



PLENARY SESSION OF THE IDF PROGRAMME COORDINATION COMMITTEE

CARLTON HOTEL, AUCKLAND, NEW ZEALAND

Sunday 28 October 2001, 08.00 - 15.30

Agenda item 4.4

Ewes and Goats Milk and Milk Products

Report by E Hopkin, IDF Secretariat with input from R Abrahamsen (NO),
G Kalantzopoulos (GR) & A Ayerbe (FR)

Please note:

The Plenary Session is invited to take note of & comment on the report and draw attention of the PCC to the suggestion to name a person to be responsible for coordination of these activities.

Comments

National Committees wishing to raise significant comments on this report are invited to submit them in writing. Such comments should be submitted by **8 October 2001** so that appropriate answers can be prepared.

1 Introduction

It has been agreed that matters related to ewes and goats milk and milk products should be referred to existing specialized bodies within the IDF structure dealing with those subjects for milk of all types. At the same time, however, it was also agreed that these topics should be regularly reviewed together for interested National Committees to have an overview of the situation. The function of this paper is to provide such a review.

IDF has potentially an important role to play in the development of knowledge and competence based on science in this field.

While it must be recognized that the production of ewes and goats milk is less than those of cows milk and buffalo milk worldwide, in many countries in which milk is produced from these species in commercial quantities the role of this production in the rural economy is significant. There is also considerable interest in the specific nutritional characteristics of ewes and goats milk and milk products insofar as they are different from those of cows milk.

2 New developments

Since the IDF World Dairy Summit in Dresden (September 2000) a significant number of topics have been proposed for work by IDF and the groundwork is already in hand for these items to progress. Indeed, a degree of enthusiasm has been built up by the experts and IDF can look forward to significant progress in this field in the next twelve months.

It was also suggested, in 1999, to name an expert in the field to take responsibility for co-ordinating the various activities. This suggestion has not yet been introduced formally, but could now be referred to the PCC.

2.1 Future of sheep and goats dairy sector NCs approved new work leading to the organization of another IDF symposium on economic and technological aspects of ewes and goats milk production and utilization and the marketing of the products. The symposium is proposed to be in two parts:

Part 1: Economics, policy, marketing

a) Policy – emphasis on the development aspect. How to use government support to the greatest effect. Alternatives to subsidies.

Payment systems for ewes and goats milk – reflections on result of IDF survey conducted in 2001

b) Markets – market development and comparisons.

c) Developments in commercial strategy

d) Presentation of the market and the products, country by country

Part 2 Technology, production technique, nutritional properties

a) Production – potential for improvement

Genetic improvement of animals (EAAP, ICAR) – productivity of animals and quality of milk

Lactation period

Husbandry techniques

Hygienic quality of milk and hygiene practice on the farm

b) Technology for traditional products

Adaptation of existing technology and development of specific technologies for manufacturing ewes and goats milk products

Problems and solutions. Link to the requirements of Protected Names of Origin and those of world trade.

Legislation – hygiene, composition: national, regional, Codex.

Potential of modern biotechnology.

c) Nutritional properties specific to ewes and goats milk products.

Several other international bodies having interest in this field have been invited to be involved in the work, as they were in the case of the previous symposium, not all have yet replied, but all are expected to accept (CIHEAM, CIRVAL, EAAP, EDA, FAO, ICAR and IFAP).

Responding to the New Work Item proposal, several NCs suggested additions to these ideas. The specific objectives of the symposium and the NCs' suggestions will be considered by the Action Team established to carry out the work. The AT comprises the experts put forward by ten NCs to participate and experts named by the co-operating international organizations.

2.2 Methods of analysis for sheep and goats milk Globalization of the trade in Milk and Milk products and the need for objective and constantly equivalent assessment of composition and hygiene has motivated most developed countries in standardization and harmonization of analytical methods and setting up adequate Quality Assurance and Certification Programs. These International Standards have been elaborated in IDF and ISO through the years, however, generally with cow's milk in mind *and methods for sheep and goats milk have lagged behind*. Recent efforts to evaluate the situation have shown the the performance of the standard methods in sheep and goat's milk analysis remains questionable, at least partly because of the limited applicability of these methods. In order to improve the situation it has been proposed that new work be undertaken IDF, in an effort to evaluate and to amend existing methods of analysis with respect to sheep and goat's milk.

Objectives The main relevant parameters are fat, protein, lactose, total solids, freezing point, urea, somatic cells count, total bacteria count, and detection of inhibitory substances.

The respective IDF standards are:

- Fat in milk: - Rose Gottlieb (FIL/IDF 1D:1996) - Reference method
- Nitrogen in milk: - Kjeldahl (FIL/IDF 20B:1993) – Reference method
- Lactose in milk: - (Still in initial development)
- Freezing Point in milk: - (FIL/IDF 108C:2001 Draft) – Reference method
- Total Solids in milk: - (FIL/IDF 21B:1987) – Reference method
- Urea in milk: - (FIL/IDF – ISO 14637 Draft) – Reference method
- Somatic cells count in milk: - (FIL/IDF 148A:1995) – Reference method
- Total bacteria in milk: - (FIL/IDF 100B:1991) – Reference method
- Microbial inhibitor tests in milk: - (ISO 13969/IDF 183 Draft)
- Determination of Fat, Protein and Lactose content in milk: - (FIL/IDF 141C:2000 – MidIR Guidance) – Routine method
- Fat content in milk: - (Butyrometric method -FIL/IDF 152A:1997) – Routine method
- Milk - quantitative determination of bacteriological quality – Guidance on evaluation of routine methods (FIL/IDF 161A:1995)

Within the spectrum of these methods, several issues of amendments have been traced in order to make the methods applicable for sheep and goat's milk analysis. Already project leaders in respect of reevaluation of some methods have undertaken collaborative work.

New Proposals Methods like Fat- Gerber Butyrometric, total solids in milk, total bacteria in milk, are for the time being considered to be of lesser concern. Automated methods reevaluation needs prior reevaluation and approval of respective reference methods. In respect of this sequence, it is proposed to start with reevaluation of the reference methods for fat, protein (nitrogen) and freezing point in milk.

These proposed New Work Items are being prepared for submission to NCs for approval. (At the time of writing the approval of the PCC is being sought.)

2.3 Milk-clotting activity A proposal for new work has also been received for a standard method for determining the milk-clotting activity of ovine and caprine rennets. It is expected that the PCC and NCs will be consulted in this topic in the near future.

3 Work completed

Since the IDF World Dairy Summit in Dresden the following item of work has been completed in this sector:

- Quantitative recommendations for milking machine installations for small ruminants (Bulletin of IDF No 369/2002).

4 Existing IDF work specifically related to ewes and goats milk

The present state of IDF work specifically related to ewes and goats milk is indicated in the Appendix .

Appendix

SHEEP AND GOAT DAIRY SECTOR ACTIVITY IN IDF

Standing Committee/ Task Force	Work item	Expected result	Deadline	Project leader	Comments
- Analytical methods for additives & contaminants	Ewes milk and goats milk – Suitability & application of microbial inhibitor tests	Standard method	April 2003	M Barbosa (PT)	First draft considered in San Pellegrino, May 2001, has been revised and issued to Project Group to be finalized by Dec 2001..
- Minor components and Characterization of physical properties	Lamb, kid, sheep & goat rennets – Total milk clotting activity	Standard method	To be determined	C Repelius (NL)	Proposal for new work has been received. See 2.3, above.
	Phosphatase activity in goat & sheep milk products	Standard method	To be determined	M Barbosa (PT)	Inter-laboratory study is in hand
- Dairy policies and economics	Future of sheep and goat dairy sector	Symposium to be organized with other bodies	2003 or 2004	To be elected by Action Team	See 2.1, above.
- Dairy technology	Technology for manufacturing ewes and goats milk products	Bulletin of IDF and contribution to previous item	2003 or 2004	A Ayerbe (FR)	See 2.1, above.
- Farm management	Milking machines for small ruminants	Bulletin of IDF (guidelines for manufacturers)	July 2001	P Billon (FR)	IDF recommendations are awaiting publication. Introduction into ISO standards for milking machines may follow in due course.
– Main components in milk	Extending the scope of existing standard methods to sheep and goats milk products	Revised standards	To be determined	G Psathas(CY), U Paggi(IT)	Proposals for new work have been received. See 2.2, above.
- Microbiological hygiene	Hygienic quality of ewes and goats milk and milk products.	Bulletin of IDF	To be determined	G Kalantzopoulos (GR)	The SC has received a written report from which it concluded that it is not immediately apparent that there are different hygienic problems specific to goat and ewe milk (other than somatic cell count). The

					management of safety appears to be the same as for cows milk. This conclusion is to be investigated further and the results considered at the next meeting of the SC.
- Quality assurance, statistics of analytical data, sampling	AT Indirect automated methods – Milk from species other than cow – Milkfat, protein, lactose contents AT Indirect automated methods – Milk from species other than cow – Somatic cell count.	Parameters to add to existing standards Standard method	December 2001 October 2001	U Paggi (IT) E H Ubben (DE)	Work should be specific to ewes milk and to goats milk. Data are plentiful. Ewes and goats specialists should be involved. Differences between breeds can be investigated (SC on Animal health).
- Standards for cheese ('SC')	Legal aspects of Ewes & goats milk cheese	Under consideration	To be determined	A Polychroniadou (GR)	An AT has been asked to prepare a possible draft standard wording or guideline addressing the labelling of cheeses made from ewe milk, goat milk or mixtures of cow's and ewe's/goat's milk for circulation to the SC on Standards for cheese