CHAPTER 6

GLOBAL PRODUCTION AND WORLD TRADE

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Abstract: Lentils are a major international pulse crop (4 million Ha harvested in 2005). However, they fall well behind the major cereal and oilseed crops in planted area as well as behind the other pulse crops of peas, chickpeas and beans. Yields tend to be low (global mean of approximately 0.8 t/ha over the last 16 years) with 95% of the crop rain-grown. There are three major areas of production N America, the Indian subcontinent and Turkey. There are other areas of production in Australia, Iran, Syria and China. Between them these areas account for over 90% of global production. There are two major groups red (70–80%) and green lentils with Canada being the largest global producer of green lentils. Lentil production in the developing world is relatively static while the population in South Asia, where most lentils are consumed, has been rapidly increasing. This has left countries such as India with a very low supply per head of population. This deficit has to be made up by increases in world trade. The major world player in lentil exports is Canada which in 2005 exported 576,000 t. Other major exporters in the same year were Turkey (118,000 t), Australia (108,000 t) the United States of America (160,000 t). Most importing countries import relatively small quantities from a number of countries. In 2004 the largest lentil importers were Bangladesh (110,000 t), Sri Lanka (93,000 t), Egypt (89,000 t) and Colombia (63,000 t). A recent nine month ban by India on lentil exports has lead to a sharp increase in their price on the world market. In the past some countries, such as Turkey, imported lentils from Canada, processed them, and then re-exported them.

1. INTRODUCTION

Traditionally lentils have been consumed where they are grown as a peasant crop. Approximately 70% of world lentil production is consumed in the country where they are grown (Agriculture and Agri-Food Canada, 2002c). Lentils are grown world wide.
as a dryland crop with relatively little grown under irrigation as they respond poorly to irrigation and the high inputs that are characteristic of the system. For example the The Southeastern Anatolia Project, in Turkey planned to have 7.5% of the area (envisaged at 1.7 million hectares at completion) sown to lentils whereas the actual amount sown is only 1.5% (Anonymous 2007). Lentils are not irrigated in Canada, USA or Australia. Some irrigated cropping occurs in various parts of Asia. However, it tends to be very small with less than 0.2% of the irrigated area in Vaishali under lentils (Reddy, 2006) and less than 10% of the total pulse crop being irrigated in India (Gupta 2003). Thus all statistics given are dominated by dry land production.

In countries such as India in the last 40 years average lentil yield has hardly changed compared with increases in cereal yields such as rice and wheat. In 1961 lentil yield in India was 453 kg ha\(^{-1}\) by 2004 it had only risen to 760 kg ha\(^{-1}\) (FAOSTAT 2007). Over the same period the population of India rose from 439 to 1,029 million (Registrar General of India 2007). Bangladesh, in the same region, has had considerable population growth and is now home to more than 147 million people (CIA 2007) while the population of Pakistan went from 40 million to 136 million by 1995 and is predicted to reach 357 million by 2050 (IIASA 2007). Overall IIASA (2007) predicts that most world population growth will be in Asia and among countries where lentil is a common item of diet. Population growth will be high in India, Pakistan, and Bangladesh. Given all of these countries have limited available land, and water, to further increase pulse grain production, the shortfall in production will have to come from significantly increased imports from developed countries such as Canada and Australia.

2. **GLOBAL PRODUCTION SITUATION**

Lentils fall into several categories based primarily on cotyledon and seed coat colour. Green and red lentils are the predominant lentil types grown, consumed and traded internationally. Green lentils have a yellow cotyledon and pale green seed coat and red lentils have an orange cotyledon and usually a dark seed coat, although the dominant seed coat colour varies between countries. Green lentils are typically cooked and consumed whole and red lentils split for use in products such as soups and dhal. Red lentils constitute 70–80% of world production (Patterson 2006). These two groups may be further subdivided based on size (small, medium and large). Generally the green lentils are also larger sized than red lentils, however, there are small green and medium-large red lentils. In addition there are a range of minor niche varieties (low tannin, black, dark green, speckled and brown) which may be locally important For example, the French have traditionally grown and prefer the DuPuy type lentil that has a mottled green and blue seed coat and yellow cotyledon and a brown dotted lentil with yellow cotyledon is consumed in Spain. Internationally the minor varieties only represent a small component of trade, constitute less than 3% of total Canadian production (Skrypetz 2000), less than 1% of production in Australia (Matere pers. comm.). In the USA medium green lentils and the Spanish brown type variety Pardina are grown with 20,000 t of Pardina exported to Spain annually. FAO figures group all the lentils types into a single category (FAOSTAT, 2007). The type of lentil produced and preferred in