<<硒缺乏、毒性、生物营养强化与人>>

图书基本信息

书名：<<硒缺乏、毒性、生物营养强化与人体健康>>

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前言

The urgent need to synthesize, critically analyze information on selenium research conducted world-wide into an updated perspective for preserving the health of the environment, livestock, and humans provided the impetus for the development of this proceedings. The book of "Selenium Deficiency, Toxicity, and Biofortification for Human Health" contains the peer-reviewed key extended abstracts to the First International Conference on Selenium in the Environment and Human Health that will be held on 18-21 October 2009 in Suzhou, China. At this conference, participants will discuss the impact of selenium contamination and deficiency on the environment, domestic animal-crop-human accumulation, biochemical metabolism processes and further on human health. The importance of these topics clearly shows why selenium is arguably the natural-occurring trace element of greatest impact worldwide in the 21st century.With the gracious financial support provided by China-Singapore Suzhou Industrial Park, Suzhou Dushu Lake Higher Education Town, Chinese Academy of Sciences, National Science Foundation of China, and Setek Co., Ltd., we are able to invite eminent scientists from within the world selenium community to provide new insight into complex-related environmental, biological, biochemical and health issues related to selenium. Symbolically we meet in China, a country that truly recognizes selenium toxicity and deficiency in human health. With authors from 1 2 countries （including Australia, Belgium, Brazil, China, Denmark, Germany, India, Poland, Sweden, Switzerland, UK, and USA）, a total of 54 presentations have been included in this publication that clearly demonstrate the significant role that selenium plays in today's modern life.

内容概要

《硒缺乏、毒性、生物营养强化与人体健康(英文版)》内容简介：The urgent need to synthesize, critically analyze information on selenium research conducted world-wide into an updated perspective for preserving the health of the environment, livestock, and humans provided the impetus for the development of this proceedings.

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章节摘录

插图：Results and Discussion Toxic effects of selenosis include thyroid hormone impairment, immune system dysfunction, hepatotoxicity, gastrointestinal disturbances, dermatological disorders, and hair loss. Typical livestock symptoms include structural abnormalities or deformities in the protein components of the hooves, hair, and/or nails. A 2007 paper suggests an associate between elevated Se levels in blood and increased incidence of diabetes in humans.Excess selenium in the food supply may result in the consumption of a potentially toxic product, as illustrated in a USA swine selenosis case study. Symptoms of selenosis were observed in animals with Se blood levels less than 1 mg L-1 and feed concentrations of about 10 mg kg-1. Feed analysis indicated the swine premix samples contained over 100 mg Se kg-1. Pork is considered safe at a Se muscle concentration of about 0.40 mg kgl wet weight.The endpoint of Se deficiency in livestock was established by the 1973 USA Food and Drug Administration Act which set the minimum Se content in livestock feeds and supplements as 3.0 mg Se kg1. However, the upper dietary recommendation for Se in livestock feeds and natural forage is 5.0 mg kg1, resulting in a narrow "safe" rangebetween deficiency and potential toxicity. Worst-cast environmental assessments are often associated with Se contaminants originating from coal fired power plants. Recently, December, 2008, at the Tennessee Valley Authority Kingston Fossil Plant, a sixty-foot ash and earthen wall securing a retention pond holding five decades of coal fly ash gave way causing a catastrophic wave of slurry.

编辑推荐

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