

### ***Harko Mulder on Swine Herd Ethics***

Camille Castelyn and Harko Mulder

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Camille Castelyn 00:04

Welcome to Voices in Bioethics. I'm Camille Castelyn. And today, it is my great pleasure to welcome Harko Mulder. Harko is an animal herd manager and has a MSc in Bioethics. Additionally, he has a Master's in Production Physiology and Product Quality and a Bachelor's in Animal Science. Welcome, Harko.

Harko Mulder 00:28

Thank you, Camille.

Camille Castelyn 00:29

It's really great to have you here. It's unique because we both are originally from South Africa. So, we welcome you.

Harko Mulder 00:34

Thank you.

Camille Castelyn 00:42

Yes, but you currently work in the US as well. So, Harko, you are a swineherd manager in the US. And you have this Bachelor's in Animal Science, but then you also have the Masters in Bioethics. So how did these two combine and help you as well in the position that you're at today?

Harko Mulder 01:01

That's an interesting question. For as long as I can remember, I knew I really had a special interest in animals. And I

started out thinking that I should probably become a large animal vet working with wildlife. I try to go down that route and life through a few curveballs, and I eventually realized that I enjoy studying just animal science, which is more focused on production, livestock production.

So, for products for human consumption, whether that be meat, milk, or in textiles, stuff like that. And that is the route that I started out on, and I managed a large breeding herd of pigs, producing place and animals for pork producers. And there, I got exposed to the industry as a whole, but also the angle of breeding and genetics, and how we can just, through that good selection and breeding strategies, really improve the animal that we are working with.

And I did that for a couple of years and then realized I needed to get more exposed to the research angle; I am looking for more challenges and looking at what we can do just with breeding. And being just amazed with pigs in general, I was convinced that we have more opportunities here. And based on that, I moved on to my new position, where we are breeding and producing pigs that are currently being used for immunology research. So that's where I am now with that.

And that led my further thought pattern to consider, okay, what are we doing? Is it something that is the right thing to do? And just to general curiosity, how do we make decisions about what is ethically acceptable and not, we've got all these amazing new technologies. But, we also need to think if we really should do something, not just if we can do it? That's where I said I don't have the knowledge. So, we'll have to go and learn some more. And that's where I am now.

Camille Castelyn 03:32

That's so fascinating. And that's fantastic how your career journey just unfolded. So yeah, some would say that doing research with animals is, and especially with immunology, as well, or any direction actually is a very anthropocentric way of looking at things. And how do you think about it? And do you think the benefits outweigh the risks?

Harko Mulder 03:56

It's a valid question. Everything that we do, we stand the risk of just having a very anthropocentric outlook on life.

That's just who we are. But if you put everything together, the risks and harms that might be inflicted on the animals, and the benefits to humans, and then also benefits through animals. All in all, it can be ethically acceptable. I think there is a lot of research that probably is not the devil is in the details, as they say. So obviously, I'm doing this, so in general, I agree with what is going on. But it asks more basic questions, how is what we're doing in research really different from the other uses we make of animals? And you can even argue that with the added benefits of the research over and above what we have in just production. It might be easier to just justify. So, that's another angle you need to think about as well.

Camille Castelyn 05:06

That's awesome. Yeah. And would you agree that, for example, how do you think about, as you say, it could be argued that it's not very different than if you eat meat? What are the arguments that are involved in that kind of

thing?

Harko Mulder 05:21

So, it's a very controversial and a popular argument to have. I, myself, am open to eating meat, and I do fairly often; it's in our culture as well. I think, here again, there is right ways and wrong ways of doing it. If we look at animals being used for commercial meat production, there is some minimum standards that we need to ensure is being held to. And animals don't necessarily have rights, but they do have interests that we need to respect and allow them. So, what I mean with interests is we need to protect them from freedom of hunger, freedom of pain, protect them from the environment, and such things. And if you look at those, and you compare what is happening just in nature, so nondomestic animals just roaming around, they don't necessarily have those protections. So, in a sense, we are also benefiting the animals in some ways. Sure, eventually, they paid the ultimate price, and we consume them, but it's a give and takes. And on the balance, it can be ethically justified in certain situations.

Another thing that we need to keep in mind is the animal that we use in production systems is a different animal than the animal that's roaming around in the wild. If we decide, okay, whatever we're doing is completely wrong, and we pull down all the fences and open all the gates, those domestic animals won't last very long in the wild; they are not adapted to that anymore. This is an animal that has evolved through many, many years of breeding and selection and sharing an environment with us. So, it's a decision we've made a long time ago already. So, it's very complicated. You cannot compare a wild animal with domestic animal anymore; you need to take it at face value as well.

Camille Castelyn 07:36

That is a very interesting take. And I actually haven't thought of it like that. I'd like to just move on a little bit to ask, how was the research with animals, would you say in general, impacted during COVID-19? If at all.

Harko Mulder 07:55

Just from my personal experience, the animals that I work with, I work at the moment solely with pigs. Fortunately, they're not affected at all. There's not a lot of people actually working with them. So that went on pretty much at the same rate and setup as usual. But I know the more experimental side has been slowed down, and a lot of the experiments postponed or canceled. But that was mostly due to all the controls and restrictions we had to place on just the human part to protect and keep the people safe. So fortunately for the animals, no real harms to them, I think they were blissfully unaware of what's going on around them.

Camille Castelyn 08:45

Lucky them.

Harko Mulder 08:47

Exactly.

Camille Castelyn 08:48

And what would you say is the most like prominent ethical challenges that animal ethics will face now and in the future?

Harko Mulder 08:57

There are many problems that we need to discuss. One that's close to my heart, and really puzzling to me is we can, or at least I'm of the opinion to a large extent, we can justify using animals for human consumption and textiles and so forth in that set of requirements we discussed earlier. But what that also means is, at what rate can we do this and what are the consequences? Two words: wild animals. You hear a scientist describing that we're witnessing a mass extinction going on. If you go and compare the number of domesticated animals to wild animals.

It is horrifying to see the number of domestic chickens compared to just name whatever wild animal you can imagine. We are essentially replacing what occurred naturally before with animals and crop production for our own use. And that's a more difficult question, because now we're adding humans needs and humans' rights in there as well. At what rate do we need to conserve what was there before? And for what purpose? My kind of view is we don't understand enough or have enough knowledge or skills to produce what is naturally occurring. So, it would be really wrong for us to affect it in such a way that we cannot maintain, at least at some level, what is there already, it would be an irresponsible thing to do. It opens up a lot of questions, of course.

Camille Castelyn 10:54

Because of human agency, and how meddlesome we are in creation. In nature, are there any other challenges that you would like to mention as well?

Harko Mulder 11:05

The other one is, we've got this relatively new understanding of our DNA and our genomes, and with newer technologies, where we can start meddling in DNA, and we can start genetically modifying animals for whatever purpose we see fit. Now, that can either scare you or excite you or both. To add the two concerns together is if we really want to limit our negative effects limit climate change.

Should we embrace these new technologies? Should we start to modify animals to produce products for our consumption? At a more efficient rate? Is that the right thing to do? What are the consequences of that? Is that really different from what we have been doing now as we've been indirectly selecting for the genome that we think is best for our systems? Now, we can just go directly to the DNA and cut out and insert what we want. Is that really the different? What are the consequences? Is that fair towards the animal?

Camille Castelyn 12:22

Yeah, that's very interesting as well, because I have to write an article about gene editing and allergies. And, of course, it's very hard to gene edit the immune systems, theoretically of humans, because if you start tinkering with the immune system, then you might switch off an important part of the immune system. So, that the the general movement is towards editing the animals. So, for example, you can gene edit, a Fel d 1, gene of a cat, that is the gene that produces the cat dander. So yeah, I think that would probably be a very profitable endeavor, because I think people would buy but you already get hypoallergenic cats as well. So. there are lots of questions to unpack definitely. And I recently saw as well, the BBC posted a thing about how cloning dogs is definitely also becoming more popular.

Harko Mulder 13:21

Should we allow it? Should we not? Is there a better way to do it? It's difficult questions.

And another point that I think is really important to remember when we are talking about animal ethics is that not all animals are the same, they have different interests. So, we cannot compare the ethics surrounding how we treat ants to beagle, we need to take into account that there's a different level of sentience. Very few of us are really opposed to using some kind of pest control to kill insects encroaching on your house. Whereas if it's some kind of mammal or something, some of us have really strong views opposed to poisoning or then hunting or even trapping. So, it's important to keep the difference in mind in animals, we cannot treat them as a block of uniform individuals. That's not the case. And it's important to keep the backdrop of what is happening without our intervention. How cruel can nature really be? Should we interfere or should we not? And if we interfere, how does it change? What happens to the animal?

Camille Castelyn 14:47

Yeah. I would like to end off with a final question and really thank you for your time. But I wonder what are your thoughts about the Zeno transplant, that was recently done as well, that made all the headlines in the news?

Harko Mulder 15:04

It's both exciting in the sense that we've got this technology that might make an immense difference to people's lives; there's several 1000 people on organ waiting lists that most likely will die because of their need, and there is no supply for them. But on the other side, I am terrified of what it might mean for the animals. Are we exploiting animals? Are we creating yet another avenue of human exploitation of animals? Or is there a midway in between where we can establish kind of ground rules of minimum requirements for the animals to have a valuable and meaningful life for themselves? Whilst also meeting our needs to achieve basically the same for humans? Is there something in between? I think there would be. But there's a lot of questions that we need to answer. Figure out exactly what it is. There's immense risk as well.

Camille Castelyn 16:28

I found that really interesting that you said a meaningful life for the animals as well. I think I can definitely appreciate that as well.

Harko Mulder 16:35

Yeah.

Camille Castelyn 16:37

Very interesting. But thank you for being here with us today are all the best with whatever you choose to do in the future. And thank you for your time.

Harko Mulder 16:48

Thanks for having me.