FOOD SAFETY FAQS

YOUR QUESTIONS ANSWERED

A visit from the auditor has been known to strike fear into the heart of even the most organised mushroom business QA manager. This is not necessarily because records are not in order, or practices are in any way unsafe. It has more to do with uncertainty about the process itself.

People may wonder "What will the auditor ask?" "What evidence will I need to provide?" "What haven't I done?" "What do I do if I get a lot of corrective actions?". It can be like going for an exam without knowing the scope of the subject.

Clare Hamilton-Bate has had more to do with food safety certification than just about anyone in Australia. Clare has also been an advisor to the mushroom industry for over 10 years. MushroomLink recently talked to Clare about tips and traps for QA managers on mushroom farms.

ML: Your career includes three years working in fresh produce with Franklins Supermarket, 17 years as head of Freshcare and three years as technical and QA manager with a large mango grower. That means you've experienced QA as a retailer, certifier, and a grower. Which one was the hardest?

CHB: Without a doubt, it's hardest when you are on farm. That's because you've got so many competing operational priorities to get fresh product to market. Compliance systems are just one of the things you need to deal with.

ML: So, what certification options are there for mushroom farms?

CHB: The mushroom industry was one of the first fresh produce industries to adopt HACCP (hazard analysis critical control point). However, HACCP alone is no longer recognised by Australian retailers.

The base schemes currently used in Australia are Freshcare, SQF, GlobalGAP and the British Retailer Consortium (BRCGS). If you are supplying one of the major retailers, you will need to include HARPS as well, as an addition to your base standard.

Through the Hort Innovation R&D levy-funded Mushroom Food Safety Project (MU20000) we have also developed a mushroom specific code of practice called Safe Mushroom. This was developed for farms whose customers don't require them to have a third party audited program in place, but who still want to demonstrate that they are growing and packing mushrooms safely.

Safe mushroom

ML: What would you say are the key success factors for businesses implementing a food safety program?

CHB: Good business preparedness and culture is essential. This includes:

- Clear responsibility for specific tasks
- Clear accountability for those tasks being done correctly
- Clear ownership of the system – and this does not just mean the compliance officer, but the whole management team
- Committed champions of the cause – people understand not just **what** they need to do and **how**, but also the **why**
- Making sure that good food safety practices are integrated into all business operations. Operations drive the business, and food safety needs to fit within all operations. In other words, no more silos.
- Compliance officers therefore need to make sure there are opportunities to question, share and improve in all parts of the business

ML: OK, you've put all the systems in place, next step is scheduling the audit...

CHB: The most important thing is to start planning early. It's easy to put off, but before you know it the audit is next week and you're not ready.

When you get a notice that an audit is due, talk to your certification body (CB). Make sure that your business details are correct in their system. That could mean changes to personnel, additional sites, or changes in product scope and procedures.

You have put effort into creating an effective system – celebrate it, don't hide it.

If it's an unannounced audit then you absolutely must tell the CB your blackout dates. These are the dates when you're not growing or packing, or when you're simply not available. While blackouts are normally limited to 10 days, it's still worth talking to your CB if, for example, you are taking a month's leave during the audit period. And if the situation changes, always let them know.

ML: Once you know when the audit is going to happen, how should you prepare?

CHB: For starters, celebrate your system, don't hide it. You've put effort into creating an effective system and this is your chance to show it off.

If situations happen that are not compliant – like a test result over the MRL, or an internal corrective action – then document it. This demonstrates that you are culturally committed to the system, and it's all about improvement.

Mushroom growing rooms are very different environments to outdoor vegetable farms and orchards, so many elements in food safety standards are not applicable.

It's essential to do an internal audit. The internal audit shows that you've been through the requirements and thought about them. Moreover, you will now have the supporting evidence for the actual audit ready to hand.

When the auditor comes it should be business as usual. Be prepared, be compliant with the requirements, but also be confident. Be proud of the success of your process.

Although mushroom compost is not "Treated in accordance with AS4454" it has been subjected to a documented, validated procedure, with pasteurisation confirmed through testing

ML: There are a lot of general requirements which don't seem relevant to mushroom growing. What do you do about them?

CHB: It's true that there are elements of standards which are '**Not Applicable'** to mushroom farms. There aren't a lot of livestock in mushroom growing rooms! Nor are mushrooms washed after harvest, so postharvest water quality is not an issue.

There are other elements that can be '**Excluded**' with supporting evidence such as a risk assessment. An example might be demonstrating (through a risk assessment) that soy proteins added to compost do not transfer to the mushrooms, so do not present a risk of allergic reaction.

Irrigation water must contain *E. coli* <100 CFU/100ml; verify this through microbial testing.

Finally, some elements may be granted a specifically agreed **'Exemption'** at an industry wide level. An example is compost. Certification programs normally require it to be treated 'in accordance with Australian Standard 4454', and a test certificate supplied with each batch. This is clearly not feasible or applicable for mushroom compost.

ML: So how does the grower show that they should be exempt from this requirement?

CHB: The key issue is that AS4454 includes exposure to temperatures >55°C for three consecutive days, with the process repeated five times. Mushroom compost isn't produced this way and mushroom compost suppliers are unlikely to be accredited to AS4454.

However, they do have a documented, validated procedure. They are also likely to keep batch and temperature records. Effectively, this pasteurisation process makes the composting process equivalent with AS4454.

Obtaining a copy of this procedure from your compost supplier to support this industry wide position is a good idea, especially if your auditor is unfamiliar with mushroom farms.

ML: How about other inputs?

CHB: With regard to water, the key requirement is meeting microbial limits. Irrigation and wash down water must contain less than 100 *E. coli* bacteria/100ml, whereas water used for cleaning equipment that contacts mushrooms must contain less than one *E. coli* bacteria/100ml. Water can be recycled, but needs to be treated (e.g. with chlorine) to achieve these limits and verified through testing.

ML: There are clearly a lot of different and varied requirements, so what are the areas where growers are most likely to end up with a corrective action?

CHB: Chemical application records is definitely one. Every spray in every growing room needs to be documented. It's the same whether spraying 100 hectares of grapes or 50m^2 of growing room.

Water treatment records can be another. Every dose, to every tank, every day, must be recorded. It's a repetitive but essential record, as the act of recording helps to

Check the calibration of your cold room using an accurate data logger or thermometer.

ensure that water is sanitised appropriately. Of course, if you are on town water, water sanitation is unlikely to be needed.

Checking the calibration of cold rooms is important not just for food safety, but for quality in general. If the cold room calibration is out, you could be reducing storage life as well as failing to meet a certification requirement.

Finally, it is important to document **why** an element is **Not Applicable**. It might seem like stating the obvious, but the auditor won't necessarily understand this. The same goes for Exclusions and **Exemptions**. In both cases, there should be clear risk assessments and supporting documentation.

ML: Many of the procedures need to be annually reviewed, which sounds a bit tedious. Is there an efficient way to meet this requirement?

CHB: It's good business practice to do an annual review regardless of system requirements. This is where you discuss what went well or didn't, what was profitable or lost money, what was operationally efficient and how things can be improved in the future.

The meeting agenda needs to include issues relating to your food safety certification, such as;

- Changes to organisational structure, roles and responsibilities
- Changes to food safety and quality policies
- Procedures and work instructions (especially if new equipment has been purchased)
- Training needs
- Risks to the business (risk assessments)
- Review of compliance, such as corrective or preventative actions
- Customer feedback both good and bad

Keep minutes of the meeting, and your annual reviews will be complete. It's good to do this when the whole management team is sitting around the table. You can get their buy in plus it actually benefits the business. This is definitely a much better approach than rushing to gather key information the week before your next audit.

ML: Perhaps that's one of the key messages we can take from this - Food safety is part of good business management, for the whole business operation

CHB: Definitely. We all own food safety as part of a good and effective business culture.

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