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Nota di contenuto	Milk and Dairy Products in Human Nutrition: Production, Composition and Health; Copyright; Contents; Contributors; Preface; 1 Production Systems around the World; 1.1 Ecological conditions; 1.2 Systems; 1.2.1 Small-scale milk production; 1.2.2 Specialised milk production in large commercial dairies; 1.2.3 Dairy ranching; 1.2.4 Urban dairies; 1.2.5 Pastoralists; 1.3 Feed resources; 1.4 Animal species used for milk production; 1.4.1 Cattle; 1.4.1.1 Milk yield; 1.4.1.2 Milk composition; 1.4.1.3 Milk production in the tropics; 1.4.2 Sheep and goats; 1.4.3 Buffalo; 1.4.4 Camel; 1.4.5 Mare 1.4.6 Yak1.4.7 Reindeer; 1.5 Breed improvement; 1.5.1 Pure breeding; 1.5.2 Artificial insemination; 1.5.3 Embryo transfer; 1.5.4 Genomic selection; 1.5.5 Crossbreeding; 1.6 Nutrition; 1.7 Animal health; 1.8 Reproduction; 1.9 Rearing of youngstock; 1.10 Housing; 1.11 Milking; 1.12 Milk marketing; 1.12.1 Marketing by smallholders; 1.12.2 Milk

collection; 1.12.3 Producer organisations; 1.13 Economics of milk production; 1.13.1 Productivity; 1.13.2 Longevity and lifetime production; 1.14 Criticism of milk production; 1.14.1 Resource use; 1.14.2 Impact on the environment; 1.15 Dairy development

References

2 Mammary Secretion and Lactation; 2.1 Introduction; 2.2 Origin and anatomy of mammary glands; 2.2.1 Types of mammalian species and mammary glands; 2.2.2 Anatomy of mammary glands of domestic animals; 2.3 Mammogenesis and mammary gland growth; 2.4 Milk ejection (lactogenesis) and secretion; 2.5 Maintenance of lactation (galactopoiesis); 2.6 Secretion of milk and its constituents; 2.6.1 Types of milk secretion; 2.6.2 Milk secretion process; 2.6.3 Comparative composition of blood and milk nutrients; 2.7 Involution of the mammary gland

2.8 Challenges and opportunities in mammary secretion today and tomorrow

References; 3 Milking Procedures and Facilities; 3.1 Introduction; 3.2 Machine milked animals throughout the world; 3.3 Milking principles; 3.4 Milking machine components and effects on milk harvesting and quality; 3.4.1 Vacuum system; 3.4.2 Pulsation system; 3.4.3 Mechanical effect of machine milking on milk quality; 3.4.3.1 Specific action of cluster and liners; 3.4.3.2 Specific action at the milk pump level; 3.4.4 Optional components; 3.4.5 Milking parlors and milking stalls; 3.4.6 Storing and cooling devices

3.4.7 Cleaning systems

3.4.8 New kinds of materials and sensing devices for better milk quality; 3.5 Milking practices; 3.6 Milking management of animals; 3.6.1 Lowering milking frequency; 3.6.2 Increasing milking frequency (three milkings and more per day); 3.7 Conclusions; References; 4 Milk Lipids; 4.1 Introduction; 4.2 Fatty acids; 4.3 Triacylglycerols; 4.4 Polar lipids: phospholipids and cholesterol; 4.5 Conjugated linoleic acids; 4.6 Genetic influences on milk fat concentrations and fatty acid profiles

4.7 Influence of feeds, feeding regimes, pasture and stage of lactation on milk lipids and their levels

Sommario/riassunto

Milk is nature's most complete food, and dairy products are considered to be the most nutritious foods of all. The traditional view of the role of milk has been greatly expanded in recent years beyond the horizon of nutritional subsistence of infants: it is now recognized to be more than a source of nutrients for the healthy growth of children and nourishment of adult humans. Alongside its major proteins (casein and whey), milk contains biologically active compounds, which have important physiological and biochemical functions and significant impacts upon human metabolism, nutrition and health.