



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



BRIEFING

Briefing No. 78

August 2005

Chickpea Production and Price Risk Management in the Northern Plains

Gary W. Brester and David Buschena

Agricultural Marketing Policy Center
Linfield Hall
P.O. Box 172800
Montana State University
Bozeman, MT 59717-2920
Tel: (406) 994-3511
Fax: (406) 994-4838
email: ampc@montana.edu
website: www.ampc.montana.edu

Contact:

Gary W. Brester
(406) 994-7883
gbrester@montana.edu

David Buschena
(406) 994-5623
buschena@montana.edu

Objective

Analysis

for Informed

Decision Making

Introduction

This Briefing discusses chickpea production and risk management issues in the Northern Plains. Historically, most production in the United States has occurred in California, Oregon, and Washington. Significant amounts of chickpea production have only recently occurred in Montana, North Dakota, and South Dakota as some crop producers in the Northern Plains have added chickpeas to traditional crop rotations.

Chickpeas in the U.S. Northern Plains

U.S. Chickpea Production: Increases in U.S. chickpea production and exports are illustrated in Figure 1. U.S. chickpea exports have generally been less than 50 percent of U.S. production. Information regarding domestic use of chickpeas is limited, but substantial amounts are expected to have been used for seed to accommodate expansions in planted acreage.

U.S. Chickpea Marketing: A USDA Economic Research Service publication provides a discussion of chickpea marketing in the United States (Price). Farmers market most chickpea production to processors who clean, sort, grade, and sell chickpeas to a variety of end-users. Most sales to processors are uncontracted and unbranded.

Chickpea producers in Montana, North Dakota, and South Dakota are expected to experience similar challenges as those facing Canadian producers regarding production, transportation, and sales. In fact, many U.S. Northern Plains producers sell chickpeas to Canadian processors. Price identifies four considerations that reduces U.S. price competitiveness in the world chickpea market:

1. U.S. pulses are high-quality commodities, commanding price premiums. Many price-sensitive segments of foreign markets are unwilling to pay significant premiums for U.S. quality, especially when lower cost pulses from other countries are plentiful. For example, India imports many of its pulses from Burma, Canada, and Australia;
2. U.S. exporters bag and containerize shipments to preserve quality. While this results in less product damage, the process is more costly than bulk shipping;
3. U.S. transportation costs are relatively high. Long distances cause high trucking costs, particularly in the Northern Great Plains. Rail rates to ports are also high; and

4. For much of the past 10 years, the high value of the U.S. dollar relative to other currencies have made U.S. chickpea exports relatively more expensive to importers relative to chickpeas produced in other countries.

In general, U.S. producers produce high-quality chickpeas because they are not cost competitive in the global production of low-quality chickpeas. High-quality chickpeas are used domestically as garnishes. Hence, annual U.S. domestic food use of chickpeas is small -- generally less than 1 pound per capita. Low-quality chickpeas are used by foreign countries as a basic source of protein. This market segment is primarily influenced by price rather than quality.

U.S. Chickpea Production Risk Management - Crop Insurance

Alternatives: USDA's Risk Management Agency (RMA) offers multiple crop insurance (MPCI) for Desi and small Kabuli (AMIT, B-90, Chi Chi, and Chico varieties) chickpeas in 10 Montana counties, 12 North Dakota counties, and 10 South Dakota counties (Table 1).

Details of MPCI crop insurance are provided in Briefing No. 8 (Smith, 2003a). Producers need to establish approved production histories as described in Briefing No. 7 (Smith 2003b), and make decisions regarding insurable units as described in Briefing No. 6 (Smith 2003c). Producers may choose CAT coverage (50 percent yield election and 55 percent price election), or buy-up coverages with yield elections between 50-75 percent and price elections between 67-100 percent. A replant payment is also available. If plant populations are unable to provide 90 percent of APH yields, then producers can receive the monetary equivalent of 120 pounds of chickpeas or 10 percent of APH yield -- whichever is less.

Only ascochyta-resistant varieties are insurable. Seed must be treated with recommended fungicides to prevent ascochyta blight, pythium, and other diseases. In addition, insurance is only available on land that has not been planted to chickpeas in any of the three most recent crop years.

Requests for Actuarial Change for Counties In Which Dry Bean MPCI Policies Exist: If Desi or small Kabuli chickpeas are produced in a county (other than those noted above) in which dry bean MPCI policies exist, then a producer can request an actuarial change (Briefing No. 13, Johnson, 2003). In addition, a *Request for Actuarial Change* is necessary to insure large Kabuli chickpeas. A successful *Request for Actuarial Change* results in a *Written Agreement*. This agreement, if accepted by a producer, is an individualized crop insurance contract for chickpeas in the specified county for that crop year.

A *Request for Actuarial Change* is initiated by a producer conferring with a local crop insurance agent. The producer and the agent complete form FCI-5, *Request for Actuarial Change*. Two years of APH production history must be submitted. The type and variety of chickpeas that are to be grown must be indicated, and evidence of a market for the current crop must be established (e.g., previous year's sales invoice, contract for current crop, etc.). Aerial photos delineating field boundaries must also be submitted.

Table 1: MPCI Crop Insurance for Desi and Small Kabuli Chickpeas in Montana, North Dakota,

Montana Counties	North Dakota Counties	South Dakota Counties
Daniels	Divide	Corson
Dawson	Dunn	Dewey
McCone	Golden Valley	Haakon
Phillips	Grant	Jackson
Prairie	Hettinger	Lyman
Richland	McKenzie	Meade
Roosevelt	McLean	Pennington
Sheridan	Mountrail	Perkins
Valley	Oliver	Stanley
Wibaux	Stark	Ziebach
	Ward	
	Williams	

Once the *Request for Actuarial Change* form is completed, it is forwarded by the farm manager's crop insurance agent to the private sector insurance company the agent represents for research and review. Subject to the insurance company's review for completeness and accuracy, the request is forwarded to the RMA regional office. The RMA determines premium rates and coverage levels. Producers have the option to reject or accept the *Written Agreement*.

Requests for Actuarial Change for Counties In Which Dry Bean MPC I Policies Do Not Exist: If Desi or small Kabuli chickpeas are produced in a county in which dry bean MPC I policies do not exist, a producer can request an actuarial change. In this case, producers must follow the above procedures for a *Request for Actuarial Change*. However, they must submit three years of APH production records and anticipated planting and harvesting dates. In addition, a producer must provide the name, location, and distance from the farm to the market in which chickpeas will be sold.

Farm Service Agency's Noninsured Crop Disaster Program: If RMA actuarial tables are not available for chickpeas in a county, the Farm Service Agency's (FSA) Noninsured Crop Disaster Program (NAP) provides some financial assistance to producers affected by natural disasters (Briefing No. 14, Johnson 2001). This program covers noninsurable crop losses and prevented plantings resulting from natural disasters.

Producers apply for NAP coverage by filing *Applications for Coverage* and paying applicable service fees at local Farm Service Agency offices. Applications and service fees must be filed by the application closing date as established by the state-level Farm Service Agency committee. The service fee schedule is as follows: \$100 per crop per county; or, \$300 per producer per administrative county; with the total fees not to exceed \$900 per producer in all counties. Limited resource farmers may request a waiver of fees. To

remain eligible for NAP assistance, farm managers must annually report both acreage and production information. Local FSA offices can advise producers of reporting dates. In addition, farm managers must annually provide the following production information:

1. the quantity of all harvested production of the crop in which you have an interest during the crop year;
2. the disposition of the harvested crop, such as whether it was marketable, unmarketable, salvaged, or used differently than intended; and
3. verifiable or reliable production records, when required.

The Farm Service Agency (FSA) uses acreage information and production data to calculate an *approved yield* that represents expected production for the crop year. An approved yield for a crop for an individual producer is usually the average of the producer's actual production history (APH) for a minimum of 4 to a maximum of 10 years.

FSA compares expected production (a producer's approved yield) to actual production to determine the percentage of crop loss. NAP compensates the producer for the production losses exceeding 50 percent of the producer's approved yield. The FSA values these losses at 55 percent of the average market price for the specific commodity as established by the state FSA committee. The calculated NAP payment may be reduced by a payment factor reflecting the decrease in production costs incurred in the crop production cycle for the crop that is harvested, unharvested, or prevented from being planted. Payment factors vary by crop.

U.S. Chickpea Price Risk Management - 2002 Farm Security and Rural Investment Act (FSRI): The FSRI added several new commodities to the

marketing assistance loan program including small chickpeas. The 2004–2006 loan rate for #1 grade Desi chickpeas is \$7.43/cwt. Marketing assistance loans can also be obtained for smaller chickpeas. Like other commodities that are eligible for marketing assistance loans, chickpeas are subject to discounts if they do not meet loan quality. Discounts for chickpeas below #1 grade are: \$1.00/cwt. for grade #2; \$2.25/cwt. for grade #3; and \$3.50/cwt. for sample grade. Such discounts are determined at loan maturity if chickpeas are delivered to the Commodity Credit Corporation (CCC).

Producers can obtain a nonrecourse marketing assistance loan for chickpeas after harvest. The maximum duration of such loans nine months beyond the month of inception. Producers have three loan settlement options: (1) prior to loan maturity, a producer may repay the CCC the lesser of the loan rate plus accrued interest or the posted-county price, (2) at loan maturity, a producer can repay the loan at the loan rate plus accrued interest to reclaim the commodity offered as collateral, or (3) at maturity, a producer can forfeit the commodity offered as collateral to the CCC which absolves the producer's principal and interest loan liability (the nonrecourse component of the loan).

Two possible income enhancement possibilities exist within the marketing loan assistance program:

- (1) loan deficiency payments, and
- (2) marketing loan gains. Loan deficiency payments (LDPs) may be available for chickpeas. If a daily posted-county price is below the county-level loan rate for chickpeas, a producer may elect to receive in cash the difference between the county-level loan rate and the posted-county price. A producer who makes such an

election is then ineligible for a marketing assistance loan on that quantity of chickpeas on which the LDP was received.

A marketing loan gain occurs if a producer decides to settle a marketing assistance loan before loan maturity at a time in which the posted-county price is below the county-level loan rate. Producers are likely to repay a loan at the posted-county price whenever they can market their collateral at market prices which exceed the loan rate. Hence, the difference between the posted-county price and the county-level loan rate represents an income enhancement.

Essentially, the market assistance loan program establishes a price floor for small chickpeas. However, some argue that this price floor will not greatly affect planted acreage because the national loan rate is generally below equilibrium market prices (Price). Nonetheless, the program does reduce downside price risk for chickpea producers.

Chickpeas are not eligible for either FSRI direct or counter-cyclical payments. However, for those producers who have established base acreages and production histories for program crops, chickpeas have been designated as a vegetable crop. For producers with base acreages who do not have a history of chickpea production, a condition for eligibility to receive direct and counter-cyclical payments is that fruit and vegetable crops (except lentils, dry peas, and mung beans) cannot be planted on "contract" acres. "Contract" acres refers to base acres plus acres enrolled in the Conservation Reserve Program (CRP). For example, if a producer had 4,000 acres of cropland with 2,200 acres of wheat base and 1,800 acres enrolled in CRP, then that producer has no "noncontract" acres. In this situation, a producer should check with their local Farm Services Agency office to fully understand the consequences of chickpea production with respect to

direct and counter-cyclical eligibility of base acreages.

Summary

Producers of specialty crops such as chickpeas face risks regarding price uncertainty and production. Price uncertainty is a particular problem with chickpeas since foreign markets represent the majority of the market and the United States appears to be a residual supplier. World chickpea prices are largely determined by production and economic conditions in countries such as India. India is the world's largest producer and consumer of chickpeas, and in most recent years, the largest chickpea importer (Figure 2).

Chickpea production in the Northern Plains must compete with traditional crops -- many of which are supported by long-standing government price support and risk management programs. Chickpea crop insurance options have been relatively limited compared to traditional crops. Although the FSRI curtails downside price risk for chickpeas, the lack of formal futures markets and the thinness of negotiated markets hinders price risk management options for chickpeas.

Although opportunities exist for contracting chickpea production with both U.S. and Canadian buyers, producers must carefully evaluate the terms of such contracts, particularly in quality measurements and dispute resolution criteria. The chickpea market, like that of other specialty crops, is undergoing significant changes with many firms entering and leaving the industry each year. Producers should research the reputation of firms prior to signing contracts.

References

Agriculture and Food Trade.
FAOSTAT. United Nations Food and Agriculture Organization. <http://apps.fao.org/default.htm>.
Agricultural Production Indices.
FAOSTAT. United Nations Food and Agriculture Organization.

<http://apps.fao.org/default.htm>.
Johnson, James B. "Noninsured Crop Disaster Assistance Program." Agricultural Policy Marketing Center. Montana State University. Bozeman, MT. Briefing No. 14 (revised). November 2001.

Johnson, James B. "A Request for Actuarial Change." Agricultural Policy Marketing Center. Montana State University. Bozeman, MT. Briefing No. 13 (revised). October 2003.

Price, Gregory K. "Will the Farm Act Get Pulses Racing?" Agricultural Outlook. Economic Research Service. U.S. Department of Agriculture. AGO\296. November 2002:18-21.

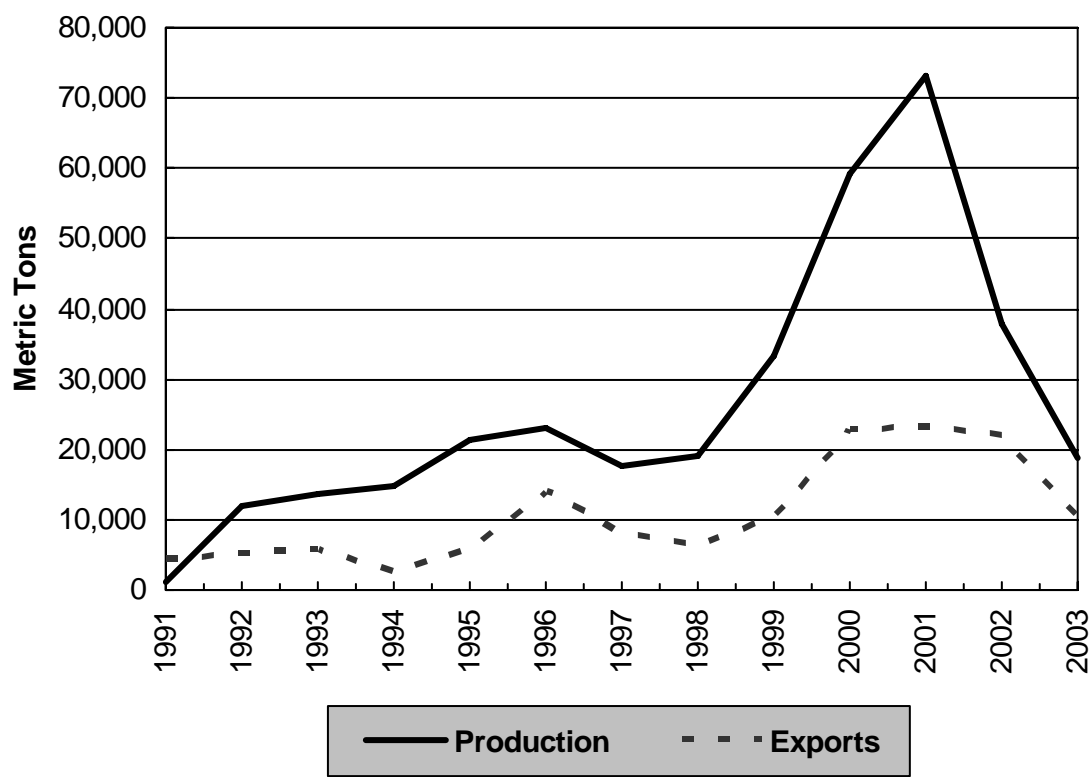
Smith, Vincent H. "Federal Crop and Crop Revenue Insurance Programs: Multiple Peril Crop Insurance (MPCI) and Catastrophic Coverage Policies." Agricultural Policy Marketing Center. Montana State University. Bozeman, MT. Briefing No. 8 (revised). October 2003a.

Smith, Vincent H. "Federal Crop and Crop Revenue Insurance Programs: Determining APH Yields." Agricultural Policy Marketing Center. Montana State University. Bozeman, MT. Briefing No. 7 (revised). October 2003b.

Smith, Vincent H. "Federal Crop and Crop Revenue Insurance Programs: Optional, Basic and Enterprise Units." Agricultural Policy Marketing Center. Montana State University. Bozeman, MT. Briefing No. 6 (revised). October 2003c.

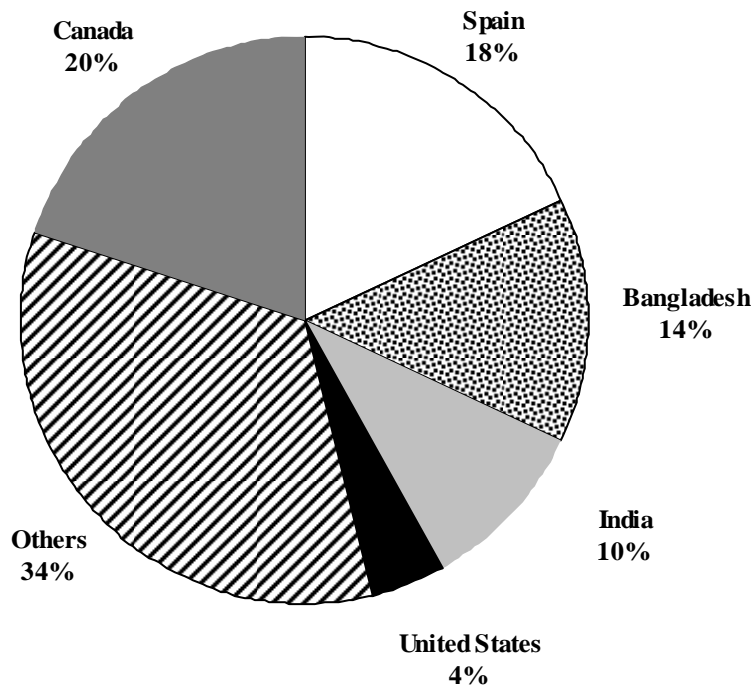
Statistics Canada. Canadian Census of Agriculture, 2001. <http://www.statcan.ca/english/agcensus2001/index.htm>

Figure 1: U.S. Chickpea Production and Exports, 1991-2003



Source: U.S. Department of Agriculture, National Agricultural Statistics Service

Figure 2: World Chickpea Imports, 2000 January 2001-December 2002



Source: U.S. Department of Agriculture, Economic Research Service



The programs of the MSU Extension Service are available to all people regardless of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Dr. Douglas Steele, Vice Provost and Director, Extension Service, Montana State University, Bozeman, MT 59717.