

# STATES OF JERSEY

## Corporate Services Sub-Panel Proposed Importation of Bovine Semen

**FRIDAY, 20th JUNE 2008**

**Panel:**

Deputy P.J.D. Ryan of St. Helier (Chairman)

Deputy J.A. Martin of St. Helier

Connétable P.F.M. Hanning of St. Saviour

**Witnesses:**

Mr. D. Frigot

Mr. D. Hambrook

**Deputy P.J.D. Ryan of St. Helier (Chairman):**

Welcome, Mr. Frigot.

**Mr. D. Frigot:**

Thank you, Deputy.

**Deputy P.J.D. Ryan:**

I think we will launch straight in, if that is okay by you. As you see it, what are the implications of not lifting the ban on importation of bovine semen?

**Mr. D. Frigot:**

If you will allow me to answer these questions. In fact, I have been away for a couple of days so I only got these last night, but I have endeavoured to answer them all. I had prepared some earlier presentation, if I may launch from that angle, if you do not mind. It is very brief.

**Deputy P.J.D. Ryan:**

Yes, as long as it is fairly brief.

**Mr. D. Frigot:**

I would like to start off by saying that the Jersey breed is not a rare breed. It is not an endangered species. It is a thriving, modern dairy cow and it is the second largest dairy breed in the world. I think we must appreciate that because livelihoods are built on the dairy cow in Jersey, on the Jersey cow in

Jersey.

**Deputy P.J.D. Ryan:**

Can I just stop you there for a second? So you do not consider that the closed Jersey herd is a breed separate from the rest of the Jersey breed throughout the world? You take the closed Jersey breed, Jersey herd, as part of the world?

**Mr. D. Frigot:**

It is precisely the same. The genetics of the world Jersey is based on the Island's genetics. It is nothing different. I hope in the next half hour to point out one or 2 what I think are anomalies or misguidance on comments that have been made earlier, but no, it is the same. The reason that Island breeders want to import pure Jersey bull semen is not just to increase milk. That is a very negative approach to it. It is to improve all the different traits of a cow, particularly health traits: the udders, the legs and feet for mobility which is highly important, sour count which is the cleanliness of the milk inside the cow since stock have infections et cetera, the bone structure of the cow which is important et cetera. It is not just the pure economics of producing milk. These chaps behind me are farming and have farmed for years. They strive to improve their cattle for pride's sake as much as anything else. They want the best cattle in the world. They cannot stand being second best and they definitely are second best at the moment. This could lead to enhancing sales of stock and I do not need to remind you that a lot of our calves are slaughtered each year and hopefully we would find a home for those. I would like to point out that Jersey is not a lot different from any other population. Sam, if you do not mind there is a chart showing the comparison of dairy industry trends in the U.K. (United Kingdom) and Jersey. I have taken the 11-year period from 1996 to today which is the most recent because there have been big changes in world dairying in that time. You will see that in 1996 there was 100 per cent of dairy cattle in Britain and in Jersey. Now, there is a little over half of the number of herds in both populations; it is no different. We have gone down from 60 herds in 1996 to 33 herds in 2006; we are down to 29 herds. I can assure you now that I am pretty confident that at least 2 herds will leave the industry this year and it will not be too many years before we are down to 20 herds or less. Farm numbers: in 1996 in the U.K. there was 34,570 herds, now there are only 19,000 herds. Since then it has gone down even more, there are just over 17,000 herds, so it is a declining number of herds. Cow numbers: percentage of cow numbers, again it is very comparable figures; from 100 per cent there is now 20 per cent, give or take, less cows. Herd sizes, and I want to emphasise this because Jersey is not different from another population. Our herd size in Jersey is larger than the U.K. We have just over 100 cows per herd despite there being 10 herds of just a few cows (less than 20) so there were considerably larger herds to balance that. Our actual herd size is very comparable to if not a little larger than U.K. herds. I am demonstrating that because I would like you to understand that we are not very different from any other population. The European figures, I have them here. These are taken from the official dairy statistics that are published by a government organisation in the U.K. The European figures are exactly the same; they reflect the

same situation. I would like to answer your question 1, which is: "What would be the implications, as you see them, of not lifting the ban on importation of semen?" I think the implications are that there would be a substantial change in subsidy payments for the industry to survive. I think it is obvious that farmers are not making money at the moment and have not been for some time. They either make efficiencies on the farms ... I think it was demonstrated to you on Monday that our system of farming, our farmers are as good as any farmers anywhere and I can guarantee that. I have visited over 40 countries to look at Jerseys, not just to visit, but to study Jerseys. I have judged in many of those countries; that is my livelihood, studying Jerseys. Our farmers here are as good husbandrymen, they are as good grassland growers, or whatever aspect of the dairy farm that you want to look at. We have as good here as anywhere in the world. Yes, we have ranges, we have poor farmers, we have good farmers, but the average farmer in Jersey is as good as anywhere. I believe that if there is a delay in this decision making of the importation of semen the industry will implode and I am quite sure in my own mind - and I know you may not have been told this officially by either the Milk Board or the Society - there are farmers out there who are ready to leave the industry if the decision goes against the importation because they cannot make large investments. For some farmers it can be tens if not hundreds of thousands of pounds for slurry, slurry storage, new facilities on farms. We have some farmers, one farmer in particular, who is wanting to build virtually a whole new dairy unit. They will not do that unless they know there is a secure future. There will not be a secure future without improving their livestock through breeding. I want to go on now to the people's perception of Island cows because this is interesting. Jersey cows are not physically different from other Jersey cows in other countries. To the breeders in Jersey who understand the finer points of the cows and who are working closely with the cows on a daily basis, they will notice changes. They will notice changes in the boning of the cow, udder texture will be much finer and more dairyness in the cow. They will change to the expert eye; they will not change to the public. I have an interesting point here, that we know statistically that the Jersey cow in Jersey is on average one inch shorter than the U.K. Jersey. All of our cows are what we call "classified" - they are classified for type. They are scored out of 100 points on each breakdown of a cow.

**Deputy P.J.D. Ryan:**

That was U.K. Jersey?

**Mr. D. Frigot:**

Yes, the Jersey cow is on average one inch shorter than the U.K. Jersey cow. Now, the U.K. Jersey cow is exactly the same size as the U.S. (United States) Jersey cow.

**Deputy P.J.D. Ryan:**

Sorry, the U.K. is the same as the U.S?

**Mr. D. Frigot:**

Yes, the U.K. Jersey cow is the same as the U.S.

**Deputy P.J.D. Ryan:**

So we can say one inch shorter than the ...

**Mr. D. Frigot:**

If you look at a 4.3 foot, 4.4 foot cow which is about our average - 48 inches or something like that - if you can tell me that one inch is suddenly going to make all cows that much bigger, it is not true. A comment was made the other day about the Guernsey situation and you have been to Guernsey. The Guernsey is a lot bigger. Yes, the Guernsey breed has always been a lot bigger, it has always been a lot taller cow than the Jersey, but when they imported semen 30 years ago they probably would have noticed an increased size in their cows and I will explain that. In the 1970s and perhaps a little earlier than that, there was a policy decision made by the Guernsey Association in America and Canada to grow their cows bigger. They wanted to compete with the Holstein cow which was a taller cow and they did manage that, they got very close to a Holstein-size cows. What they did not do, unfortunately, was match the production of those larger cows with the Holstein cow. In those days the Guernsey cow was the second largest breed in the American continent. Today it is almost a rare breed. That is probably being a little bit over the top but ...

**Connétable P.F.M. Hanning of St. Saviour:**

I think in Guernsey they said to us the numbers were small.

**Mr. D. Frigot:**

Yes, they are very small. In fact, I visited a dairy holding owned by the Government of Canada in Ottawa in 1982 and they had 10 cows of each breed there: Jerseys, Guernseys, Holsteins, Ayrshires whatever. I visited that same establishment about 6 or 7 years ago and there was one Guernsey and it had a notice that it is now a rare breed in Canada. It is just an interesting observation. The same thing will not happen with the Jersey cow. Indeed, numerically the Jersey cow now outnumbers all the other coloured breeds by twice as many in the U.S.A., for instance, and Guernseys from their elevated position as the second largest breed are now way down the list and are outnumbered by Jerseys by probably 5, 6 or maybe 10 to one, probably more than that, I should think, yes. Jersey breeders, or the Jersey breed, never went down the avenue of increasing size, probably because the more popular bulls did not breed particularly larger cows. They were the most productive, the smaller average-sized cows, so it did not happen with the Jersey breed. There was a very strong policy brought out by the American Jersey Cattle Association in about 1970 or something and I always remember a statement made by the chief executive of that organisation at the time. He said you find your most profitable cow and you learn to like the look of her. It is a very significant statement because instead of going for show cows that did

not produce, as we were doing in Jersey and have done for generations, they found the most profitable cows and changed their thoughts slightly on how those cows looked and how modern dairy cows, profitable dairy cows, should look. That policy helped the Jersey to its present prominent position. Just as a matter of interest, the Jersey cow is the only dairy cow in the world today that is increasing in numbers and it is increasing very quickly in numbers. It is the second largest dairy breed. It will never be numerically the largest, but it is the only breed that is growing in numbers. If I can answer question 2, your submission that explains that different countries have Jersey cows that suit their requirements, for example, the North American Jerseys in the U.S.A. are highly productive. There are a range of genetics available and I do not believe Jersey farmers would search for extremes of size, of production or whatever other trait. They would look for an improvement of quality in specific areas of the cow. An instance of that would be if within a farm somebody has, say, 100 cows he is going to have 10 cows that are, say, over 60 per cent butter fat. He will have another 10 cows that will be under 5 per cent butter fat. The average of the herd might be 5.3, 5.25, 5.4 per cent or something like that. So the lower butter fat cows, he will use a bull that will improve that trait if he wants to improve that trait. Components of dairy cattle are really governed by payment systems and I think it is in the last 2 or 3 years that the Milk Board changed their payment system, I think, to include a component element. Prior to that they only paid on milk volume. They will certainly look at traits that will improve their cattle. Not necessarily all of their cattle. A farmer will not go out and put all his cows to one bull; that will not happen. He will probably select half a dozen bulls and use those. At the end of question 2 you said: "What would the effects be on other production and functional traits such as fat and protein [I have covered that] longevity, temperament, fertility and disease control?" I am going to point out that disease control is very much the domain of the States vet. I can comment, but she is the one who can answer that. I was not at the meeting on Tuesday, but I believe she did make some representation there. My only comment in my experience of importing and exporting semen all over the world is that the exchange of semen and embryos internationally is extremely well policed. Europe is probably the hardest region when it comes to import regulations. There are a number of bulls which are precluded from us using them in Europe because all of Europe is one region as far as health regulations are concerned. There are bulls that we cannot use, but they might be able to be used in Australia or South Africa, and certainly Latin America and countries like that.

**Deputy P.J.D. Ryan:**

Can I just ask you about that point, embryos, what proportion of the international trade is embryos as opposed to semen?

**Mr. D. Frigot:**

I am not sure if there are enough noughts to put behind the point. It is minimal, absolutely minimal.

**Deputy P.J.D. Ryan:**

Why?

**Mr. D. Frigot:**

More expensive.

**Deputy P.J.D. Ryan:**

Expensive?

**Mr. D. Frigot:**

Yes. I think there is simple answer and, having said that, I am just bringing some embryos in from America to England. I think this very day they are arriving in the U.K. Each of those embryos are going to cost about £500 to purchase, for an English farmer to ...

**Deputy P.J.D. Ryan:**

Why would a farmer want an embryo? What would he do with the embryo?

**Mr. D. Frigot:**

He would implant them to bring in new genetics into his herd.

**Deputy P.J.D. Ryan:**

A major influx of new genetics? Why would he not do that with semen?

**Mr. D. Frigot:**

He would be buying single numbers. I have one chap who is having 5 embryos from this cow. Sam, I do not know if you have given that out, but this cow, we had some embryos taken from her and they are coming into the U.K. I have sold 5 to one chap. He will have those transplanted into recipients on his farm. He is not expecting 100 per cent conception, but with a bit of luck he might end up with 3 calves from that. One of those might be a bull calf and, therefore, he would raise the bull calf and he may use that bull calf in his herd to improve genetics of the herd.

**Deputy P.J.D. Ryan:**

Other than the cost, are there a lot of regulations around the embryo trade? Is it more difficult than the semen trade, for example?

**Mr. D. Frigot:**

Yes, there are.

**Deputy P.J.D. Ryan:**

Where does the cost come from?

**Mr. D. Frigot:**

The cost of doing embryo technology on a cow is much greater than collecting semen from a bull. It is a numbers game. This cow gave 17 embryos - 15 of them were what we call grade 1 embryos and they are the ones we are bringing in; they were frozen and we are bringing them into the U.K. The other 2 were not quite so good and each embryo is looked at individually under a microscope. They were implanted in cows on the farm where she comes from and there are 2 pregnancies there.

**Deputy J.A. Martin of St. Helier:**

Can I just be clear on embryo, so it is not an egg, it is the egg taken and then it is in a dish?

**Mr. D. Frigot:**

It is.

**Deputy J.A. Martin:**

It is just an egg?

**Mr. D. Frigot:**

Yes, but how would you explain ...

**Deputy J.A. Martin:**

The only thing is I know an embryo in humans, you can take the egg and then they put it in a dish and they put the semen. To me that is an embryo.

**Mr. D. Frigot:**

No, the semen is put into the cow prior to the embryos being collected so the cow is inseminated and then one week later the embryos are then extracted from the cow, non-surgically these days. In other words, they do not open up the cow. Those embryos are flushed through so they can be seen. A cow may not have any embryos at all, she might have what we call degenerate embryos which are embryos that have not conceived to the semen, and the best ones are kept.

**Deputy J.A. Martin:**

That clears it up completely. It is the other way around, obviously, to how it is done in -- so the embryo has already been -- it has basically ...

**Mr. D. Frigot:**

Yes, so the embryos are a week old. It is a week-old embryo.

**Deputy J.A. Martin:**

Yes, a week-old baby.

**Mr. D. Frigot:**

They can either be transferred directly into another recipient cow that has been on heat a week earlier, so it is the same period, or they are frozen and used again somewhere else on other cows that have been programmed as well and they are put in a week after they have come on heat. In pure financial terms, if you were to spend, say, £2,000 and bought 5 embryos the maximum pregnancies you can get is 5, but the likelihood is you will probably get 2 or 3. If you put £2,000 into semen you can breed 100 cows for that and get 60-70 pregnancies.

**Deputy P.J.D. Ryan:**

Part of the characteristics of this review that we are doing is the lack of understanding in the public domain and that is why we are trying to shine some light on that because members of the public get all sorts of odd views. You can imagine the kind of imagination that works around the importation of cattle embryos. What are we talking about here? Is it this big and you wheel it in with a wheelbarrow?

**The Connétable of St. Saviour:**

An embryo will sit on the same straw that holds the semen.

**Deputy P.J.D. Ryan:**

So that is that, but the controls around those in terms of health are much tougher and much tighter?

**Mr. D. Frigot:**

Tougher, yes.

**Deputy P.J.D. Ryan:**

So that adds to the cost?

**Mr. D. Frigot:**

Yes.

**Deputy P.J.D. Ryan:**

What else adds to the cost is that you are going to get much fewer results for your money. What are the advantages of it then for a farmer? Why would he do it, other than the cost?

**Mr. D. Frigot:**



I do not know. In this situation in Jersey, I do not believe any embryos will come in. In fact, the Society were not wanting to bring in embryos when we debated it. The rules of the Jersey herd book do not allow for imported embryos to be registered so that is important. If they are not registered, the herd in which they are used cannot sell their milk to the Milk Marketing Board under the present rule.

**Deputy P.J.D. Ryan:**

It is probably not an important one and we should not spend too much time worrying about the possible beef type situation, but would you envisage that in a beef scenario?

**Mr. D. Frigot:**

They will not bring in embryos.

**Deputy P.J.D. Ryan:**

No, because that is even worse from an economic perspective?

**Mr. D. Frigot:**

Yes, definitely.

**Deputy P.J.D. Ryan:**

Much worse.

**Mr. D. Frigot:**

Yes. I really think the embryos are a red herring, to be honest, an absolute red herring because dairy farmers are wanting - and this is the very essence of the whole argument - to improve their Jersey cows and supply milk to the Jersey Milk Marketing Board in a more efficient way. At the moment they cannot do that. They are certainly not going to be into the game of embryos. I will tell you, the people who buy embryos are the people who show their cattle and want to have the prestige of winning shows, of selling offspring. There was a sale in England a couple of months ago, a sale called Smiddy Hill - that was the prefix of the event. The owners are multi-millionaires and they have been playing at the game with black and white cows and Jersey cows for the last few years. They have won all the top shows, the Royal shows and all that sort of thing, and they became bored so they are selling their cows now. They have sold their cows and those cows made a premium because they were sold mostly to like-minded people, I suppose. In actual fact, those are the only type of people that would entertain using embryos really.

**Deputy P.J.D. Ryan:**

Is it a short cut to improving the genetics?

**Mr. D. Frigot:**

It introduces a new blood line into your herd. If it turns out to be a good animal, yes, it is a short cut, but it is a very minimal cut. As I said to you before, you can breed 100 cows for the same cost of half a dozen embryos and the improvement you can get on 100 cows is much greater than you can from half a dozen embryos.

**Deputy P.J.D. Ryan:**

Anything further on embryos before we move on?

**The Connétable of St. Saviour:**

Just one thing. Can you check the sex before it is ...

**Mr. D. Frigot:**

You are not allowed to.

**The Connétable of St. Saviour:**

So you do not know whether you are going to get a bull calf or ...

**Mr. D. Frigot:**

You can do it. No, you do not. I happen to be a part-owner of this cow. When we flushed her, and that is the process of extracting embryos, we had her bred to semen that was sexed semen so the chances are she is going to have a higher number of heifer calves. We do know that the 2 calves that are growing inside those recipients (she is in Washington on the west coast of America) are female, but under international law the embryo is not allowed to be punctured in any way to be exported.

**The Connétable of St. Saviour:**

So you cannot tell?

**Mr. D. Frigot:**

No, you can do it on the farm in your own country, but you cannot export that embryo. It has to be whole. It must not be punctured so, no, we cannot define it.

**The Connétable of St. Saviour:**

So that in itself can affect your economics?

**Mr. D. Frigot:**

Yes.

**The Connétable of St. Saviour:**

Because you can with the semen whereas you cannot with an embryo.

**Mr. D. Frigot:**

That is right, yes. Question 3 is: "What controls do you envisage to avoid excessive use of semen from a very small number of bulls?" Sam, do you mind handing this one out, please? I will say now that David Hambrook, who is the livestock manager at the R.J.A. & H.S. (Royal Jersey Agricultural and Horticultural Society) deals with all things with 4 legs, he and I worked this out and we prepared this yesterday so David has been doing some work on this. Very simply, I want to say that you ask about usage and other than the rules of the Jersey herd book there should not be any rules on usage. In other words, it would be wrong for the Society to say, or anybody: "We will only bring in semen from 2 bulls and everybody has to use those 2 bulls." It has got to be the breeder's choice. He has got to be able to manage his own affairs and choose the bulls that he wants to use. As long as those bulls, and the semen from those bulls, complies with the veterinary health regulations, the law of Jersey and the European laws, of course, and also the Jersey herd book rules then those, I think, are the extent of the usage regulations. Interestingly, in Jersey today 382 bulls, which we have here, have been used in the past 8 years; from 2000 to 2007, 382 bulls were used. There was comment the other day about lots of bulls being used, but only 70 of those bulls have sired enough daughters - that is at least 35 daughters - to have a meaningful influence on the Island herd. The other 300-odd sired less than those 35 daughters. In fact, half of the bulls used had less than 10 daughters so in genetic terms they make no contribution whatsoever to the breeding of the Jersey cow. Now, 6 of the top 10 bulls that we used - and those top 10 accounted for 20 per cent of all heifers born - were very closely related. I challenge people to say we have a very wide genetic base; it is closing all the time. I made a similar study in 1981 and in that study there was all the heifers born and registered in Jersey from 1975 to 1980. There were 644 bulls used in that period that sired at least one daughter; it was getting towards twice as many bulls, but there were many more herds in those days. At that time the bulls on average sired 7.7 daughters, under 8 daughters a bull, so there were a lot of bulls used, but not many had a proof that we knew anything about. The most popular ones of the day sired over 200 daughters so we were already 30 years ago starting to narrow blood lines and as there are less herds (and we have 29 herds today) there is at least 10 or a dozen who have never kept a bull in their lives and are not likely to, so our breeding herds are well under 20 in number.

**The Connétable of St. Saviour:**

Could I just ask for the record, roughly what date did they start using artificial insemination as opposed to natural serving?

**Mr. D. Frigot:**

1968, 1st August 1968.

**The Connétable of St. Saviour:**

In Jersey?

**Mr. D. Frigot:**

In fact, that is the company that I own now. It is now called Jersey Island Semen Exports, or J.I.S.E.X. for short. The company was started by Ernie Goden(?) and Lord Jersey, ex-Senator Goden at the time. But Mr Pallot was one of the directors of the company who started A.I. (artificial insemination) in Jersey. There were 12 directors and they formed the very first artificial insemination centre in Jersey. That was quite some years after it had gained popularity in the rest of the world. It was the mid 1950s when A.I. really took hold across the world and, therefore, changed the breeding aspect of cattle. Up until then we were kingpins in the Jersey world because there were so many bulls in Jersey and every farmer was able to use any bull that he wanted. He could go to his neighbour, and did. They went to their neighbours, loaded up their cows on the trailer or walked them down the road, bred them to what we would call a stud farm, almost a little A.I. centre on its own only natural. Therefore, we could make improvements within the Island that other countries could not make because somebody living in another country, Australia or America, or wherever, they could not load their cows up and go to another farm and breed them. They would purchase or a breed a bull and use that bull in the herd. If he was good the herd improved; if he was not the herd would go down. That was the form of breeding. With artificial insemination it turned the whole thing round and while Jersey was locked in the traditions of breeding, other countries were by then identifying bulls that were the best of the breed and being used on a wide basis and then, a little later, on an international basis. It was just interesting here that in 1980, or that period, 1975 to 1980, the number of daughters per bull were 7, or nearly 8. The last period, 2000 to 2007, it is 20 daughters per bull. Now, are we going to be looking at 50 daughters a bull in time or 30 or 40 daughters per bull? If we are that means our bloodlines are going to narrow much more quickly and I would advance the opinion that without importation we are going to close our bloodlines much much quicker. This idea that with importation, it has been suggested, we will use so few bulls, in fact, it is quite the reverse because we have all of our bulls plus hundreds of bulls from around the world all doing slightly different things. So I think we will widen our genetics.

**Deputy J.A. Martin:**

You did answer question 3 saying that you would not impose certain bulls on farmers as long as everything else is okay where they came from. I think our question is, because it was put to us, the reverse of that, what if all the farmers decided to choose mainly the best bulls and that would or may be across 4, 5 or 6 bulls to breed into Jersey? There is no control over that but you are saying that it is very unlikely for different reasons?

**Mr. D. Frigot:**

I think it is unlikely and I know this will not happen. Why do I know? Because some farmers in Jersey, in anticipation of the law change, have already chosen the bulls that they want to use and, in fact, for several years now some have secured semen in case it can come in and that is from bulls that are no longer available generally because they have passed on.

**Deputy P.J.D. Ryan:**

But they own the semen within the U.S.A., Canada or ...?

**Mr. D. Frigot:**

In the U.S.A. -- yes, that is right. It is an investment they consider to be good

**Deputy P.J.D. Ryan:**

It is not imported but they are owning it outside of the Island.

**Mr. D. Frigot:**

If the decision is "No", well that semen will be sold. If the decision is "Yes", they can bring it in then --

**Deputy J.A. Martin:**

They are ahead of the game.

**Mr. D. Frigot:**

Yes, they are ahead of the game and that is what they want to be. You hit the nail on the head, they want to be ahead of the game, they do not want to lag behind.

**Deputy J.A. Martin:**

Yes, sure.

**Mr. D. Frigot:**

Now, I can tell you that the number of bulls that have been selected so far exceeds a dozen, so there will already be - without giving it any wide promotion or thought - a wider selection.

**The Connétable of St. Saviour:**

Could I just ask on that same score does the Society see itself with the overview so that they could warn farmers if they thought the selection was coming too narrow?

**Mr. D. Frigot:**

Yes. It is in the Society's interests. I think one must appreciate that the Society is all about the improvement of Jersey cattle; that is our fundamental reason for being there. The Royal Jersey

Agricultural and Horticultural Society is a horticultural society for gardeners and people who like growing things and on the agricultural side it is for the registry and improvement of the Jersey breed of cattle. It started in 1833, the Home Office introduced it in 1866 and the very, very first rule in 1833, the very first reason for the Society being formed, was to improve the standard of cattle. We have always done that and we still want to do that. The Society obviously wants the ability to do that. So, yes, David Hambrook, as I said, was the livestock manager there and he studies the breeding carefully and then if there are any red flags to throw up they will be thrown up, in terms of breeding.

**Deputy P.J.D. Ryan:**

Question 5, first of all, would you accept the prime reason for importing semen was to increase production? I think you have already mentioned that there are other reasons as well.

**Mr. D. Frigot:**

Yes.

**Deputy J.A. Martin:**

Why have we skipped 4?

**Mr. D. Frigot:**

I will come to 4 very quickly. Do you want me to answer 5 first?

**Deputy P.J.D. Ryan:**

I will tell you what, let us go to 4, as Judy says. The reason I skipped 4, Deputy, is because I did not think this was in Derek's area of expertise.

**Mr. D. Frigot:**

Well, that is what I have got. The answer to question 4 is I am no longer the president of the R.J.A.&H.S. (Royal Jersey Agricultural & Horticultural Society) and I think this question should be directed to them. I understand, however, that they are talking to scientific organisations. You have already interviewed Dr. Kurt van Tassell from the U.S.A. I believe they are in contact with Dr. Mike Coffey at the Scottish Agricultural College. Also, can I just point out that there is - and they will tell you - a store of 120,000 units of semen at Trinity which includes samples of semen from every bull that has been collected since 1968. So there is a vast store of traditional genetics.

**Deputy J.A. Martin:**

As I say, it is not your expertise, but why I thought what I was going to ask you what you do, you say you do not import to Jersey but you do not have any problem transporting and importing across the whole of Europe or do you? Because this is under a convention, it is an international E.U. (European

Union) convention that the U.K. government has signed up, supposedly acting on behalf of Jersey. So I am asking you, even though there is a convention, do you have any problem moving semen around Europe or from any other country?

**Mr. D. Frigot:**

No. Well, there is not a country in Europe, apart from Jersey, that prohibits semen importation. Every member of the E.U. signed up to the Veterinary Regulations that exist.

**Deputy J.A. Martin:**

This convention, as I say, is an E.U. convention, it has not affected you. That is fine, that is all I wanted to know.

**Mr. D. Frigot:**

No, it has not.

**Deputy P.J.D. Ryan:**

Are there any other jurisdictions of countries around the world, that you are aware of, that has closed herds that have a similar sort of restriction?

**Mr. D. Frigot:**

No, not one. No, I do not think so. I will be honest, I cannot think of one but I might be wrong.

**Deputy P.J.D. Ryan:**

That you are not aware of.

**Mr. V. Pallot:**

The Prince of Wales' herd?

**Mr. D. Frigot:**

But the Prince of Wales' herd is in Gloucestershire.

**Deputy P.J.D. Ryan:**

But the country --

**Mr. V. Pallot:**

No, the Rare Breed Survival Trust?

**Mr. D. Frigot:**

Well, yes, but the Rare Breed Survival Trust is just that. It is trying to protect indigenous breeds of pigs, sheep and cattle. They are now using these breeds to try and improve traits in modern breeds. They are basically breeds that are almost got down to the last few. I mean, somewhere or other the British White cattle have been protected and, yes, that was a singular herd of cattle and there are probably a very satellite herds now of British White cattle. But the Jersey breed is not in that situation, it is the second largest breed in the world. It is certainly not in that situation.

**Deputy P.J.D. Ryan:**

You have already answered the question that you do not consider the closed Jersey herds to be a rare breed.

**Mr. D. Frigot:**

It is different. I mean, Catherine Vint, I think, explained it pretty well the other day that the Island cattle, alongside the internationally bred cattle that they had, what they saw was the difference in the performance of these cows and the type of these cows but they were the same breed. Of course, hundreds, if not thousands, over the years of cattle have left the shores of Jersey and been bred with bulls from other continents or countries to improve them. But they are still the same breed; it is not a rare breed. It is interesting; in my original submission I mentioned colours. Now, in the old days we used to have quite a lot more mulberry cows, which is an almost -- not a black cow like that but a black with a brown tinge, as opposed to the black and white cow, which is a black with a black tinge, if you like. We used to have silver breakouts. We do not have those cows any more. Now, why is it that in a closed herd that has never been touched by anything else we have not got those genetics or those genes in our cattle today?

**Mr. V. Pallot:**

What colour forms the current --

**Deputy P.J.D. Ryan:**

Sorry, sir - I beg your pardon - this is not a general forum. That was more in the public debate that we had. If you do have some questions to ask, no problem, but could you direct them -- perhaps jot them down on a piece of paper and if you would like to do that and give them to our officer then by all means, we will ask those questions of the witnesses that we bring forward.

**Mr. D. Frigot:**

Mr Pallot is the next witness so he will have his opportunity.

**Deputy P.J.D. Ryan:**

Yes, exactly.



**Mr. D. Frigot:**

No, we have lost certain genes of the cow through the generations. Now, colours are easy to identify so we know we have lost those genes. But there are other genes that I am sure - absolutely certain - we have lost in the genes like in the quality of the bone structure of our cows. Our cows are much rounder in the bone. John Le Feuvre mentioned that the other day and they are much rounder in the bone than some populations elsewhere. I believe we have lost some of the quality genes that we did not want to lose. Production is another one. I will stand to give you another paper in a few minutes but you will see that our production is a lot lower, as you have been told before. So we have lost other genes along the way and we know this through cow families. I mean, in the old days there were specific cow families that are totally gone. I mean, the Labey family from Grouville, for instance, Deputy Labey's ancestors; they were great breeders of cows and they had cows like the Fontaines, naming cow families, you know, and the Sultanes, and all this sort of thing. Those cows do not exist now; they really do not exist except they are somewhere out there in the world. Number 5.

**Deputy P.J.D. Ryan:**

Question 5.

**Mr. D. Frigot:**

Before we do that, can I just make some comment because it is part of this chart; somebody has said that quite strongly that our cows do not last as long as others -- sorry, our cows last longer. I think the young Sarah Barette said that the other day. I think Kate Le Way(?) has referred to that in her submission. The life expectancy in Jersey, and this is actual facts --

**Deputy P.J.D. Ryan:**

Where are you quoting those facts from?

**Mr. D. Frigot:**

This is quoted from the --

**Deputy P.J.D. Ryan:**

What I am saying is you cannot say they are actual facts unless you can tell me where they are coming from.

**Mr. D. Frigot:**

Yes, okay, sorry, N.M.R. (National Milk Records).

**Mr. D Hambrook:**

The body in the U.K. which is now called Dairy Council, which was the Milk Development Council, they do have a body in there, they have a genetics evaluation director whose name is Dr. Marco Winters. The Scottish Agricultural College with Mike Coffey's team of the Genetics Department evaluate all the genetic efficiencies and inefficiencies of all the dairy breeds in the U.K. and these are facts based on historical information for Jersey Island and the U.K. Jersey population, probably over the last 15 years.

**Deputy P.J.D. Ryan:**

Right, thank you.

**Mr. D. Frigot:**

Thanks, David, for that. They have equated life expectancy in Jersey to 4.2 lactations or 4.2 years of milk. In the U.K. the Jersey's life expectancy is 4.0.

**Deputy P.J.D. Ryan:**

Would you mind so that it helps the public, how old is that?

**Mr. D. Frigot:**

Sorry, lactation is 10 months, 305 days. The natural cycle of a cow who calves and after calving she comes into milk, the natural female thing. She will then milk for 10 months. Now over that 10 months she will probably rise to a top of milk production which might be 20 litres of milk a day or 30 kilos - some cows do 40 kilos - and then it will gradually tail off. After having calved 3 months she is then put back into calf because she carries her calf for 9 months, okay? So when she is about 7 months pregnant, in other words, at the 10-month period, 305 days - and all official records are based on 305 days of lactation - she is dried off. The drying-off period is very important because it gives her a chance to not be milking but to be feeding that calf and then 2 months later that calf is born and the whole cycle starts again. So 4.2 lactations, bearing in mind that a cow calves her first lactation at 2 years of age. So 4.2 is approximately 6 years.

**Deputy P.J.D. Ryan:**

Six years of age?

**Mr. D. Frigot:**

Yes. That is the absolute average. In the U.K. it is 4.0, which is only 10 weeks less, okay? So, a very, very small difference. Now, I believe the difference is --

**Deputy P.J.D. Ryan:**

Do we have any of those statistics for Canada, say?

**Mr. D. Frigot:**

Yes, we do.

**Deputy P.J.D. Ryan:**

Perhaps I will ask you if those can be supplied.

**Mr. D. Frigot:**

Yes, we can supply those.

**Deputy P.J.D. Ryan:**

What we would like to know, very quickly, is the same arguments that you are making about the Jersey cow, the life expectancy of the Jersey cow being ever so slightly longer than that of a U.K. cow, do you know off the top of your head --

**Mr. D. Frigot:**

Not very different.

**Deputy P.J.D. Ryan:**

To the U.S.A., to Canada ...?

**Mr. D. Frigot:**

The U.S.A. I think a Jersey cow is -- I have forgotten. There are so many days of productive life it is expressed to us that we can equate it to the same. Incidentally, a Jersey cow in the U.S.A. on average - and this is taking millions of becquerels - lives about 6 months longer than the black and whites in the U.S.A - the Holsteins. I believe that the difference between here and the U.K - and remember, the U.K. is mostly of international breeding. It is one of the countries in the Jersey breed that has got more international genetics in it than almost any other because they have brought in from Australia, New Zealand, Denmark, Canada, U.S.A., more than any other country, so it is a very good comparison. Also, the environment is very similar to us; their husbandry is similar to us, et cetera. I believe the difference is attributable to environmental conditions in Jersey and there are 4 points I would like to make. Subsidies in Jersey are based on an annual payment per cow; it was decoupled from production some few years ago. So, in other words, if you have got 110 cows in your herd in a year you will be paid a subsidy for 110 cows - if you have 108 you will only be paid for 108. U.K. do not get government subsidies for cows. We also, in Jersey, have a number of small herds that tend to keep their cows longer. My nearest neighbour is 77 years of age; he still tethers his 15 cows. Those cows are going to live longer, yes. They have not got the stress of going through a parlour each day; they are part of the family and he does naturally keep his cows longer. In Jersey we have very little inter-herd movement.

In the U.K. cattle can change hands and move through auction markets and private sales. There is a much greater movement of cattle and, yes, movement of cattle can equal stress and, yes, that would lop off a week or 2 or more of a cow's life compared to Jersey. We do not have any inter-change of cattle. The other thing that is significant, I think, is the abattoir is incapable of handling the larger number of cattle due for slaughter at the start of the winter. When farmers stop grazing their cattle outside and bring them in for the winter there is always a higher number of cattle. Over of the few years the slaughterhouse has not been able to cope with it so animals have stayed in the herd a little longer - not because they are profitable but because they have got to stay there. In fact, you can see groups of dry cows in fields that should have been gone a long time before but there is plenty of grass around. Our grazing system is longer than the U.K. so, yes, they will keep them and they will get the subsidy for them. They are putting on weight so they will get a bit more at the slaughterhouse when they eventually go. So there are very good reasons --

**Deputy P.J.D. Ryan:**

Sorry, they will get a bit more at the slaughterhouse when they eventually go?

**Mr. D. Frigot:**

Well, if they have a bit more weight if they are paid by the kilo. If they sell a cow for slaughter at the butcher or somebody else it is usually on the kilo weight. So if they put a bit of weight on the cow and there is lots of rye grass around. It is probably not large reasons but together it certainly negates that 10 weeks difference. What I am trying to say is that a Jersey cow in Jersey naturally does not last a lot longer than the Jersey cow in the U.K.

**Deputy P.J.D. Ryan:**

Production diseases.

**Mr. D. Frigot:**

Yes, production diseases. It is not about increasing production. Our farmers cannot increase production per se because they are governed by quota. We have a quota system that will buy so much milk from a farmer each year. Somebody with, say, 120-cow herd has a quota of 600,000-700,000 litres?

**Mr. D. Hambrook:**

Less.

**Mr. D. Frigot:**

Less - 500,000 litres? Is it 400,000, is it? So if he has got a quota for 400,000 litres that is all he can sell to the Dairy.

**Deputy P.J.D. Ryan:**

But if he could produce that with a smaller number of cows surely that has got to be more economic?

**Mr. D. Frigot:**

That is the whole point. What we are not talking about increasing production, we are talking about making production more efficient.

**The Connétable of St. Saviour:**

Can I just ask, the quota that he is limited to is not dependent on the size of his herd?

**Mr. D. Frigot:**

Yes, each farmer has a quota that they have to work to and if they have got 100 cows, they have got a quota of, say, 400,000.

**The Connétable of St. Saviour:**

Can you tell me how it is going to be an improvement in making the cows more efficient? If his quota is going to stay the same there is no point --

**Deputy J.A. Martin:**

It will take less cows to do it.

**Mr. D. Frigot:**

Yes.

**The Connétable of St. Saviour:**

I just said is the quota dependent on the size of the herd and you said, yes. You cannot have it both ways.

**Mr. D. Frigot:**

Sorry, no, he does not have to have to have the number of cows. All he has to do is produce the amount of milk that he has the quota for and if he can do that from 20 cows less than he has now then that is good for him.

**The Connétable of St. Saviour:**

His quota will not change because his number of cows drops?

**Mr. D. Frigot:**

No.

**The Connétable of St. Saviour:**

Right, okay, that is fine.

**Mr. D. Frigot:**

There is another aspect and that came out through Andrew Le Gallais the other day that if the Milk Marketing Board want to increase their sales of product then they may well release more quota to the farmers.

**Deputy P.J.D. Ryan:**

But the question was about production diseases.

**Mr. D. Frigot:**

Well, I cannot think of any production diseases as such. Sam, would you mind just handing this one out, please?

**Deputy J.A. Martin:**

I think we are asking if it is a less amount of cows that producing the same amount of milk is there any more of a likelihood of the cow becoming ill, I suppose, through extra milking, in layman's terms -- I think I am asking the question --

**Deputy P.J.D. Ryan:**

Putting more stress on them.

**Deputy J.A. Martin:**

Yes, putting more stress on the cows or udders, if you know what I mean?

**Mr. D. Frigot:**

I do not think it puts more stress on the cow. In fact, if you have less cows in your unit it is less stressful for the cow. You know, a cow has to be milked twice a day. If she is bunched up in a herd in a barn, for instance, in the winter months where there is not too much room around for all the cows, they are up to capacity, I guess there is more stress than if there was less capacity but producing the same amount of milk. I think it could be contended that the opposite --

**Deputy J.A. Martin:**

Yes. It is just a question that -- I think that is what we meant by the question not production ...

**Mr. D. Frigot:**

Yes, it is interesting. What I want to show you on this one is the National Milk Records in the U.K., for which we do our milk recording as well; it is the report for last year. Now, if I can just point out the Jersey figures on the first page you will see that the average Jersey in 2006-2007 averaged 5,635 litres of milk, the butterfat is 5.26 and protein is 3.81. Overleaf you have the Jersey Island average for the same period which is exactly 1,000 litres less, the butterfat is slightly less and the protein is slightly less. So I think we can establish from that that Jersey cows in the U.K. were fed exactly the same way as ours in a similar environment, similar farm setups, are producing 1,000 litres more. The next figure to the right is the cell counts which is the infections in udder. I mean, you could call that the health of the cows. The lower that figure is the better. Now, in the U.K. the Jerseys there have a cell count of 186,000; in Jersey it is higher, it is 202,000. Now that would lead me to believe that the Jerseys in the U.K. are slightly healthier cows.

**Deputy P.J.D. Ryan:**

They do fluctuate quite a lot, though, from year to year, do they not?

**Mr. D. Frigot:**

Yes. The Jersey ones particularly. If you take the 10-year average it is well over 200,000, whereas the U.K. on a 10-year average is about 180,000. It is significant.

**Deputy J.A. Martin:**

Sorry, who is this N.M.R.?

**Mr. D. Frigot:**

National Milk Records.

**Deputy J.A. Martin:**

So this is a government sort of -- it cannot be challenged? We could put that at the back of our report and that would stand up - these figures?

**Mr. D. Frigot:**

Yes. They are official figures.

**Deputy J.A. Martin:**

That is all I am asking.

**Mr. D. Frigot:**

The N.M.R. do our recording. Our recording is conducted by the Society in Jersey, the R.J.A. & H.S. and they send samples off daily to England and it is all managed under the same recording system as the

U.K.

**Deputy J.A. Martin:**

Yes, thank you.

**Deputy P.J.D. Ryan:**

Could I just ask you a question, if you look at the Jersey Island service, trend-wise the cell count has come down slightly over the 10-year period, whereas the cell count of the Jersey in the U.K. has, on average, gone up in that period.

**Mr. D. Frigot:**

It has gone up slightly.

**Deputy P.J.D. Ryan:**

The trend is there. Why would that be?

**Mr. D. Hambrook:**

As with all things bovine, when we took on the Milk Recording Service from Government in 2002, the sampling is now done at the same laboratory in the U.K. Prior to that it was done in the laboratory at Jersey Dairy - the somatic cell counts - there are very subtle differences. We have also done some tests with Guernsey Island using their lab there and there are some subtle differences depending on what sort of technology you use. So you will see a drop, I would suggest, from 2003 onwards. The last 4 years, that is to say, the 4 years that are directly comparable to the U.K, the previous ones we were looking at the results being calculated on a different machine.

**Deputy P.J.D. Ryan:**

So we cannot really pay too much attention to the cell count, would you say? But the point that I think you are making is really in very general terms.

**Mr. D. Hambrook:**

If I could take it one step further and follow the question on infectious diseases, I would suggest that if I was a local farmer who wanted to dramatically improve somatic cell counts through genetic management, I would not have the availability to bulls that would enable me to make those changes if I only had the local bulls. There is insufficient - to go back to that same thing - genetic variation in the local population to make dramatic improvements in any field.

**Deputy P.J.D. Ryan:**



In health?

**Mr. D. Hambrook:**

Internally.

**Deputy P.J.D. Ryan:**

Yes, but we are talking about health. Well, overall you are saying that the overall health of the Jersey in the U.K. is probably a bit better than the Island health.

**Mr. D. Frigot:**

Yes.

**Deputy P.J.D. Ryan:**

The only general point is that I think if we start reading too much into this --

**Mr. D. Hambrook:**

Yes, it is very functional.

**Deputy P.J.D. Ryan:**

We are running short of time so I think we need to move on as quickly as we can.

**Mr. D. Frigot:**

Yes, number 7, in Kate Le Way's submission she stated that we were not comparing like with like that is recording milk recording, et cetera. She states that in some herds in the U.K. they are not all recorded but have selected recording, you know, 70 cows in the herd are recorded. This is not so. It is not allowed to be so. Under the rules of milk recording all animals in the herd must be recorded. There are some very small herds in the U.K. that do not record because it is not cost effective and we are talking about people who have just a few cows, maybe make a bit of ice cream to sell or cream sales. They are not really pedigree herds or anything like that. Some of the very large commercial herds, and I am talking more about Holstein rather than Jerseys, they do not officially record because they have sophisticated equipment in their parlours for doing the amount of recording that they are satisfied with. All other Jerseys - and we are talking about virtually, and I use the word "virtually" - it is probably as near to 100 per cent of registered pure Jersey cows in the U.K. are milk recorded. So we are comparing like with like, it is not a question of something different. In fact, I am quite confident in saying that if milk recording in Jersey was not heavily subsidised by Government, at least a third of the cattle would not be recorded. It is really only for information for the breed as a whole that we do that. Number 8: Jersey herd books. It is interesting because Nick Blampied was talking about Jersey herd books not going back far enough in other countries and they were formed in the 1950s or something. The Jersey

Herd Book in the Island, 1866; the American Jersey Herd Book, 1871; the English Jersey Herd Book, 1879; the Canadian Jersey Herd Book, 1912, and, in fact, prior to 1912 they registered their cattle in the American Herd Book; New Zealand, 1905; Queensland, Australia, a similar year and the South African one started in 1940 -- sorry, that was volume 3. I think they started again around the 1920s. Denmark was the other country; they started their Herd Book in 1902. I gave Sam this the other day, I do not know if you have had a chance to see that. But anyway, it proves that a cow, or a particular cow in this case, was born in America, bred in America, every line of her pedigree goes back to the Island and we can trace that through these very valuable Herd Books which are totally above any suspicion. There is no question that pure bred Jerseys outside of the Island trace their ancestry back here.

**Deputy P.J.D. Ryan:**

You are saying that the Herd Book guarantees this; the U.S. Jersey improvements only come from Holsteins?

**Mr. D. Frigot:**

Exactly. They have sections of their Herd Book in latter years where they have what they call “genetically recovered” animals. Indeed, there is now a section of Herd Book that could include Holsteins but it is very, very well documented and we skirt around that quite easily. What guarantees are there that the high milk yield and lower butterfat characteristics of the U.S. Jerseys are not due to integration from breeds such as Holstein? Well, for those very reasons they are not. Milk payments dictate how production is achieved in the U.S.A. and they pay for their milk mostly on a cheese-yield basis... They can get more pounds of cheese from a given quantity of Jersey milk than we can from, say, Holstein milk, and that is how they are paid. But they want pounds of butterfat and pounds of protein rather than percentages. That is why they find that their most economical or profitable cow is a cow that gives over 8,000 litres of milk at about 4.7 butterfat and 3.9 protein, which is about their national average. Question 9: To what extent have the (inaudible) of Jersey cattle been characterised for functional traits? Well, historically, the Island’s recording of such traits has been absolutely abysmal. It does not exist. Up until recent times we have not recorded for health traits. Other countries do in fact they are far, far ahead of us in that. Denmark, for instance, have really looked for the health traits in their cows and they have selected the cows that are low in cell count and other things like that.

**Deputy P.J.D. Ryan:**

Which we have not been doing?

**Mr. D. Frigot:**

We have not been doing at all. We do record the cell counts now but we have not actively, even up to today, sought out bulls that are going to produce cows that are lower in cell count; that are more efficient for other traits.

**Deputy P.J.D. Ryan:**

How recently is the occurrence -- recent years?

**Mr. D. Frigot:**

Recent years but very, very recent, we are way behind them. My last comment, if you do not mind, breeders want to use sires to improve their cattle and particular traits. They will search the world to do this and some have. As I said to you earlier, some have taken those opportunities up to now. A Jersey cow is a Jersey cow. I am going to ask you a question, if a Yorkshire terrier dog is born outside Yorkshire, is it not a Yorkshire terrier? In Jersey there are about half a dozen Island breeders who have travelled quite extensively through the world to select particular bulls to improve their own cattle if and when the day comes. These people are real breeders. In Jersey at the R.J.A. shows, which is, I think, an indication of the interest taken, we have less than 10 farmers who regularly show their cattle, who regularly select the bulls that they want. We have 20 dairy farmers, I would say, with probably about 10 or so who are actual breeders who want to make those breeding decisions to improve their cattle. The other farmers do not have to use international semen if it comes in. They, at least, have a choice. Ladies and gentlemen, that is it.

**Deputy P.J.D. Ryan:**

Thank you very much for your time, Mr. Frigot, this morning.