deteriorating agriculture soils, decreasing agriculture yields, climate change, and running short of time. The world population clock is ticking continuously and every second passed adding to our total number dwelling on the earth. Therefore, complexity of this challenge demands urgent measures rather to assume that the food crisis will develop after couple of decades in 2030 or 2050. A single event that may create large scale emergency such as poor harvest in a vast region, drought or famine would be enough to disrupt the world food supply, thus could force thousands of families to go hungry and end up with life threatening situation, i.e., severe malnutrition or even death. A time when world is heading toward potential shortage of food for human consumption, the news about possibilities to increase productivity and yields is grim. Agricultural productivity is vulnerable and poor crop and livestock yields are predicted due to several factors - climate change is one of the major one. Many reports have pointed out that climate change will alter the stability of food supplies and create new food security challenges as the world seeks to feed nine billion people by 2050. The solution of food security challenge requires world to ensure supply of sufficient, safe, and nutritious food to everyone on our planet. This is not a simple task and multiple sectors – science and education, research and development, social, political and regulatory changes need to move forward in a systematic and synchronized manner. Food science as a discipline has a lot to offer by maintaining the stability of food supply. A better understanding of the nature of changes in food with climate change could inform us more appropriate processing technologies. Therefore, food science and allied disciplines have a role to play in food process innovation, food safety and quality improvement and an efficient supply chain development.

This will ultimately contribute to the availability of more and safe foods for a longer time period. One example how food science will be able to improve food security is removing the food allergens through food processing. This could put more food on table for people with specific conditions such as lactose or gluten intolerant. Another example where food science seems a major contributor is reducing the food wastage through improvement in food safety and quality as well as improved utilization. According to the United Nations, approximately 1.3 billion tons of food (about a third of the world's food supply) was wasted in 2013. A reduction in this wastage will help to decrease the number of hungry individuals - currently 1.2 billion people are facing hunger and extreme poverty.

GLOSSARY

Agronomics: Agricultural economics or agronomics is an applied field of economics concerned with the application of economic theory in optimizing the production and distribution of food and fibre—a discipline known as agronomics.

Chemosenses: It involves the chemical sensing system. The sense of smell is part of our chemical sensing system appropriately known as chemosenses.

Diet: In nutrition, diet is the sum of food consumed by a person or other organism.[1] The word diet often implies the use of specific intake of nutrition for health or weight-management reasons (with the two often being related)

Food: Food is any substance consumed to provide nutritional support for an organism. It is usually of plant or animal origin, and contains essential nutrients, such as carbohydrates, fats, proteins, vitamins, or minerals.

Food safety: Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards

Functional food: The term functional foods refers to processed foods containing ingredients that aid specific bodily functions in addition to being nutritious. The Institute of Medicine's Food and Nutrition Board (IOM/FNB, 1994) defined functional foods as "any food or food ingredient that may provide a health benefit beyond the traditional nutrients it contains."

Nutrition: *Nutrition* is the study of nutrients in food, how the body uses nutrients, and the relationship between diet, health and disease. Major food manufacturers employ nutritionists and food scientists.

Nutraceuticals: Nutraceuticals is a broad umbrella term that is used to describe any product derived from food sources with extra health benefits in addition to the basic nutritional value found in foods. It is a pharmaceutical-grade and standardized nutrient regulated by FDA under the authority of the Federal Food, Drug, and Cosmetic Act.

Preservation: Food preservation refers to preventing the growth of bacteria, fungi (such as yeasts), or other micro-organisms (although some methods work by