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Current status of soybean production, trade and research in Asia and Oceania

Tianfu Han^{*}, Institute of Crop Science, Chinese Academy of Agricultural Sciences, Beijing, China

Guangming Yang, Institute of Crop Science, Chinese Academy of Agricultural Sciences, Beijing, China

Shiyan Tian, Institute of Crop Science, Chinese Academy of Agricultural Sciences, Beijing, China

Asia is the largest continent both in areas and population, where soybean is traditionally originated and widely planted. According to the data of FAO, the soybean average planting areas in Asia was 19.91Mha, accounts for 19.73% of the world's total 184.51 Mha from 2005 to 2014. Soybean production here was 27.97 Mt, accounting for 11.50% of the global total (2463.46Mt), with China, India, Indonesia, South Korea, and Vietnam as the top five soybean producing countries. Soybean production in China was 14.18Mt, accounted for 5.76% of the world total. Soybean export of Asia is very limited, and even decreases year by year. The average export from 2004 to 2013 was 459.3 Kt, accounted for only 0.59% of the world 81.73Mt, and the export value was 26.58 M US\$, accounting for 0.88% of the world 34.45 billion US\$. Asia is the main soybean consuming region in the world. Soybean imports from 2004 to 2013 was 56.53 Mt, taking 68.50% of the world 81.35 Mt, and the average soybean imports value was 2.71 billion US\$, accounting for 69.8% of the world 3.78 billion US\$, increasing from 62% to 76% year by year. China is the largest country for soybean imports (taking 53.88% of the world total), followed by Japan, Thailand, Indonesia and South Korea. In Australia, soybean production, export, and import are 0.02%, 0.01%, and 0.04% of the world, respectively.

Recent years witnessed a rapid development of Asian countries in soybean research. From 2007 to 2016, Science Citation Index Expanded of Web of Science included 6,112 soybean related articles published by authors from Asian countries (45.67% of the 13,382 soybean related articles around the world). The top five countries by article number were China, Japan, South Korea, India and Iran, and the top five organizations by article number were Chinese Academy of Sciences, Chinese Academy of Agricultural Sciences, Nanjing Agricultural University (China), National Agricultural Research Center (Japan), and Northeast Agricultural University (China). Articles were most frequently published in Journal of Agricultural and Food Chemistry, Food Chemistry, PLoS ONE, Food Science and Biotechnology, and Legume Research, focusing on food science & technology, plant sciences, agronomy, biotechnology & applied microbiology, and chemistry applied.

China is becoming a major player in soybean research. From 2007 to 2016, authors from China published 2821 soybean related articles (21.08% of the total soybean related articles), ranking first in the world. Chinese Academy of Sciences, Chinese Academy of Agricultural Sciences, Nanjing Agricultural University, Northeast Agricultural University, and China Agricultural University are the top five organizations by article number in China. Most of the articles published in PLoS ONE, Journal of Agricultural and Food Chemistry, Food Chemistry, Theoretical and Applied Genetics, and

Euphytica, falling into the categories of plant sciences, food science & technology, agronomy, biotechnology & applied microbiology, and chemistry applied, etc. Asian countries are becoming stronger in soybean research, and are expected to be exporters of soybean-related technologies in the near future.