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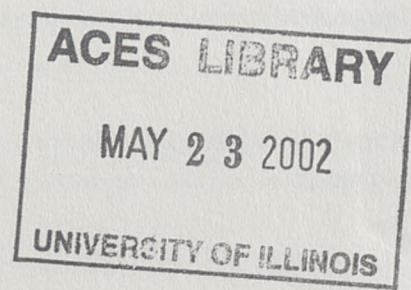
8TH INTERNATIONAL FARM MANAGEMENT

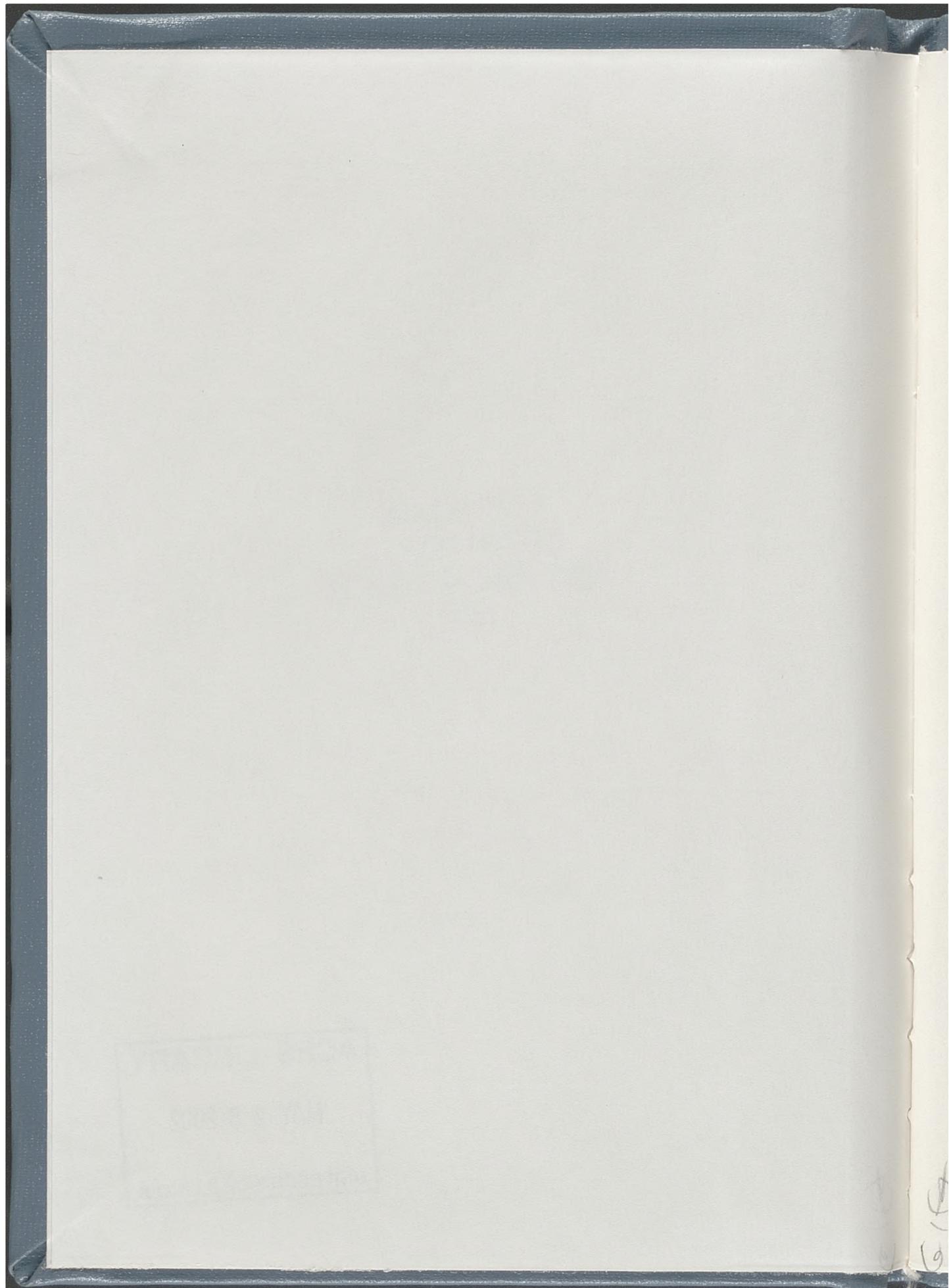
SUPPLEMENTARY PAPER

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Ladies and Gentlemen

My name is **UWE ROTH**. I come from Chile and live in the south of the country near the town Temuco, 800 kms south of the capital Santiago. The organisers of this Congress asked me to speak about the system of control of my dairy herd.

First I will give you a survey about the history, the climate and where my operation is situated.

160 metre above sea level and on the 42 degrees longitude that is corresponding to the northern hemisphere about Sicilia. From the Humboldstream the climate is involved and so we can say it is about middle European climate. The lowest temperature in winter will arrive -5 degrees Celsius (which does not stay all the day) and in summer +30 degrees Celsius. But at night it cools down, and so we can have up and down temperatures of 28 degrees celcius within twelve hours. The annual rainfall is medium 1800 mm where 65% rainfall is in winter, 30% in spring and only 5% in summer. Summer lasts 3 months. The soil is a young volcanic - ash soil, that lays several metres thick on the endmorens and is very easy to work.

The farm is, since built in 1886, in the hands of our family and I am the fifth generation in Chile.

Sorry, I speak so little English, so that I can hold this speech in your language, but I hope that my brother in law, Peter Dreckinauu from Hamburg will translate it correctly. Thanks Peter.

Now to the theme.

The farm I will speak about is my own and has 3200 ha where 1100 ha are forestry, *Pinus radiata* and natural forest (200 ha farm land and 900 ha permanent grazing land. It is subdivided into three areas: Forest engineer with 40 men, administrator for the farm work with all machinery and administrator for the animals and all work in the grassland. In all there is work for fulltime men, of which one third work on the animals.

At the moment we keep 900 dairy cows separated in six units each of 150 cows. From the 1st September until the end of April they are milked only on the pasture, only four months under roof and the cows go out in the pasture for the day. 615 millilitres are produced and the calving rate is 50% in spring and 50% in autumn. The calves are brought up with milk replacement food and hay and concentrate hay is fed in two places.

There are two breeds of cows held, American Holstein cows for milk production and Red and White Holstein that are used both for milk and beef. Once a month all cows are controlled for milk production. The system will be described a little later.

We get the semen from all over the world, also from New Zealand, for example from the bull Prefect, which gave us very good daughters. I may not be able to get further semen from this bull as he may be dead, but if not I will return with semen from this bull to Chile. This bull brought us daughters of middle size with an excellent milk amount which suit exactly our economic interests. We want the animals to produce most of the milk out of the basic feeding and produce only the amount of milk out of concentrate if it is economical.

And now we come our milk records.

This milk control system we use in all our six dairy farms. Every time we can follow every single cow from the first calving until the eliminating in the horizontal and in the vertical we overlook and overproof all the herd.

The horizontal you see first the control number of the cow,

- 2) then you see the father
- 3) the control number of the mother
- 4) and her classification
- 5) grandfather
- 6) grandmother
- 7) her classification
- 8) great grand father
- 9) great grand mother
- 10) last milk production of the cow

The above you see the months from January until December from the year 1986 until 1990. On the day of the calving you see a vertical sign, and after that the monthly milk records. Then you see the milk control days and put the sum of the yearly milking record in the surrounded part of the two months, when the cow is dry. Then in this case the cow has calved again and it begins again. So we can follow this system the whole lifetime and the amount of milk every year of this cow. At least under observation we find remarks such as "Why the cow has been eliminated, on what date and to whom she was old".

The point with the circle around means pregnant.

The crosses means to be in heat. The point is done, when the cow is covered, the circle around shows that the Vet says she is pregnant.

Small signs as there are m = she is lame.

On the date of milk record, n = normal after calving and free to be covered again and others give us the possibility to work nearly only with this book.

In the vertical we can see the amount of milk of all the herd and can sum the average for each month.

So it is very simple to compare one month with the other and see what mistakes have been made in the feeding.

So for example if we compare the month of August 1988 with August 1989 we see that parts of the cows have calved later compared with the year before and that the average of milk was rather higher. With this system we control on my farm six herds of each 150 cows.

Each herd is milked by two men.

50% are calving in spring within two months and 50% in autumn. So we produce nearly the same amount of milk all over the year. We have our own assistant for the insemination on the farm. He also does the milk reports and the animal books.

The calving is very concentrated and all calves will be fed with milk replacers until 70 days.

The average of the red and white 1990 was 6,280 litres and with the Holstein Friesian 7,350 litres.

For eight months we use milking parlours that can be moved daily in the meadow where the cows are. Concentrate is fed after the amount of milk the cows give is known to the feeding person by a coloured string around the neck of the cow. In the four winter months the movable milking parlours are installed on a concrete floor next to the stable, where the cows are fed with fresh leaves of sugarbeets, grass silage and hay.

By the movable milking parlours we have the opportunity to do the silage on the meadows near the stable and we use about 30% less diesel by the short ways. In the time we do silage the cows are grazing in the meadows far away.

But now let's return to our book over the records. This we use not only in the Buro but also in the fields for the classification of the cows.

Shortly before the insemination the consultant for the animal records every single cow on:

1. the hooves
2. the udder
3. standing of the teats
4. frame broad - small, short - long, little - large
5. type - Holstein-Friesian, Canadian, European.

Every cow is marked by a plastic tag with a number in the ear so that she can be found immediately in the book and the consultant will be aware of the amount of milk and the problems while lactating. All animals below the average are eliminated.

So we can proof the used bulls by their daughters.

Now we will finish and if there are questions, please ask them.

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