

Dry Beans

Introduction

Dry beans, also referred to as field beans, include pinto, navy, kidney, and black beans, as well as many others. Most dry beans grown in the U.S. prefer cooler climates; however, researchers are proposing to investigate black beans and navy beans for their potential in Kentucky production. In addition, researchers would like to look at a few cultivars from Africa and South America that may fit in with our warmer climate, possibly as a double crop behind wheat.

Marketing and Market Outlook

U.S. dry bean production reacted to storage surpluses and low prices in the early 2000s, with national dry bean production dropping 40 percent between 2002 and 2004. Low production resulted in depleted stocks of stored beans, and acreage increased 45 percent in 2005. The USDA's Economic Research Service does not expect 2005 production to fill depleted stocks, and forecasts \$19 to \$20/cwt prices across all bean classes. Dry beans are extremely price-sensitive to changes in supply.

Use of dry beans in the U.S. fluctuated from 5 to 7 pounds per capita from 1975 on. During the 1990s, per capita use exceeded 7 pounds, peaking at 5.9 pounds in 1994. Use dipped back down below 7 pounds, reaching 5.7 pounds per capita in 2004. With the exception of black beans, the use of dry beans has remained relatively static.

Use of black beans has grown with greater foodservice usage and larger Hispanic populations in the U.S.



There is a black bean delivery point in southern Missouri, 65 miles from Paducah. Beans for this market are grown under contract with the California-based parent company. In addition, according to the Thomas Jefferson Institute, there is some interest in developing niche markets for some of the specialty beans.

Production Considerations

Site selection and planting

Dry beans are a warm-season crop and are not planted until all danger of frost has passed. A wide variety of soils are suitable as long as they are well-drained; dry beans do not tolerate heavy clay or water-logged soils. While seed can be inoculated with nitrogen-fixing bacterial, additional applications of fertilizer may be needed to help provide season-long nitrogen. To optimize quality and yield, dry beans should be irrigated to supplement rainfall.

Pest management

Dry beans are susceptible to a number of diseases that can result in crop losses, including common blight,



rust, halo blight, Rhizoctonia, Pythium, rust, anthracnose, white mold, and bean common mosaic virus. Selecting resistant cultivars and following good management practices can help reduce the impact of disease. Potential insect pests include bean leaf beetle and stinkbugs. Aphids and whiteflies can also serve as vectors for virus diseases. Regular scouting to monitor populations can help the grower determine when and how often insecticides should be applied. Dry beans compete poorly with weeds; however, a combination of herbicides, cultivation and a good rotation system can help control weeds.

Harvest and storage

Equipment used to harvest soybeans can be used for harvesting bush-type cultivars. Vine-type cultivars require different machinery for harvest. Drying can be accomplished with or without heat. Storage facilities need to be dry, clean and free from rodent and insect pests. Some buyers may require that beans be polished for the edible market.

Labor requirements

Labor needs per acre are approximately 2 hours for production, 2 to 4 hours for harvest and 1 to 2 hours (or more) for packing and grading.

Economic Considerations

Production costs for dry beans are similar to that of soybean, approximately \$135 to \$195 per acre. Producers may incur additional costs due to insect or disease problems. However, the greatest extra cost in dry bean production is the added cleaning and storing costs, which can come to \$50 to \$75 per acre.

The economics of dry beans is hard to estimate due to widely fluctuating prices, resulting in profits that are highly variable. Black beans

can potentially return \$100 to \$200 to land and management per acre at higher return levels; however, they can also return less than \$30 per acre in years of lower prices.

At this time, recent low prices for dry beans make them a pessimistic prospect for Kentucky growers considering them as an alternative crop. Black beans may be a potential addition to a crop mix in western Kentucky, but a buyer and quality specifications should be lined up before production.

More Information

- Dry Edible Beans (Thomas Jefferson Agricultural Institute)
<http://www.jeffersoninstitute.org/pubs/drybeans.shtml>
- Black Bean Cost-Return Budget (Thomas Jefferson Agricultural Institute)
http://www.jeffersoninstitute.org/pubs/budgets/black_bean_budget.pdf
- Center-Pivot-Irrigated Dry-Edible Bean Cost and Return Budget (Kansas State University, 2007)
<http://www.oznet.ksu.edu/library/agec2/mf999.pdf>
- Dry Bean Production Guide A-1133 (North Dakota State University, 2004)
<http://www.ag.ndsu.edu/pubs/plantsci/rowcrops/a1133-1.htm>
- Economic Issues with Dry-Edible Beans (Kansas State University, 2001)
<http://www.oznet.ksu.edu/library/agec2/mf2533.pdf>
- Sustainable Dry Bean Production (ATTRA, 2003)
<http://attra.ncat.org/attra-pub/summaries/dry-bean.html>