Biosecurity

Evaluating an Existing Biosecurity Program

Adequate biosecurity programs may take weeks or even months to develop, implement and weave into corporate policy and standard operating procedures. If donning security uniforms and handing out warning tickets is what it takes to implement the program, then so be it.

Most farmers are aware of biosecurity and aware of the consequences of biosecurity failure. However, when there is a scare such as the recent mad cow incident, everyone scrambles to see where there may be loopholes in their biosecurity program. That may be too little too late.

This panic is fuelled by the horrible images of burning carcasses of past epidemics and thoughts of the devastating social and economic impacts. So, why would anyone wait until after an epidemic presents itself to look for weaknesses in the biosecurity program?

Biosecurity programs ensure that procedures are taken to reduce or eliminate contact between our fish and those pesky viruses, bacteria, fungi, and parasites. The assumption is that having these procedures in place will reduce the likelihood of a disease outbreak. But how, in the absence of disease, can fish farmers be sure that their biosecurity program is indeed effective?

Monitoring biosecurity could mean one of two things. It may mean monitoring, evaluating, and reviewing the biosecurity program itself. This would involve auditing the entire program from hatch to harvest. It may also mean evaluating the particular procedures and products used within the biosecurity program. This would involve sampling for pathogenic organisms in all

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areas that they normally like to hide out (cracks, crevasses, nooks and crannies). One involves monitoring the *program* the other involves monitoring the *procedures* involved.

Several steps may be required in order to monitor a biosecurity program. It may also require that fish farmers establish a multi-level auditing system that includes self-evaluation as well as independent third party evaluation.

Although no system is a hundred percent airtight, steps can be taken to determine how well biosecurity procedures work. The first step could involve a fish health technician visiting sites and taking culture samples for pathogens. The second step could involve compiling and comparing data against historical data or, if historical information is not available, using them to develop some sort of comfort zone. Probably the best way to evaluate biosecurity is by taking routine samples to determine baseline levels.

Gauging the success of disinfection and other biosecurity measures may be as simple as taking before and after samples. Comparison of the pathogen load before and after disinfection will help determine how effective the product or procedure actually is. In order to gather information about contact time, sample immediately after applying the disinfectant and several times thereafter.

Evaluating the biosecurity program will require a little more creativity. It means evaluating each and every barrier put in place to address the specific critical control points identified in the development process. This is where empowerment comes in. Anyone in the production process, be it up stream or down, should be able to point out weaknesses in the biosecurity program as well as recommend corrective action.

The best way to evaluate a biosecurity program is by auditing. A fish farm can be audited in three phases. The first two phases are self or internal auditing while the third phase is accomplished through third party auditing. A third party audit allows for an independent and more objective evaluation of the program.

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Internal auditing can be done on two levels. The initial audit can be done on a daily or weekly basis where the on-site staff or designated biosecurity personnel audit the facility. A detailed checklist can be drawn up highlighting important aspects that should be part of the daily routine such as the footbaths that make our loafers soggy. If things are not up to par or need to be modified, they can be noted and reviewed at site or company meetings.

The fish health staff or the site managers can conduct the second stage of internal auditing. A qualified fish health technician or veterinarian can audit all company sites evaluating specific criteria set out for each individual site and the company in general. This takes the process one step further and brings light to important issues. During this time, the local biosecurity personnel can chat with fish health personnel or site managers and get up to date information and make comments regarding the current biosecurity program.

The third phase of auditing is an independent third party audit. An independent veterinarian, fish health technician or biosecurity specialist can carry out this audit. This process will allow the site to be evaluated from a "new perspective" giving a fresh look at the process currently in place. Observations and recommendations from the independent audit can be passed on to the fish health or biosecurity personnel for further review.

Biosecurity programs are labor intensive and take time and effort from all staff members. Therefore, it is extremely important to ensure that it is as efficient and effective as possible. Evaluation and modification is the only way to maintain an adequate biosecurity program. In order to modify and keep the process current, it must be evaluated through some comprehensive process.

It is important that whoever is given the responsibility of donning the biosecurity uniform understands the principles and objectives involved. Without some sort of evaluation and process for modification, the biosecurity program risks ending up right where it started, in a big pile of smoldering carcasses!