eicker

Martmari van Greuning

Sadly Professor Albert Eicker passed away on 6 January 2018 at the age of 82.

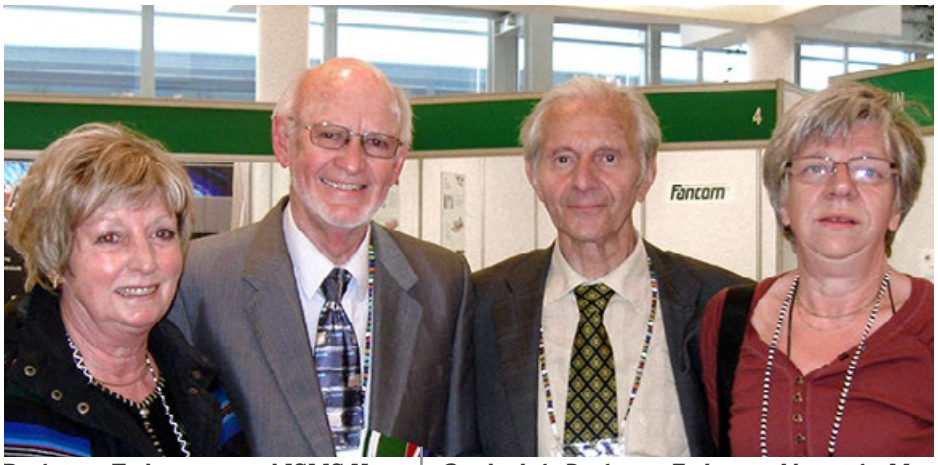
After 31 years professor Eicker retired from the University of Pretoria in 1999 as Head of Department of Botany. During these years he developed a keen interest in the mushroom industry. His role in research was significant, with many post graduate students who worked on mushroom related subjects under his guidance. He presented and published numerous papers on various aspects relating to commercial mushroom production, including compost, chemicals, pathogens and weed moulds. He arranged short courses in mushroom growing and many South African mushroom farmers benefited from his vast knowledge of mushrooms.

He was a founder member of the South African Mushroom Farmers Association (SAMFA) and in 1996 he was awarded honorary lifetime membership of the association. As an active member of SAMFA, professor Eicker was the editor of the 'Spawn Run', the newsletter for the local industry, for seven years and also represented SAMFA on the Council of the International Society for Mushroom Science (ISMS).

In 2008 he was awarded honorary lifetime membership of the ISMS for his enormous contribution to further the cultivation of edible fungi.

After his retirement he ventured into spawn making and set up a business in the production of speciality mushroom spawn for the local market.

Through his many years' research on various aspects of mushrooms and active involvement in the South African mushroom industry, professor Eicker left behind a legacy. He will be remembered for the significant role played, not only in the South African mushroom industry, but also internationally.



Professor Eicker received ISMS Honorary Membership at the ISMS conference in Cape Town, May 2008.

On the left: Professor Eicker and his wife, Marina, and on the right Professor Poppe from Belgium and his wife, Jacqualene.

Topterra Holland *changing to* Legro Mushroom Casing Solutions

As you probably know, Topterra is part of the Legro Group, a family business in growing media now headed by the fourth generation. While Topterra focuses only on the production and sale of mushroom casing soil for mushroom cultivation throughout the world, Legro produces potting composts and substrates for arboriculture, soft fruit growers and growers of young plants.

At the Legro Group, we are enthusiastically and ambitiously anticipating the future. Our goal in the coming years is to continue our growth with you, our customer, at our side. This goal requires all of us in the group to start operating as a single company, and this also means having a strong brand linked to an unmistakable image that's recognised both nationally and internationally. This is why Topterra as a company name will change to Legro Mushroom Casing Solutions while retaining Topterra as the name for its products.

What will this change mean for you?

Even under our new name, we will still be the same personally involved company: one that looks forward to continuing a long, friendly and productive relationship. Operating as a single group will make it easier to share our expertise about raw materials and to apply this knowledge to improve our products. The integration will also improve our position as a buyer of raw materials, allow us to operate more efficiently, provide us with synergy advantages, and optimise the service we provide our market.

About Legro

Legro is one of the largest substrate suppliers in Europe. The company processes and mixes raw materials to obtain optimum substrates, customised to meet the specific needs of, in particular, tree growers, sowing and cutting companies and soft fruit growers. Legro distinguishes itself in terms of quality by managing the entire production process itself. It has its own transport company and it owns and manages peat fields with a total area of around 3000 ha in Estonia and Latvia. It has three production locations in the Netherlands, one in Germany, one in Belgium, one in Latvia and one in India. Legro forms part of the Legro Group, a family business specialising in growing media that is now being managed by the fourth generation. The organisation also includes Legro Transport, Topterra and Kalloveen.

For more information about us, please visit www.legro.nl

For more information, please contact Leon Litjens – Managing Director, Legro MCS (+31 (0)651147870) or Ted Buis – Commercial Director, Legro Group (+31 (0)630060060).

Legro facts and figures

"Produces and sells substrates for horticulture and mushroom casing."

220 Employees

1924 Foundation year

9 Total production location worldwide

Fourth family generation

7 Sales offices

Home based

in 9 countries worldwide

your blend for life

Topterra Holland is a member of the Legro Group, a family business in growing media now headed by the fourth generation. Our goal in the coming years is to continue producing the best possible product and services for the mushroom and horticultural industries. This goal requires a different organisation than we had in the past. A strong company structure linked to a clear brand, recognised both nationally and internationally. This is why Topterra Holland as a company name has changed into Legro Mushroom Casing Solutions. Proudly we will retain Topterra as our mushroom casing product name.

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Sjef Swinkels

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Energy: The Mollier diagram and air handling

By Jan Gielen,
Manager Delphy Mushrooms,
Climate & Energy Specialist
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The previous article used three examples to clarify the Mollier diagram (diagram of moist air). This article completes the subject by using the diagram to explain the effects in the climate unit during cooling, heating, humidifying and dehumidifying.

This article was first published in Mushroom Business magazine, it has been / they have been republished with kind permission of Global Roel Media B.V.

www.mushroombusiness.com

To illustrate the examples, this article is based on the assumption that optimal management of a certain given cultivation situation could require an inlet air climate of 17° C and 75 % RH– in other words a moisture content of 9 g/kg and a heat content of 40 kJ/kg. How the climate unit achieves this desired climate condition (preferably energy-efficiently), depends on the computer control program and the CO2 limits set by the grower.

Summer conditions

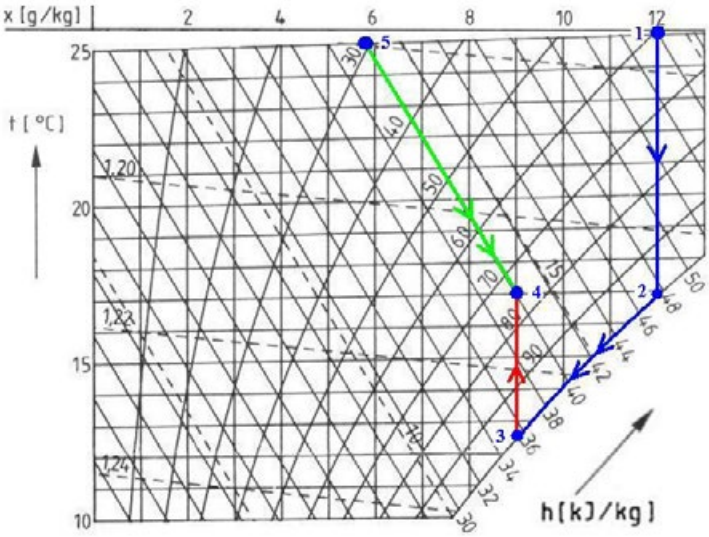
Example 1 of the Mollier diagram is based on two summer conditions: warm and moist (climate point 1) and warm and dry (climate point 5).

Cooling, dehumidifying and re-heating

As, especially in the Netherlands, the 'warm and humid' condition occurs more frequently, this example will be explained first. As a starting point, we will take a climate condition that can occur in the air mixing box of a climate unit in such a situation. To proceed from mixed air condition 1 (25°C, 60% RH, 12 g/kg moisture content and 56 kJ/kg heat content) to inlet condition 4 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content), we start by cooling (line 1-2). At point 2, the air behind the cooling coil has been cooled to 16.8°C. This point is referred to as the dew point as the air has now reached 100% RH, but still has a moisture content of 12 g/kg. The moisture will only condense on the cooling coil surface if we continue cooling to below this dew point (line 2-3). To reach the desired moisture content of 9 g/kg, we must cool the air behind the cooling coil down to 12.5°C (climate point 3). We now have the correct moisture content, but the air is too cold and must be re-heated again to reach the desired inlet condition (line 3-4). This re-heating reduces the RH, but the moisture content remains unchanged. In this way, the desired inlet condition 4 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content) can be achieved.

Adiabatic cooling (desert cooling)

We are unlikely to experience this in the Netherlands, but in a continental climate, warm and dry climate conditions can occur (climate point 5). Adiabatic cooling is necessary to directly reach inlet condition 4 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content), coming from mixed air condition 5 (25°C, 28% RH, 5,7 g/kg moisture content and 40 kJ/kg heat content). Adiabatic cooling is a system that draws air through wet desorption pads that are kept moistened by water. This method simultaneously cools and humidifies the air. To reach the required inlet condition 4 in our example, all that has to be done is evaporate water (3.3 g/kg). The energy needed to evaporate the water droplets is taken from the air, a process that causes the air temperature to cool (line 5-4). The water vapour and evaporative heat are released into the air, causing the moisture content to rise while the heat content stays the same. In this way, the desired inlet climate 4 can be achieved in a single step.



Example 1: Mollier diagram with two summer conditions.

Winter conditions

Example 2 of the Mollier diagram is based on a winter condition and two humidification methods: steam humidification or water humidification.

Heating and steam humidification

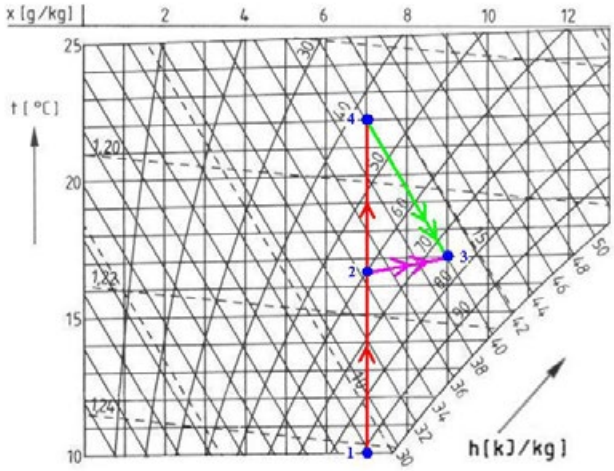
Steam humidification is traditionally the most widely-used method of RH control in growing rooms. Steam humidification is considered the most suitable method in winter in particular when heating and humidification are required. As a starting point, we again will take a climate that can occur in the air mixing box of a climate unit in such a situation. To proceed from mixed air condition 1 (10°C, 92% RH, 7 g/kg moisture content and 28 kJ/kg heat content) to inlet condition 3 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content), we start by

heating (line 1-2). At point 2, the air behind the heating coil has been heated to 16.5°C. The RH has dropped to 60%, but the moisture content is still 7 g/kg. To reach the desired moisture content of 9 g/kg, steam humidification is used in this case, whereby 2 g/kg humidification still has to be added. As low pressure (0.5 bar overpressure) steam humidification has a heat surplus of - rounded off - 0.25°C/g/kg, 2 g/kg of low pressure steam humidification will also result in a temperature increase of 0.5°C (line 2-3), which therefore achieves the desired inlet condition 3 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content).

Heating and water humidification

If water humidification is chosen, be aware that additional heat is required to evaporate all the small droplets of water. The air must therefore be pre-heated properly beforehand. In this case, 16.5°C (point 2) is insufficient, so heating must continue (line 2-4) until the air temperature reaches 22°C (point 4). The RH has dropped to 43%, but the moisture content is still 7 g/kg. To reach the desired moisture content of 9 g/kg, water humidification is used in this case, whereby 2 g/kg humidification still has to be added. As water humidification cools the temperature by – rounded off - 2.5°C/g/kg, 2 g/kg water humidification will also result in a temperature decrease of 5°C (line 4-3), which therefore achieves the desired inlet condition 3 (17°C, 75% RH, 9 g/kg moisture content and 40 kJ/kg heat content).

Note: it should be apparent that effective water humidification not only depends on small water droplets that are easier to evaporate, but also on well pre-heated air. If the air is not pre-heated sufficiently (or nor heated at all – e.g. during cool down/pinheading), the water droplets will evaporate to an insufficient degree (or not at all), which means the inlet air stays too dry and causes low RH levels inside the growing room. Many growers who use water humidification experience problems with low RH levels and scaling, certainly in winter periods. When these problems occur, growers do not often associate them with better pre-heating of the air used for water humidification, however doing this will clearly have a positive effect.



Example 2: Mollier diagram with winter condition and two types of humidification.

Important Dates
on the Mushroom Calendar

Masterclass –
Mushroom Composting & Growing
14th – 19th May 2018
Mushroom Office, Horst,
The Netherlands
mushroomoffice.com/courses-mushroom-growing

Ukrainian Mushroom Days
6th – 7th June 2018,
Hotel Cosmopolit,
Kyiv (Kiev), Ukraine
http://umdis.org/conference/en/

The 9th International Conference
on Mushroom Biology and
Mushroom Products
(ICMBMP9)
12th – 15th November 2018,
Shanghai, China
www.worldmushroomsociety.com
www.sh-mushroom.com

Masterclass –
Mushroom Composting & Growing
19th – 24th November 2018
Mushroom Office, Horst,
The Netherlands
mushroomoffice.com/courses-mushroom-growing

2019

Dutch Mushroom Days
22nd-24th May 2019,
the Brabanthallen,
Den Bosch,
The Netherlands

To ensure that your event is included in The Spawn Run's Mushroom Calendar, please email all the pertinent details to nathan@highveldmushrooms.co.za

Incidence and control of *Listeria monocytogenes* in food environments

Siyoum, N., Chidamba L. and Korsten, L

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Introduction

The genus *Listeria* consists of several species such as: *L. seeligeri, L. innocua, L. welshimeri, L. grayi, L. murrayi, L. ivanovii* and *L. monocytogenes*. The latter two are known to be virulent species in animals and humans. *Listeriaivanovii* causes abortion in ewes, goats and cows and possibly disease in humans, while *L. monocytogenes* is the most pathogenic both in humans and animals (Videau, 1987).

Listeriamonocytogenes is a common and wide spread organism in the environment being present in soil, water and manure (Zhu et al., 2017). Consequently, contamination of fresh produce by *L.monocytogenes* is a common occurrence. In general, food sources that are of animal and vegetable origin are at risk of contamination by this pathogen.

Listeriamonocytogenes can grow under a wide range of environmental conditions, which makes its control and ultimately the prevention of contamination, more difficult. Growth of this foodborne bacteria can take place under temperatures as low as -4°C (Zhu *et al.*, 2017) and as high as 45°C. *Listeriamonocytogenes* can also grow in both acidic and alkaline environments with a pH range of 4.3 – 9.6 (Zhu *et al.*, 2017; Videau, 1987). Since *L. monocytogenes* can grow and multiply in refrigerated conditions and in stored food products, it is the "ready-to-eat food" that is most at risk of being contaminated. This can be avoided by consuming cooked food that it is not cross contaminated after cooking.

Food contamination by *Listeria monocytogenes*

Food can be contaminated at different stages from production to the consumer end of the supply chain. Contamination may start at the production stage via contaminated soil or water, or animal manure. *Listeriamonocytogenes* is widely present in many animals and humans without causing any disease symptom. The feces of carrier animals and humans then becomes the source of contamination to the environment (soil and water). Fresh produce cultivated in such environments is more likely to be contaminated by *L. monocytogenes* (Fig. 1).

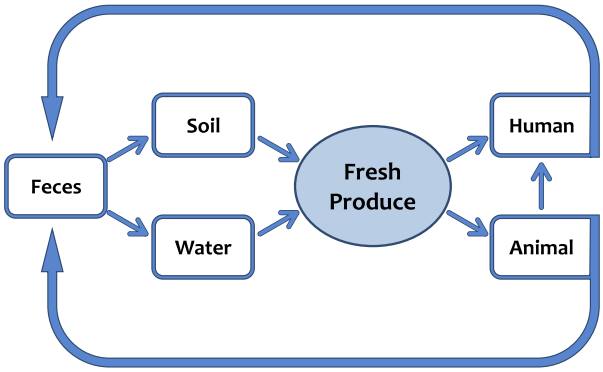

Figure 1. Potential pathways of *Listeriamonocytogenes* transmission to humans via fresh produce (Zhu *et al.*, 2017).

It is also possible that clean fresh produce can be contaminated during further food processing. This type of contamination arises from contaminated facilities, equipment or tools.

Disease outbreak and food contamination history

Despite the low incidence of listeriosis in the general population the causative pathogen, *L. monocytogenes* is a major concern in food production due to its ubiquitous nature, persistence once introduced and relative difficulty to control in the food production environment. Further the severity of associated clinical outcomes can include death and in the case of pregnancies spontaneous abortions or death of the new borne baby, among others (de Noordhout *et al.*, 2014).

Although the prevalence of *L. monocytogenes* in many foods decreased in the 1990s due to improved control measures, the past decade has witnessed a rather constant global increase of listeriosis (Buchanan *et al.*, 2017). Such findings, together with recent reported outbreaks linked to novel foods and complex processing and distribution systems as well as the associated severe clinical outcomes, have raised several questions related to the epidemiology, virulence, growth, survival and risk management of *L. monocytogenes* in the food chain (Buchanan *et al.*, 2017). Since 2010, several listeriosis outbreaks have been associated with different food products including celery, lettuce, cantaloupe, sprouts, stone fruit, caramel apples, cheese, meat and meat products, and ice cream, among others (Buchanan *et al.*, 2017; European Food Safety Authority, 2015).

Most recently, a listeriosis outbreak, possibly one of the largest in history, was reported in South Africa. As of the end of November 2017 a total of 557 cases of listeriosis were reported in the country, mainly Gauteng Province, according to the National Institute for Communicable Diseases (NICD) December 2017 report. Since then the figures dramatically increased to 172 deaths and close to 900 confirmed cases. However, no link has been established between the source, a food product and the outbreak.

***Listeriamonocytogenes* in mushroom production environments**

Listeriamonocytogenes is ubiquitous in agricultural environments where its ability to grow in wet and cool conditions confers survival in packing and processing facilities. The persistence of *L. monocytogenes* and its development of antibiotic resistance in such environments have been reported (Ferreira *et al.*, 2014; Lungu *et al.*, 2011). Mushroom production environments are no exception to contamination by *L. monocytogenes* (Viswanath *et al.*, 2013). Thus, mushrooms can potentially be a vehicle of foodborne listeriosis, as is the case with other types of food including agricultural food produce and ready-to-eat meats (Cartwright *et al.*, 2013; Choi *et al.*, 2014; Hächler *et al.*, 2013).

The mushroom production process consists mainly of three stages namely composting, mushroom cultivation (production) and harvesting (Leong *et al.*, 2013; Viswanath *et al.*, 2013). Each production stage presents unique sources and risks of contamination. The substrate for composting is usually prepared from straw, horse or poultry manure, in addition to gypsum, and therefore presents a potential source of *L. monocytogenes* contamination. In SA, poultry manure is commercially used and constitutes a major source of potential contamination if not handled, stored and treated adequately prior to use. Furthermore, the substrate components are wetted during mixing. The water used for wetting is a potential source of contamination and also provides humid conditions that support the growth of *Listeria* spp. However, the composting procedure also involves a heat treatment stage (pasteurisation) which is aimed at inactivating and eliminating *L. monocytogenes* along with other human pathogens. Nonetheless, the growth and packing rooms, and equipment also provide additional sources of contamination during mushroom production due to movement of equipment and people between areas.

Although no listeriosis outbreaks have been linked to fresh mushroom consumption to date, presence of the pathogen has been reported and resulted in mushroom recalls (Buchanan *et al.*, 2017; Leong *et al.*, 2013; Viswanath *et al.*, 2013). As a result, recent studies have explored and demonstrated the prevalence and contamination patterns of *L. monocytogenes* in mushroom production environments (Chen *et al.*, 2014; Viswanath *et al.*, 2013). Moreover, mushroom production and distribution has been shown to support survival and/or growth of *L. monocytogenes* (Leong *et al.*, 2013). However, only a few studies have investigated *L.monocytogenes* contamination in mushroom production and at the retailer level, indicating the need for further investigation (Chen *et al.*, 2014; Viswanath *et al.*, 2013; Wu *et al.*, 2015). The need for such investigation is underscored by the reported variability in prevalence among different production sites and at different stages of production (Chen *et al.*, 2014; Viswanath *et al.*, 2013). Although cleaning and disinfection procedures are part of the mushroom production process, they may vary among different facilities and in some, may not be efficient in eliminating *Listeria spp*.

Prevention and control measures of food contamination by *Listeriamonocytogenes*

Listeriamonocytogenes is ubiquitous and contamination can occur at any stage from substrate preparation to shipping of the mushrooms, hence, preventative measures must be assured to minimize contamination risks. In SA the Mushroom GAP and Mushroom food safety management system developed by the University of Pretoria, as well as the Mushroom Good Agricultural Practices (MGAP) program by the American Mushroom Institute and Penn State University, provide a set of standards and procedures that mushroom growers can use to achieve a state of compliance. These systems were designed to prevent contamination by all human pathogens that could be prevalent in mushroom production systems (Penn State University and the American Mushroom Institute, 2010). These guidelines is based on the prioritization of prevention strategies, due diligence and control of safety hazards as opposed to damage control: product recall or even worse a listeriosis outbreak as we currently have.

Substrate or casing preparation must be carefully managed to minimize contamination risks of the final product. The heat treatment stage for the substrate must be adequate to eliminate and inactivate *Listeria* spp. Production personnel, hygiene and field sanitation is also critical in the reduction of contamination risks. Adequate hygiene training should be provided for all production personnel and best hygiene practices should be practiced and enforced throughout the production facility. In addition, adequate facilities must be put in place to support an effective hygiene operation of the production facility including clean toilets and handwashing facilities among others. The water used for preparation of substrate and casing materials, cleaning, irrigation, pesticide use, generation of steam, hand washing and drinking, has the potential to be a source of *Listeria* spp. contamination during production and subsequent handling is therefore important. The source and quality of the water for all uses in the mushroom production facility should therefore be carefully monitored and controlled. Potential hazards or sources of contamination should be identified, documented, communicated, monitored and controlled to ensure efficiency of all microbial safety measures. Product security should also be established and maintained. An important point to manage is the goody water source. This will require effective management and disposal.

Industry message and preventative strategy

It is critical for the South African mushroom industry to be aware of the latest Listeria outbreak and take cognizance of the severity of the situation and its long-term effect on food production in the country. Has trust been compromised between the consumer and the various role players in the food chain? This question can only be answered once we fully understand the impact of the outbreak. What is important is that government can no longer shy away from their responsibility to ensure safe food for all. The need for the long awaited Food Safety Authority should therefore be considered a priority.

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POWER OF PINK CAMPAIGN

Powered To New Heights In 2017

R560 000.00 raised and public awareness of the cancer fighting properties of mushrooms increased

The South African Mushroom Farmers' Association, Pick n Pay and Mpact could tell a real good news story to Reach for Recoveryand financially challenged breast cancer survivors just before World Cancer Day on February 4, 2018.

During October 2017 **the Power of Pink campaign raised R560 000.00** in support of Reach for Recovery's (R4R) Ditto prostheses project! But it's not only Reach for Recovery that benefits from the campaign. It's also the entire mushroom industry because the media campaign message focused on the cancer fighting properties of mushrooms and the extensive worldwide research indicating that 10g of mushrooms a day can reduce breast cancer by 64%!!!

The results of the 2017 campaign represent an increase of R95000 over 2016 and increased sales of 95000 punnets year-on-year (this figure is based on the fact that R1 from each punnet sold goes to R4R and their Ditto project).

BruceMain (Mpact), Ross Richardson (SAFMA), Stephne Jacobs (Reach for Recovery), Gareth O-Connell (Pick n Pay) and Martmari van Greuning (SAMFA)

95% of the funds raised go specifically to the funding of silicone prostheses for women who cannot afford to purchase them. The remaining 5% is used to provide care bags containing support items and information leaflets.

Stephne Jacobs showing the R4R Ditto Project's prostheses

"Women in low-income categories, diagnosed with breast cancer," says Reach for Recovery's Management Board Chairperson, Stephné Jacobs passionately, "deserve the same access to support services as anyone else as these services could be life-saving; literally and figuratively."

"And mushrooms make this miracle happen every year," concludes SAMFA's chairperson Ross Richardson. "The Power of Pink campaign assists in increasing awareness of the cancer protective properties of mushrooms as indicated by the research and combines this good news industry story with a fundraising project that makes a real difference to the well-being of breast cancer survivors."

20 Questions with Mel Meyer

- Mushroom Consultant

How did you get into Mushrooms?
There was an advert for a vegetable grower outside Durbanville, so I applied. I must have answered all questions correctly for Roddy Cairns and got the job.

How many years have you been in Mushrooms?
23 years this June.

What is most difficult task you have had to undertake while in Mushrooms?
Locating and negotiating for raw materials and services in certain foreign countries.

What is your greatest strength/talent?
Being able to adapt to the situation at hand and train personnel on many levels in a logical and patient manner.

What is your favourite pastime?
Ok tough one. I get max pleasure from launching and soaring my radio controlled glider from the top of a beautiful slope.

If you could change one personality/character trait you have, what would it be?
Not getting too worked up over the 'things' that I do not have much control over.

As a student, what did you want to do or be after your schooling?
A professional Yacht Bum.

What was the most significant event in your whole career so far?
Assisting farms with limited budgets and minimal control methods, yet still achieving numerous weeks of selling over 30kg per square meter.

What do you feel is your greatest achievement in life?
I am forever chasing new goals, but the one that comes to mind is circumnavigating the globe around all of the great Capes via the Southern Ocean.

If budget was unlimited what car would you drive?
I am not really a car person, so pass on this one.
Ok Ok Ok, If I must, then a Bugatti Chiron.

Who has had the greatest influence in your life and why?
Shew, tough one. My parents on the family side and Jim Dicks on the mushroom side.

What is the craziest thing you have ever done?
Climbing onto a 34ft yacht with 2 strangers and not showering for 60 days whilst at sea.

What are you addicted to?
Life, family and quality mushroom crops.

Do you have a nickname and if so what is it and why?
Will Litjens used to call me Mel Kel; you'll have to ask him why. I believe it is just the dialect from Horst in Holland and simply means bloke. Knowing Will, it could mean something a lot more wild.

What is your favourite movie?
Out of Africa.

What cheers you up?
Catching up with sailor friends and family. Normally a bottle of Breede Kloof valley red close at hand.

If you could be or were to describe yourself as an animal, what animal would it be and why?
An Albatross. The agility to soar over the southern ocean swells with such ease and manoeuvrability.

What is your greatest fear?
Breakdowns of equipment on mushroom farms where I cannot be of assistance. These include hydraulic pumps and the likes.

What is your favourite meal?
I love all food that is well prepared with fresh ingredients, yet if I was to choose then I suppose the Termitomycetes soup they make in Rwanda would be my favourite.

What is the best life advice you have been given?
Keep your head on your shoulders and learn to pat oneself on the back when deemed necessary (Tim Crawley 2007)