

S5P9.WP

THE DISCUSSION AND DEVELOPMENT OF THE PROCESSING TECHNOLOGY ON MEAT AND MEAT PRODUCTS IN CHINA

TIAN AI JIA

Tianjin Food Research Institute, NanKai, Tianjin, The People's Republic of China

INTRODUCTION

China is a major producer of meats and meat products in the world. The annual yield of meats in China has increased from 12 million tonnes in 1980 to about 31 million tonnes in 1991. Therefore, it is important for meat scientists and researchers in China to consider how to make full use of meat and natural domestic resources and to develop new meat products with Chinese characteristics and high quality in order to meet consumer demands. In response to this need, we are investigating and analyzing the outlook and orientation of future meat and meat product development in China.

CHINESE TRADITIONAL MEAT PRODUCTS

Pork is the main meat for most meat products in China. These products are divided into six basic meat types: ham, sausage, roasting, fermenting, fumigating and those cooked in soy-sauce. Some of the unique meat products a particular interest include:

Jin Hua Jing: a traditional meat product with good flavour and quality, with a long tradition both in China and abroad;

La Chang: a semi-dry sausage popular particularly in the south of China; and

Nan Jing Duck: a product with a unique flavour produced by traditional boiling, cooking and roasting processes.

RECENT DEVELOPMENTS IN MEAT PRODUCTS

Traditional Chinese medicine is well-known throughout the world. Chinese herbal medicine is a unique natural resource. In recent years, herbal medicine has been added to various food products including basket, bread and drinks. Most consumers in China seem to prefer such food products. Consequently, we have developed and tested several meat products with different herbal medicines. Some of the more promising meat products include:

Meat products with moyu. Moyu is a wild plant in the south of China that plays a role in cleansing a person's intestinal system of harmful substances and purifying one's blood. We believe meat products with moyu are promising products which can be of benefit to people's health.

Sausage with jujube. Jujube, or date, offers pharmacodynamic benefits and in particular, it has been found to increase haemachrome, white blood cell counts and immunity to diseases of individuals. Through soaking, heating and extraction, we have been able to obtain a juice from the date that, when included in sausage, not only provides the above health benefits, but also produces an excellent flavour.

Meat products with wolfberry. The fruit of Chinese wolfberry is a Chinese herbal medicine well-known for its strong tonic influence. It has been included in many drinks. We believe that it offers the same medicinal benefits when included in processed meat products as well.

BY-PRODUCT INDUSTRY

Carcasses, following slaughter, are basically divided into meat products and by-products. Proper utilization of these by-products offer the Chinese livestock and meat industry with new opportunities.

Included in by-products are other edible parts such as the animal's ears, tongue and liver. These are made into a variety of traditional meat products liked by many consumers in China. However, there are other by-products of commercial value including the animal's hair, skin and blood. For example, the animal's blood -- and that of pigs in particular -- is used to produce animal feed through fermentation. This high-protein, fermented feed has three times more protein than protein in the animal's blood. Animals fed such a modified feed promotes the growth of the animal. Statistics on the biological value of such a feed has proven to be very significant.

FOOD ADDITIVES

Another area of research is the used of additives in meat products. The use of soybean protein is of great interest in China because of its high nutritional value. Today, soybean protein is accepted and welcomed by Chinese consumers. When we added certain amounts of soybean protein to meat sausage we found that it not only improved the fine and smooth texture of the sausage, but it also had an effect on the amino acid ration in the sausage. It is our belief, therefore, that soybean protein is an excellent additive to meat sausage.

SHELF-LIFE OF MEAT AND MEAT PRODUCTS

Putridity of meats and meat products results from the pollution of microorganisms, the deterioration of proteins, and rancidity of fat. Even when stored as chilled or frozen, the fat of meat and meat products may oxidize. Many scientists have studied storage methods to prevent putridity of meats and meat products. Super-high pressure is one of the treatment methods found to prevent putridity of meat products. Not only does it keep the original flavour and nutritional components of the meat products, super-high pressure treatment also provides good sterilization.

A second problem is extending the shelf life of meats and meat products. We performed an experiment using an extractive of ginger, water and other substances. This extract was sprayed on the surface of fresh meat. After a few weeks we found that the extract did prevent fat oxidization. However, sterilization and proper packaging is still the superior method.

CONSUMER SCIENCE

A final area of concern is that of consumer science. It is important to understand the consumer's mind. Another aspect is promoting quality and prestige of product by adopting superior technology and strict management practices. Ultimately, all these factors must be combined to create new products that have a strong appeal to consumers.

CONCLUSION

China is a country with wide natural resources and materials. We believe the potential exists for the development of higher quality meat products with nutritional value to meet consumer demand. We are confident that the meat industry in China has a bright future.

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