

A CRITICAL COMPARISON OF ALPACA MAP AND Q-ALPACA Bob Kingwell, Monga Alpacas (October 2008)

Are you considering an alpaca assurance program and or a bio-security program for your herd? Do you believe that Johne's disease (JD) is no longer a threat to you alpacas? If you answered yes to either of these two questions then you should read this article. Are you already in a program but are frustrated by the program's rules and guidelines? Animal Health Australia (AHA) who administers the Alpaca Market Assurance Program (Alpaca MAP) carry out regular reviews of all their Market Assurance Programs. If you answered yes to this third question then, as a stakeholder, it is an appropriate time for you to take a critical look at Alpaca MAP. When AHA conducts its next review you will then be in a position to offer suggestions and comments on how you believe this program could be improved. This comparison between Alpaca MAP and Quality Alpaca (Q-Alpaca) has been written in the hope that it will generate thoughts and ideas within the readers on the possible future direction for Alpaca MAP.

The fundamental difference between these two bio-security programs, both of which are also quality assurance programs, is that Alpaca MAP is administered by AHA and deals only with JD whereas Q-Alpaca is administered by the Australian Alpaca Association Ltd (AAA) and covers a broad range of diseases. Herds cannot enter Alpaca MAP until the whole herd has been isolated and tested negative for JD. This is not a requirement for herds wishing to enter Q-Alpaca. The methods employed by each program to monitor disease are also fundamentally different.

Alpaca MAP has three risk assessment levels referred to as Monitored Negative 1, 2 and 3 (MN1, MN2, MN3) that indicate the number of whole herd tests that the herd has undergone. These levels rely on set frequency biased maintenance faecal testing and post-mortem examinations with specimen testing if necessary, to confirm that a herd remains free of JD. It assumes that the herd may be infected until confirmed otherwise by these tests or examinations.

Q-Alpaca on the other hand is a single level assessment program. It does not have maintenance testing, but requires all alpacas over 12 months of age that either die, from whatever cause, or are euthanased, to have a post-mortem examination carried out by the approved herd veterinarian. This also applies to young alpacas under 12 months old with a history of wasting or diarrhoea that die or are euthanased. Q-Alpaca assumes that the herd is free of disease unless confirmed otherwise by a post-mortem examination.

Both programs have internal auditing procedures to maintain the integrity of a herd's status. Alpaca MAP also has provision for regular external sample auditing of all stakeholders including herds, veterinarians, laboratories and state authorities.

Before a herd can enter either program a Herd and Property Management Plan and a signed agreement of intent must be endorsed by an approved veterinarian. Alpacas must not be allowed to run on land that is being grazed by other Bovine Johne's disease (BJD) eligible species (cattle, goats, deer, and other camelids) unless these species are in the appropriate Market Assurance Program (MAP). There are however differences involving time constraints, the origin and status of the animals and the status of other animals running with the alpacas. I refer you to the references for the details of these differences.

When introducing new alpacas into an existing herd, both programs allow for the immediate entry of animals that are of an equivalent or higher risk assessment level. Both require isolation and testing before alpacas of a lower level can be introduced. Because herds that join Q-Alpaca do not need to be herd tested, these Q-Alpaca animals cannot join an Alpaca MAP herd without first being isolated and tested negative for JD. They do however have an MN1 equivalent risk status for movement purposes only.

Significant changes were made to the Alpaca MAP in 2005 to accommodate those herds that chose to be in both Alpaca MAP and Q-Alpaca. Alpaca MAP herds that also join Q-Alpaca are no longer required to carry out regular maintenance testing and herds are automatically given a status credit to the next highest level (MN1 becomes MN2 and MN2 becomes MN3). These changes have significantly reduced the isolation time involved when introducing alpacas of lower status. As an example, two or more non assessed (NA) alpacas can now be introduced into an MN2 herd in the time it takes for one set of faecal test results to come back (up to 3 months). This is the same time and the same number of tests to introduce a NA alpaca into a Q-Alpaca herd. Before 2005 it would have taken this long for the animals to achieve MN1 status and then a further two years before the animals would have been eligible for their second test to achieve MN2 status. There is provision for testing after 12 months, but only to align testing with other eligible species that may be running with the alpaca herd. The table below shows the times and tests required to achieve and maintain the different Alpaca MAP levels without Q-Alpaca compared with being in Q-Alpaca

ALPACA MAP pre 2005	ALPACA MAP + Q-ALPACA post 2005
isolation + negative whole herd test up to 3 months enter at MN1 level then biased maint. testing every 2 yrs to retain level	isolation + negative whole herd test up to 3 months enter at MN1, join Q, advance to MN2 no maintenance testing
22-26 months later	22-26 months later
negative whole herd test (backdated) min. 25 mths (3+22) to reach MN2 level then biased maint. testing every 2 years to retain level	negative whole herd test (backdated) min. 25 mths (3+22) to reach MN3 level no maintenance testing
22-26 months later	
negative whole herd test (backdated) min. 47 mths (25+22) to reach MN3 level then biased maint. testing every 3 years to retain level	

Table 1: Time/testing differences between Alpaca MAP and Alpaca MAP+Q-Alpaca

It can be seen from Table 1 that, if an Alpaca MAP herd chooses to join Q-Alpaca and also chooses to take advantage of the incentives that this offers, the pre 2005 risk assurances based on time dependant maintenance testing no longer exist.

The original Alpaca MAP, through the use of introductory and maintenance testing, was specifically designed to protect herds from JD and provide levels of assurance that these herds remained free of the disease. The fact that Q-Alpaca and now post 2005 Alpaca MAP + Q-Alpaca do not require maintenance testing means that, were an alpaca to develop JD, it would probably go undetected until the animal showed clinical signs of the disease or died. By this time it could have infected other

properties and herds in the programs and the disease would have had time to spread to all states and territories. The disease is usually contracted when animals eat feed that has been contaminated by animal faeces containing the bacteria. It could also be transmitted to healthy animals that ingest contaminated milk products such as colostrum. Alpacas most at risk are travelling stud males. They have the greatest exposure to properties and herds that are not in either program and must rely on the host property's assurances that the mating area is a dedicated area not otherwise used by the host herd.

It could be argued that the Q-Alpaca program has effectively rendered the Alpaca MAP redundant. Q-Alpaca is significantly cheaper to both administer and maintain. It has only one risk assessment level and unless new animals of a lower status are being added to the herd, there are no testing requirements. There is also no requirement for external auditing.

In 2005, when Q-Alpaca commenced, there were 169 herds participating in Alpaca MAP. In March 2008, this number had increased to 183, a net increase of only 14 herds. Q-Alpaca on the other hand now has 237 herds (March 2008) participating. These numbers clearly indicate a preference for Q-Alpaca over Alpaca MAP and suggest that, if this trend continues, Alpaca MAP participation will become insignificant as existing participants retire and leave the industry.

Alpaca MAP was developed in the late 1990's in response to an outbreak of Bovine Johne's disease in which 33 alpacas were known to have contracted the disease. Of these 33 alpacas, 15 died with clinical signs of the disease and another 11 either died or were put down and confirmed by post-mortem examination to have had the disease. The remaining 7 alpacas, which initially tested positive to the disease, were later found to be negative and had thus been able to shed the disease. The disease outbreak, which started in the Bendigo region of Victoria in 1993, spread to all mainland states. The last confirmed case was reported in 1996 and this animal subsequently died of the disease in 1997.

It has now been 12 years since the last reported case and the original cause of the outbreak has still not been identified. The first animal to die was an 11 months old male that started showing clinical signs of the disease at 9 months of age. His 7 years old mother also died of the disease, but not before another two young alpacas also died. Whether the disease first infected the cria or the mother is not known, however since the young are more susceptible than adults, it is reasonable to assume that the first animal to be infected was the male cria. As a result of this outbreak we know that alpacas are, under the wrong circumstances, susceptible to the Bovine strain of the disease. We also know that some alpacas have a natural ability to shed the disease. Although it is unlikely that Johne's disease currently exists in Australian alpacas, the question which now begs to be asked is, can another outbreak occur in the National herd? The answer is undoubtedly, YES!

The current trend for a rural lifestyle change has heightened the risks of JD re-infecting alpacas. In most cases these lifestyle properties are small by rural standards, are often overstocked, and frequently have a large variety of 'pet' animals including sheep and a milking cow or milking goats. These are JD eligible species and are usually purchased with little or no regard for their risk assurance levels. The risks become apparent when female alpacas are added to this mix. If the females are mated to a visiting male, and adequate precautions are not taken, then these risks are capable of being transported off the property by the male.

Dairy cattle, sheep and goats are extremely susceptible to JD. Different strains of the disease are also known to jump from cattle to sheep and from sheep to cattle. It is therefore expedient that adequate bio-security measures be adopted in areas where these animals are present. Because the disease is capable of spreading beyond these areas through the movement of animals, it is also advisable that ALL herds adopt adequate bio-security measures. Herd owners that are, or are likely to be, selling animals also have a vested interest in participating in a risk assurance program. Buyers will pay a premium for animals from such herds.

The Alpaca MAP and the Q-Alpaca program are specifically designed to be both bio-security and risk assurance programs. It is strongly recommended that all members participate in at least one of these two programs. The following list summarises the differences between the two programs.

SUMMARY OF DIFFERENCES

ACTIVITY	ALPACA MAP	Q-ALPACA
Administered by	AHA	AAA
Diseases covered	JD	Broad range
External auditing	Y	N
Number of risk assessment levels	3	1
Entry herd isolation and JD testing	Y	N
JD maintenance testing	Y (voluntary if also in Q)	N
Post-mortem examination	Y (if JD suspected)	Y (all deaths)

Key: Y = yes, N = no, Q = Q-Alpaca

A few years ago alpacas could not freely enter the Western Australian Free Zone unless they had an MN3 risk assessment. Today MN1, Q-Alpaca and alpacas from a Queensland Protected Zone can enter this Free Zone as long as they comply with a range of property requirements and time constraints. This relaxation of entry requirements means that there is now little or no incentive for an MN3 herd to maintain this risk level.

The original MN1, MN2, and MN3 levels reflected the number of whole herd faecal tests that the herds had undergone. It has already been shown in Table 1 that an MN1 herd requires the same number of tests as an MN2 herd that is also in Q-Alpaca. Joining Q-Alpaca has therefore replaced the second test with a post-mortem examination, a requirement, although limited, that already exists in Alpaca MAP, and the MN2 status has lost its original meaning. It no longer represents a herd that has undergone two whole herd tests.

Rather than the Alpaca MAP having 3 risk assessment levels, it could simply have two levels; an MN level which would be comparable with the existing MN1 level, and an MNQ level which would be comparable with the existing MN2+Q-Alpaca level. These new levels would more accurately reflect the true risk assessment levels and would greatly simplify the Alpaca MAP Rules and Guidelines. The proposed MN level would require all alpacas to be isolated and faecal tested negative before entering Alpaca MAP and would still require maintenance testing. This testing could be an annual pooled test, if available, of those alpacas either involved in movement off the property or that had run on land used by other alpacas visiting the property. The MNQ level, apart from requiring all alpacas to be isolated and tested before entry, would effectively be no different than Q-Alpaca.

These changes would eliminate the accelerated entry requirements and would simplify the maintenance testing and new introduction's requirements. There would no longer

be a need for the 10% rule that allows for the entry of a small number of animals from herds of one status lower, after they have first been isolated and tested negative.

How real is the risk of a future outbreak of JD in alpacas? This is a question that each of you must answer before you can decide which of the two programs best suits your needs. Both are voluntary programs and if you choose to participate in Q-Alpaca there is nothing stopping you, other than the cost, from regularly faecal testing your herd. If or when pooled faecal testing becomes available for alpacas, this will be a cheaper option than whole herd testing. If you then choose to carry out yearly pooled testing of your more vulnerable animals, you will have a quality assurance level for your herd that is better than either of the current programs. Your animals will be monitored for a broad range of diseases, you will have a biased maintenance program for JD and your costs will be kept to a minimum. You will have the best of both programs.

References:

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