

Introduction to the Meat Science Lexicon of the American Meat Science Association

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Implications

- The meanings of words matter!
- Many terms used in the meat science field were never systematically ascribed but came about over many years of time and usage
- The American Meat Science Association (AMSA) Lexicon is an attempt to define some of the “loaded” words being bantered about in the popular press and the scientific research and to offer alternative words where better choices exist.
- This document can be used as a starting place to begin discussions to include these more precise terms.

Key words: definitions, lexicon, meat science, terms

What is the Meat Science Lexicon?

Merriam Webster defines a lexicon as 1) a book containing an alphabetical arrangement of the words in a language and their definitions and 2) the vocabulary of a language, an individual speaker or group of speakers, or a subject (Merriam-Webster, 2017). Basically, a lexicon is a collection of terms and their definitions that can be for a specific subject area, industry, or other group. Such a document can be used to explain the words used in an industry to educate the workers in that industry and to explain and educate others outside of that particular industry where people may or may not know their exact meaning. Words many times have “popular” meanings that may or may not convey their “true” meaning. This can come about when words are taken out of context where the hearer must use the meaning for the given word they currently have in their memory, but that meaning may or may not be the actual meaning of the word. Sometimes words are deliberately manipulated by individuals making specific arguments to mean something never contemplated by those who know the etiology of the word; consequently, the original meaning can become distorted at best and obscured at worst.

Each industry (especially mature ones) has its own set of words and definitions that are used in day-to-day activities. Many of these are nouns that name different “things” being used, and many terms describe actions that are taking place. The animal and food sciences are filled with these. We talk about the distinction between heifers and cows, shoats, feeder pigs, sows,

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Definition of LEXICON

plural *lexica* • \lek-sə-kə\ or *lexicons*

- 1 : a book containing an alphabetical arrangement of the words in a language and their definitions : **DICTIONARY** • a French *lexicon*
- 2 **a** : the vocabulary of a language, an individual speaker or group of speakers, or a subject • computer terms that have been added to the *lexicon*
b : the total stock of morphemes in a language
- 3 : **REPertoire, INVENTORY** • added the DVD to his video *lexicon*

First Known Use: 1580

etc. that have very specific meanings to those involved in animal production but have little meaning to those outside the industry. When we consider meat science, the problem of meaning increases further. Consumers generally have little knowledge of animal physiology and anatomy and have no idea how we get from a live animal to a fresh meat ‘product’ like a New York strip steak or a slice of bologna. The meat industry itself has a list of its own jargon that the general public may not be familiar with or may assign meanings to the words that are different than the intended meaning.

So, in short, the Meat Science Lexicon is a document that was developed by the American Meat Science Association (AMSA) as an attempt to define some of the more problematic words currently being thrown around in the popular press and by those involved in other areas of research so that they can be better informed as to their meanings. Instead of allowing readers to come up with their own definitions for words used by the meat industry, we have provided clear definitions to ensure their proper meaning.

The Lexicon is not meant to be a “regulatory document” providing exact definitions for every context in every corner of the meat industry, including regulatory, import/export, marketing, science, nutrition, etc. Again, many of these terms have been in use a long time and may mean specific things to people in different countries, but this is a start to demonstrate the best definition in use at the present time. It may be that others in the meat industry and allied fields (including nutrition and medical research) may change their current definitions of terms to conform more closely to those in the Lexicon—this can only be a good thing as the real meanings become more commonly used.

Who Developed the Meat Science Lexicon?

The American Meat Science Association is the premier provider of learning and knowledge for the meat science discipline in the USA. It is an individual membership organization of more than 2,000 meat scientists representing major university research and teaching institutions and meat processing companies in the USA and throughout the world. The purpose



of AMSA is to discover, develop, and disseminate its collective meat science knowledge and to provide leadership, education, and professional development to college students and professionals alike. The association believes that objectivity in science is paramount to scientific integrity. The Lexicon Committee consisted of volunteer members of AMSA primarily representing academia (AMSA, 2017). Some members were actively employed as university professors and researchers while some were emeriti. All had a keen interest in producing a scientifically accurate document that could be used as an authoritative lexicon of meat science terms.

The core Lexicon Committee consisted of Dr. Dustin Boler (University of Illinois), Dr. Chad Carr (University of Florida), Dr. Michael Dikeman (Kansas State University, emeritus), Dr. Jimmy Keeton (Texas A&M University, emeritus), Dr. Casey Owen (University of Arkansas), Dr. T. Dean Pringle (University of Georgia), Jeff Sindelar (University of Wisconsin), Dr. Dale Woerner (Colorado State University), and Dr. Thomas Powell (AMSA). These members provided a wealth of experience regarding this project because of their familiarity with the meat industry and with meat science research. We also had an extended team of individuals that the Lexicon Committee used to serve in an advisory capacity as it deliberated and developed the document. This advisory team consisted of individuals from several organizations: the National Cattlemen’s Beef Association (Dr. Mandy Carr, Dr. Bridget Wasser, and Dr. Shalene McNeil), the National Pork Board (Steve Larson), the North American Meat Institute (Dr. Betsy Booren—now with Olsson Frank Weeda Terman Matz PC—Susan Bacus, and Dr. KatieRose McCullough), and the US Meat Export Federation (Travis Arp and Paul Clayton). The advisory group provided invaluable information on word meanings used throughout the USA and, in fact, the world.

During our committee deliberations, we had several joint meetings with the members of the advisory group and even sent them copies of the document to review. They provided much needed feedback, especially related to the accuracy of the terms included in the document and how these terms might be perceived by researchers outside of the meat science realm and by non-scientists in the industry.

Why Was the Meat Science Lexicon Composed?

Because the meanings of words can shift over time, especially when controversies may exist, AMSA decided an authoritative document stating the definitions of specific words was necessary. The AMSA Board first conceived of the idea of a lexicon during its strategic planning sessions in 2013, identifying it as one of the top 20 priorities for the following five years. In 2016, members of the advisory team requested that AMSA move up the priority of the lexicon project after witnessing the discussion at an International



Agency for Research on Cancer (IARC) committee meeting trying to define “red meat” during deliberations in 2015 concerning potential relationships between meat consumption and cancer. Some of the issues that committee was struggling with could have easily been solved had such a lexicon been in existence. One difficulty the participants had was in defining “red meat” and distinguishing it from “white meat.” These distinctions, which had been used for years, suddenly seemed to have a new importance since the potential risk for cancer seemed to depend upon it. This discussion brought to the forefront the concern that even educated professionals may not even know what some of the words used in the meat industry mean. Here, by choosing to define “red” and “white” meat, it betrayed their lack of knowledge since it implied that these researchers thought that these terms had some scientific distinction when they really did not. This caused the observers to realize that a lexicon of this and other difficult terms should be created.

How Should the Lexicon Be Used?

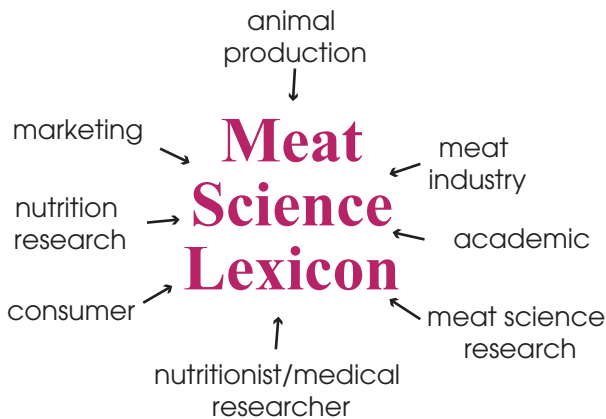
The AMSA Meat Science Lexicon is to be used by everyone involved in meat science research, animal production, marketing, and nutrition research. Here are some suggestions:

For the academic

The Lexicon provides some of the most used words and terms used in the industry today and can provide a reference point as to their meaning in 2017. Some meanings may have changed over the years, and this can provide an opportunity to provide students with more of a historical perspective in their use. It can also provide a basis for communication between researchers or at least a place to start when considering new research.

For the industry

Our Lexicon is full of words that have been derived over time from the industry, but their derivation was never a systematic process. Thus, words may not mean the same to those outside the industry as it does to those in the industry. Choosing the correct word for marketing purposes will take great care—consumers may need to be educated since very few have actual any production experience and may have never heard of some of the words let alone have any knowledge of their meanings.



About the Author



Dr. Dennis Seman received his B.S. degree from the Ohio State University (agricultural education), his M.S. from the University of Nebraska–Lincoln (animal science), and his Ph.D. from the University of Kentucky. He worked at Oscar Mayer for 25 years, principally involved with process development and food safety (use of lactate/diacetate to inhibit growth of *Listeria*). Since retiring from Kraft Heinz Company, Seman worked as an independent consultant with various food companies. He received the AMSA Meat

Processing Award in 2007 and the Signal Service and Fellow Award in 2015.

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For the nutritionist/medical researcher

Meat and meat products are more than the distinction between “red” and “white” meat. These terms may have seemed to be a prudent distinction to help the classification of what and how consumers consume meat products, but they are too imprecise to use for epidemiological research and may contribute to the “noise” observed in the studies. Unfortunately, better alternatives are not immediately apparent, but the Lexicon and some of the articles in this issue will point out some of the difficulties with the current system and perhaps provide some ideas. The Lexicon shows the complexities of making meat products and the large varieties of products available to consumers. Using simple distinctions to describe these in large categories are not enough in today’s complex food supply.

For the consumer

The simple designation between “processed” and “non-processed” is too simplistic. All foods are processed in some manner to take them from their raw, natural state to a form for consumption. Today, much of this is accomplished in processes not visible by the average consumer, and therefore, it is a mystery to them. There is an “ick” factor to all food production from removing the dirt and grime from produce to skinning a beef carcass and making Braunschweiger. Many of the processes used in the meat industry are things consumers already do at home—cutting, grinding, mixing, forming, and cooking. These processes simply reduce the particle size and add ingredients to the product to make it into something desired by consumers. It is not like chemical extractions in other food products that require organic solvents (e.g., soy oil extraction with hexane) (KMEC, 2017) and the like.

The AMSA Meat Science Lexicon is a starting point and may be reviewed and updated as time goes by, but it will provide a discussion platform for all researchers trying to make their research better.

Literature Cited

AMSA. 2017. Over sixty-nine years of networking and knowledge dissemination, <http://www.meatscience.org/about-AMSA>. (Accessed 3 Mar. 2017.)
 KMEC. 2017. Soybean oil production. <http://www.oilmillmachinery.net/Soybean-Oil-Production.html>. (Accessed 3 Mar. 2017.)
 Merriam-Webster. 2017. Lexicon. <https://www.merriam-webster.com/dictionary/lexicon>. (Accessed 1 Mar. 2017.)