



**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](mailto: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.*

# USDA OUTLOOK FOR GRAINS AND OILSEEDS 2003

## Agricultural Outlook Forum

February 21, 2003

Pete Riley

Economic and Policy Analysis Staff

Farm Service Agency

USDA

# OUTLOOK FOR GRAINS AND OILSEEDS

---

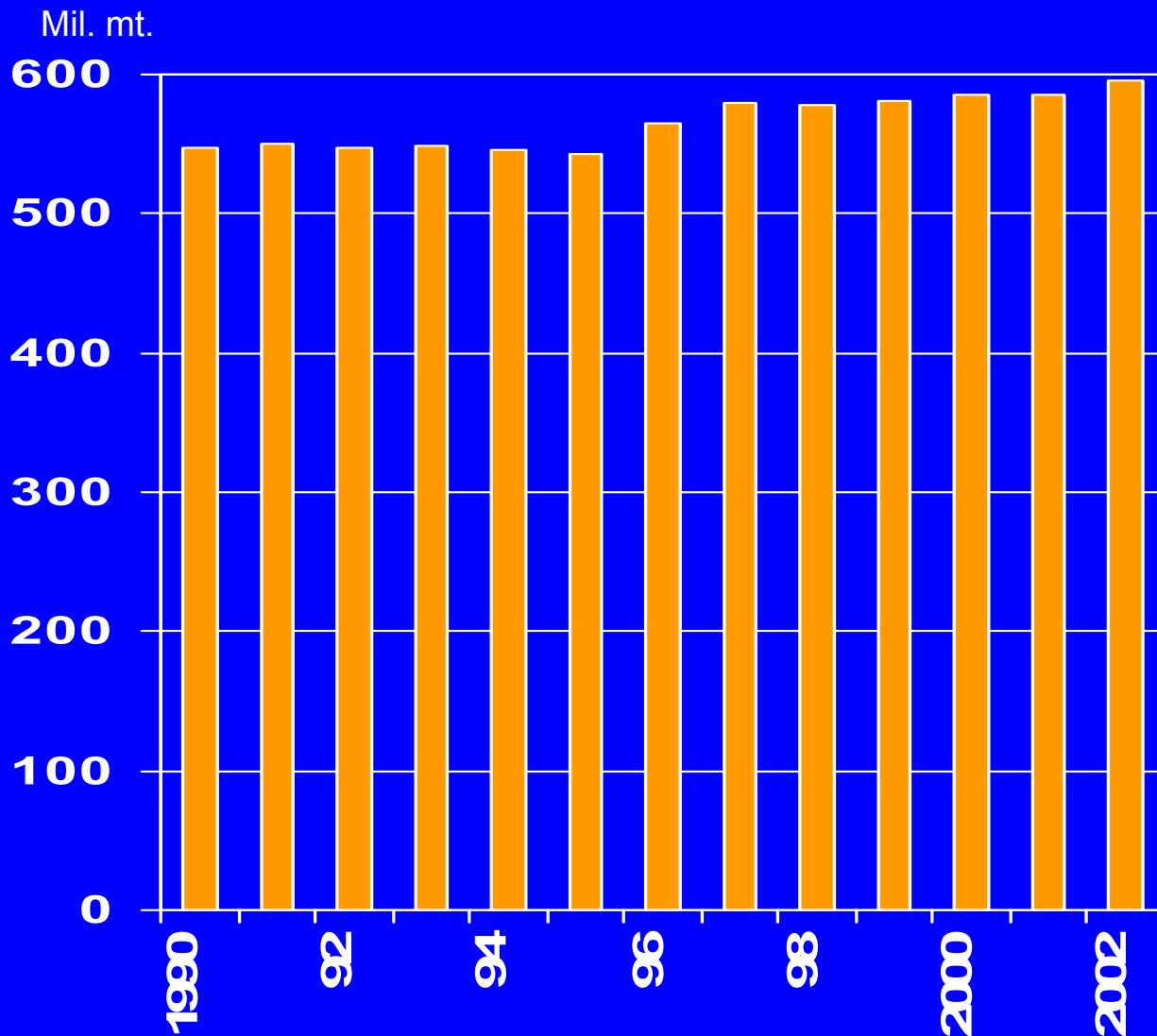
## I. The Setting for 2003

- **Recent Consumption Trends**
- **Policy Brief**

## II. Crop Highlights

- **Acreage Prospects**
- **Wheat**
- **Corn**
- **Soybeans and Products**

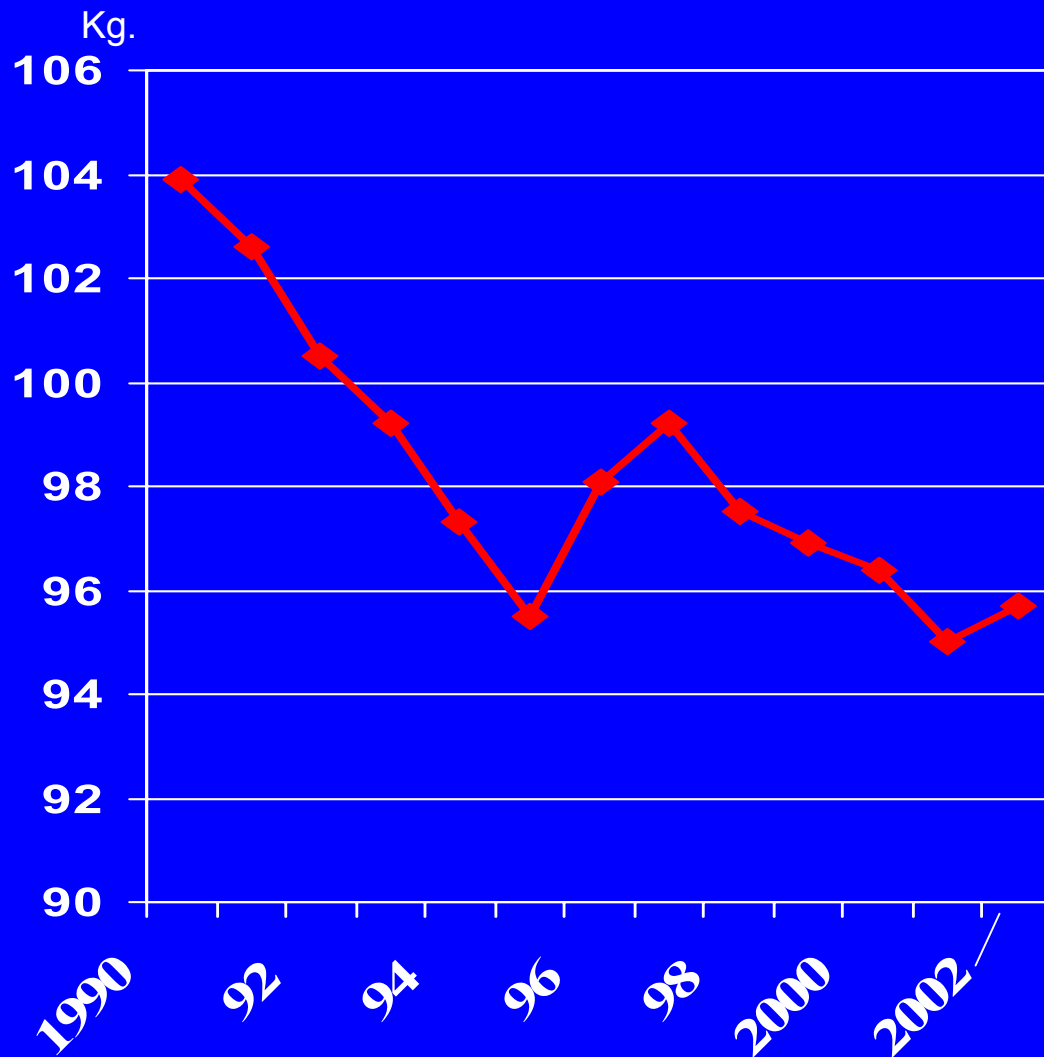
# Global Wheat Disappearance, 1990-2002



- World wheat disappearance gains relatively small
- Food use is flattening out
- Feed use showing healthy gains from 2000

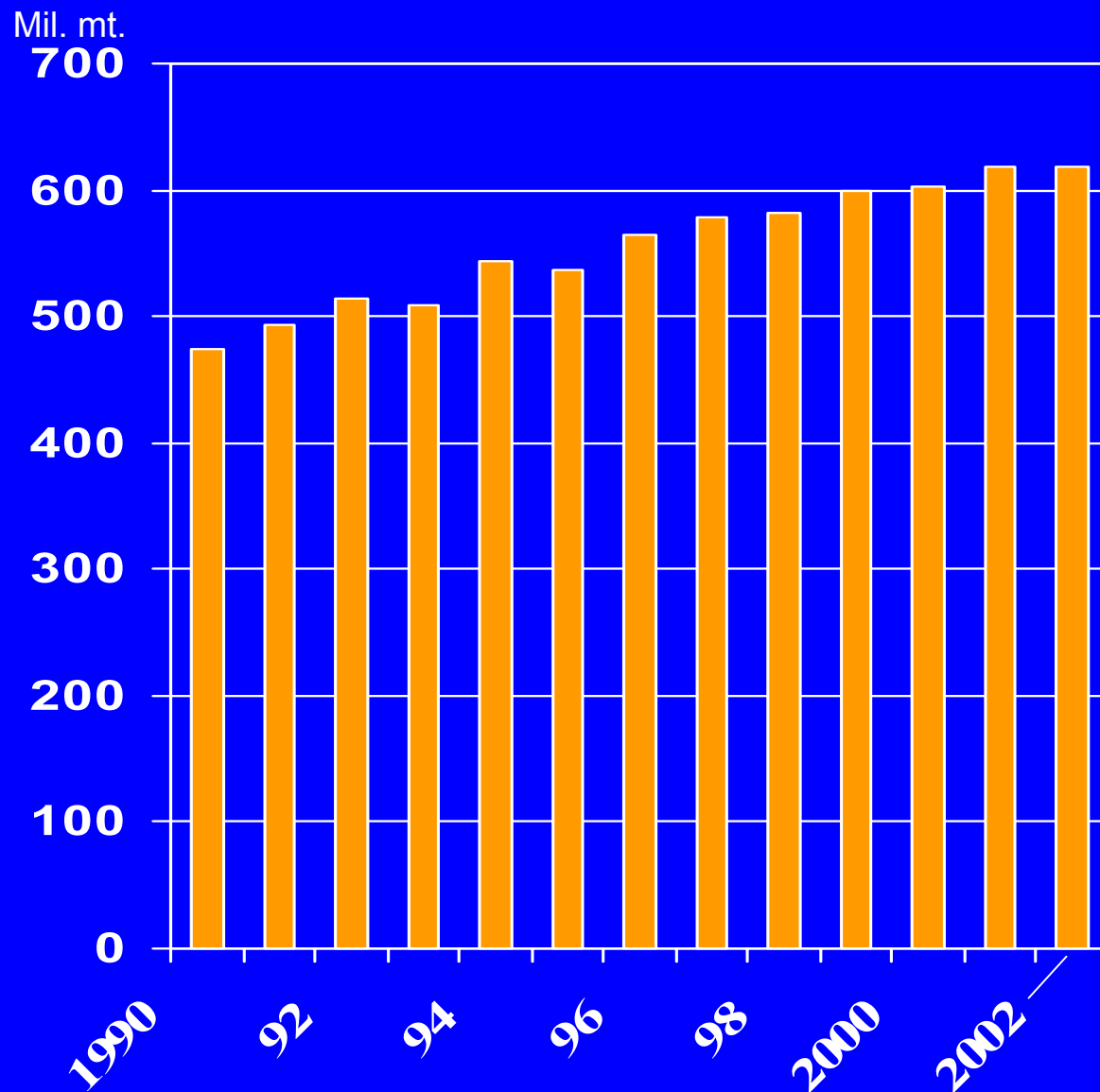
# Global Per Capita Wheat Disappearance

## 1990-2002



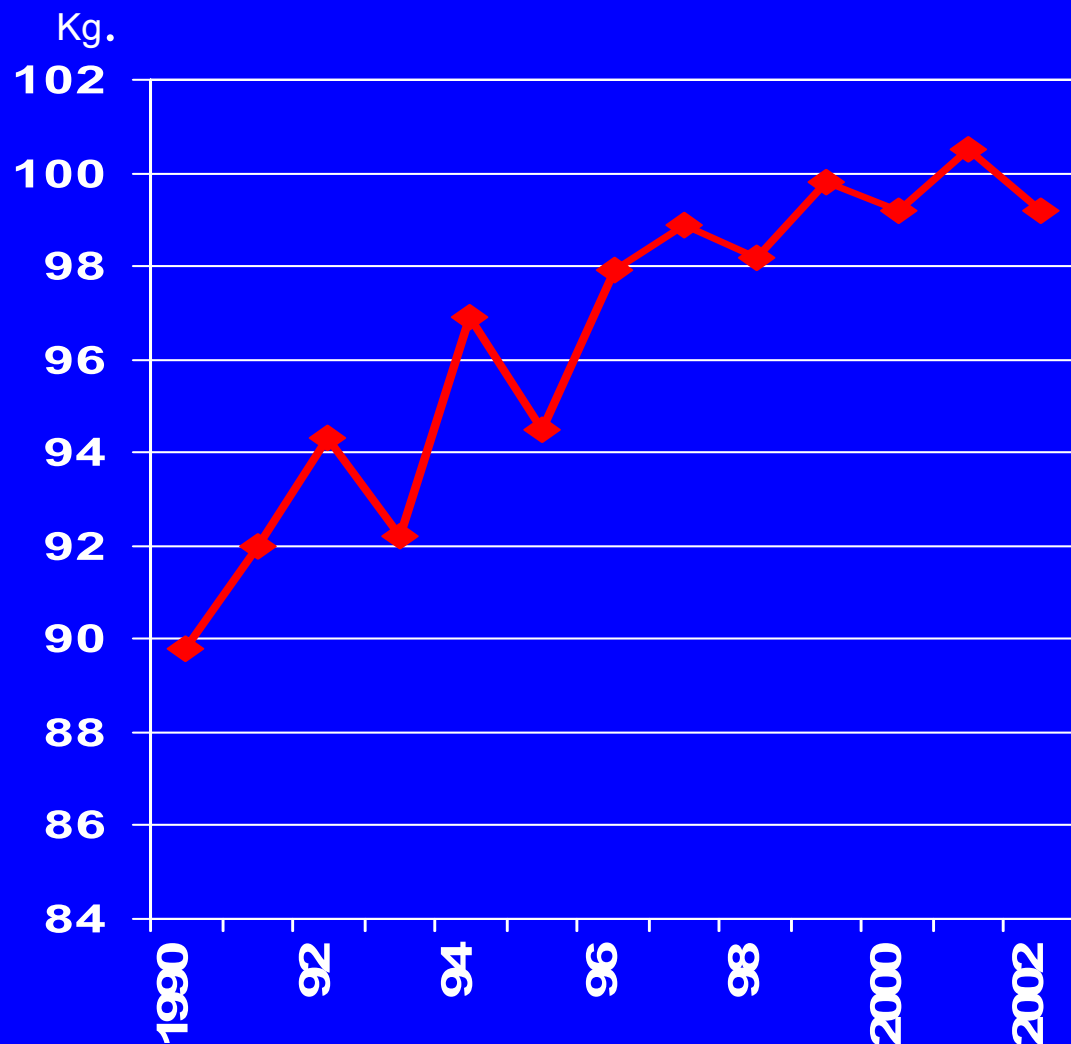
- World per capita wheat use trending down
- Sharp drop in early 1990s reflected declines in Former Soviet Union
- 2002 increase due to more wheat feeding

# Global Corn Disappearance, 1990-2002



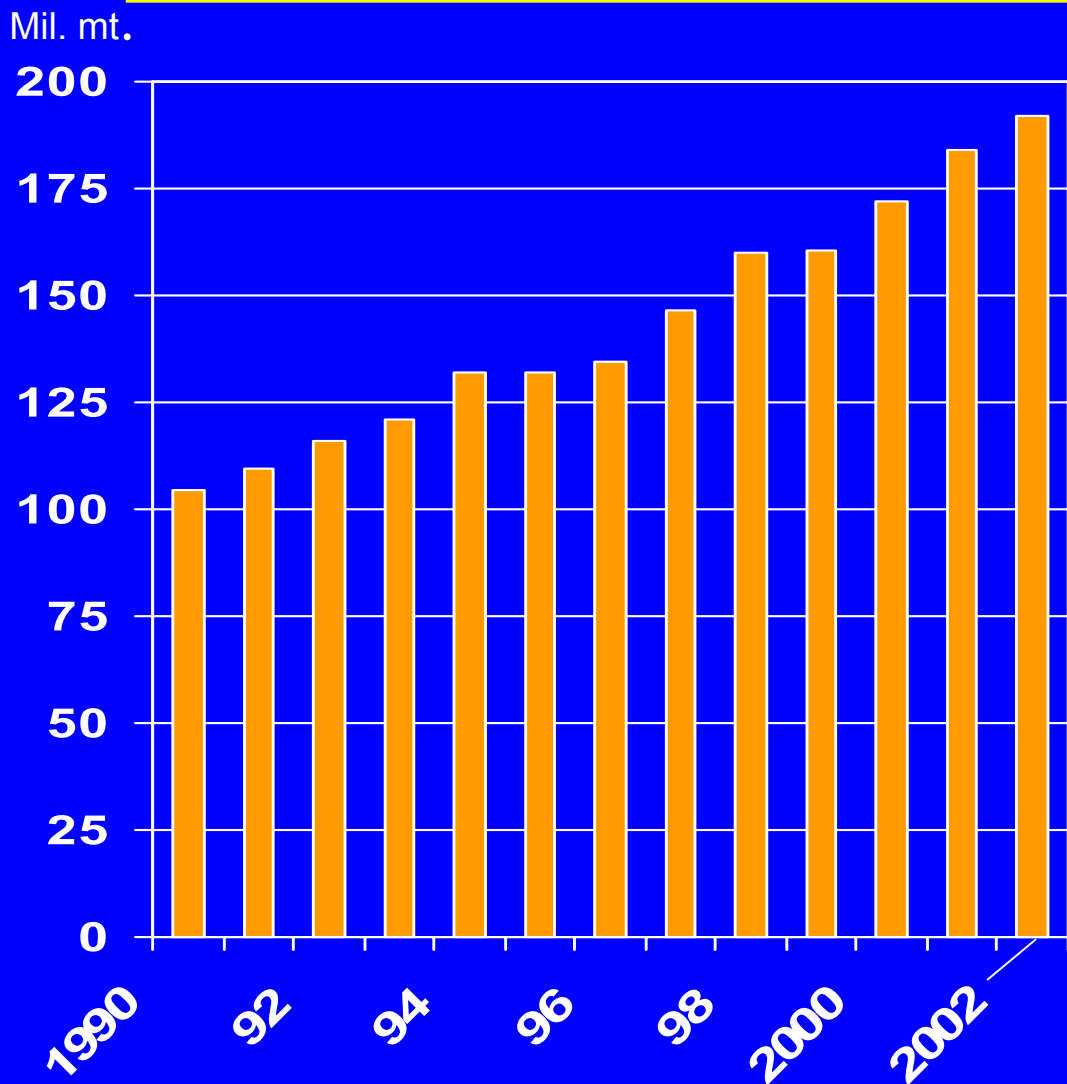
- Global corn use up substantially in the 1990s, surpassing wheat by 1998
- No growth in world corn use in 2002 due to decline in U.S.
- Increasing feed use accounts for most gains

# Global Per Capita Corn Disappearance 1990-2002



- Increases in per capita corn use slowing
- Dramatic gains through mid-1990's were fueled by China, U.S., and many developing countries

# Global Soybean Disappearance, 1990-2002

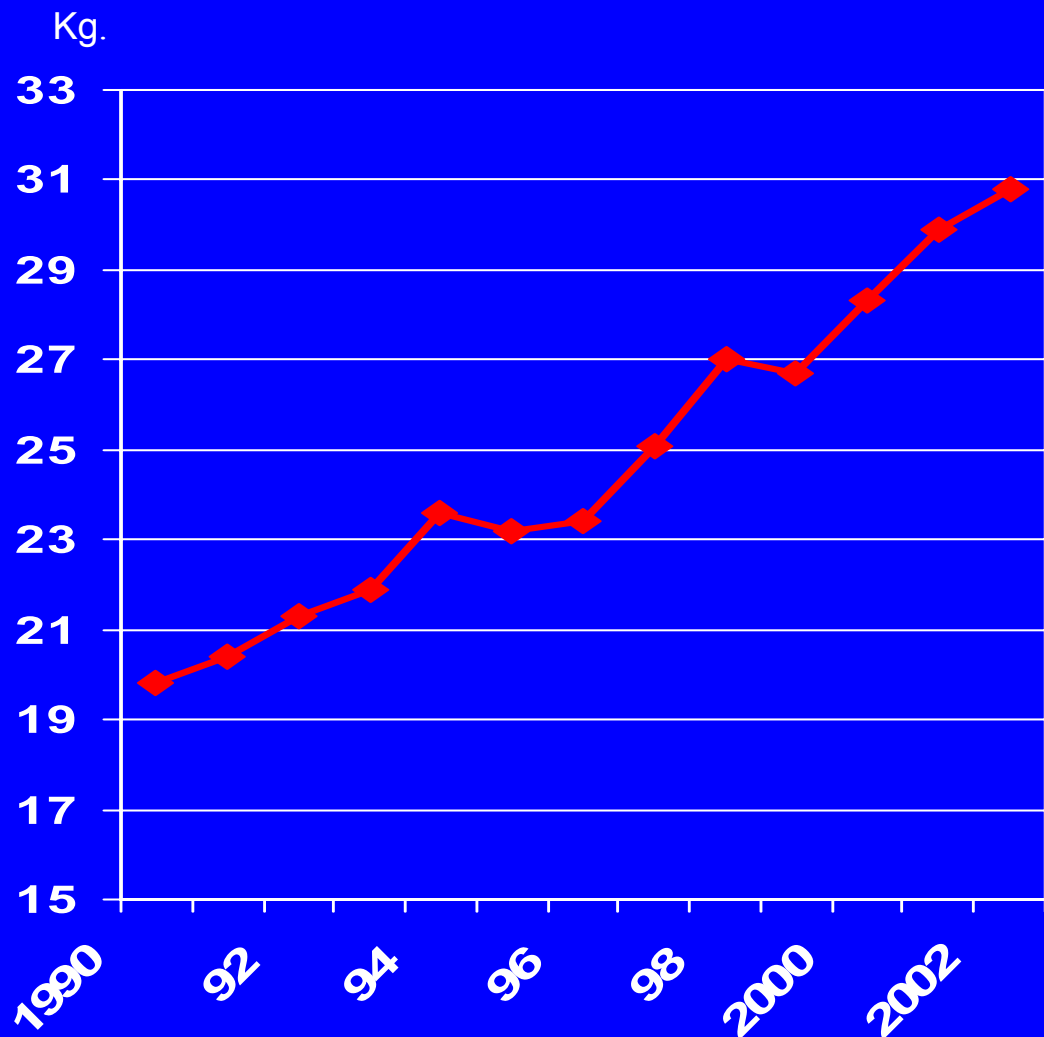


- World soybean disappearance has almost doubled since 1990
- In contrast to wheat and corn, soybeans have continued to realize robust gains
- Soybean meal use up nearly 90 percent since 1990, soybean oil use up nearly 100 percent



# Global Per Capita Soybean Disappearance

## 1990-2002



- Growth in per capita disappearance remains strong
- Direct consumption of soybeans is very small, and meal and oil account for the growth
- Little indication of slowing in the near-term

# **2002 Farm Act: Key Provisions**

---

## **Marketing Loan Program Continues**

- New loan rates reflect recent market prices
- Wheat and corn loan rates rise, soybeans drop

## **Fixed Decoupled Payments Continue**

- Direct payments replace PFC payments
- Adds soybeans and other oilseeds

## **Counter-Cyclical Payments Introduced**

- Institutionalizes past market loss assistance

# 2002 Farm Act: Implications

---

Wheat, Corn, and Soybeans

## 2002

- Provisions not certain before planting
- High prices result in minimal marketing loan benefits and no counter-cyclical payments
- Slow program sign up delays direct payments

## 2003

- Loan rates known
- Lower price outlook brings potential for marketing loan benefits and counter-cyclical payments
- Direct payments enhance cash flow before planting

# 2003 Acreage Prospects

---

## Wheat

- 63 million acres
  - winter 44.2 million, up 2.5 million
  - spring and durum 18.8 million, up 0.2 million

## Corn

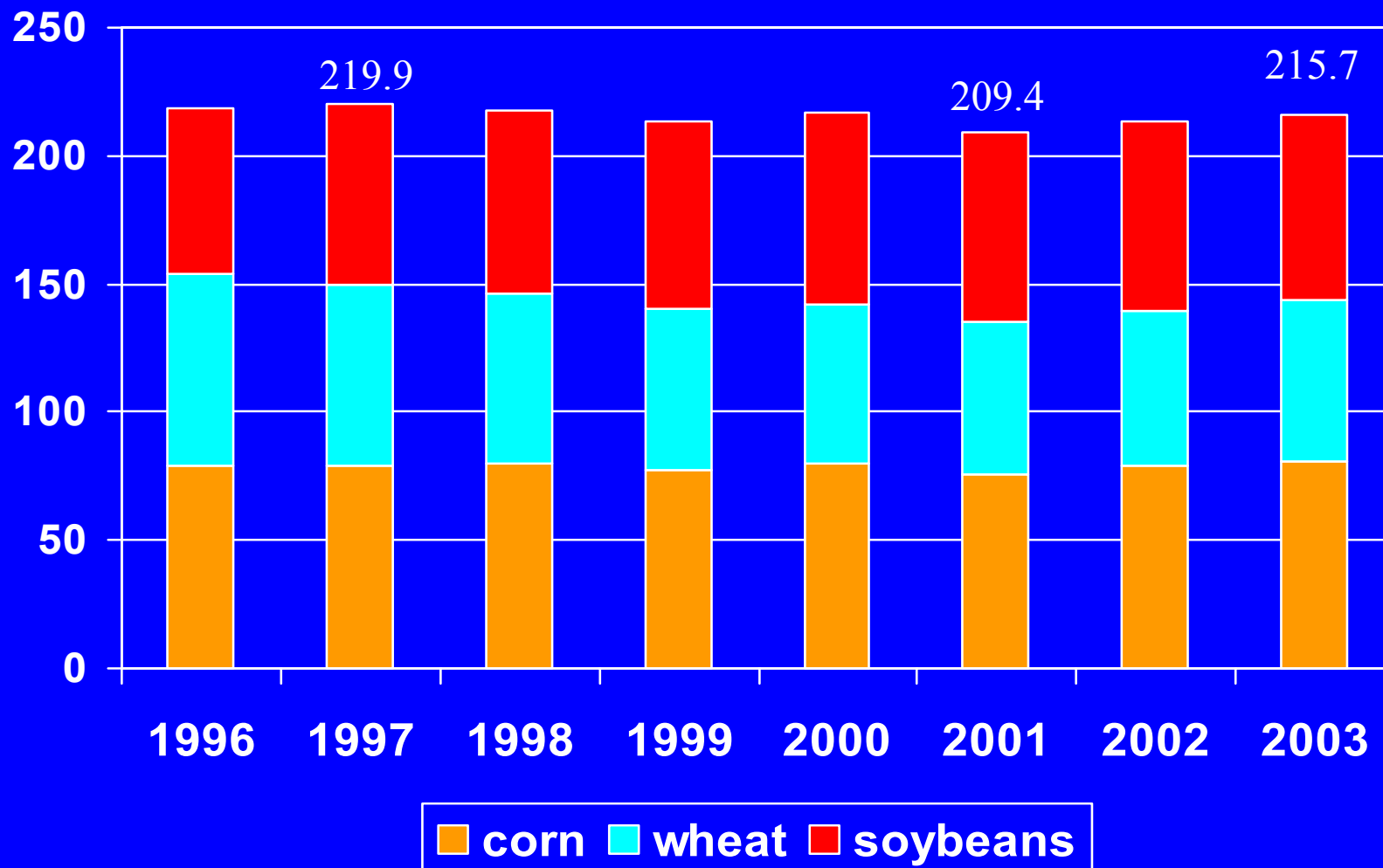
- 80.5 million acres, up 1.4 million

## Soybeans

- 72.2 million acres, down 1.6 million

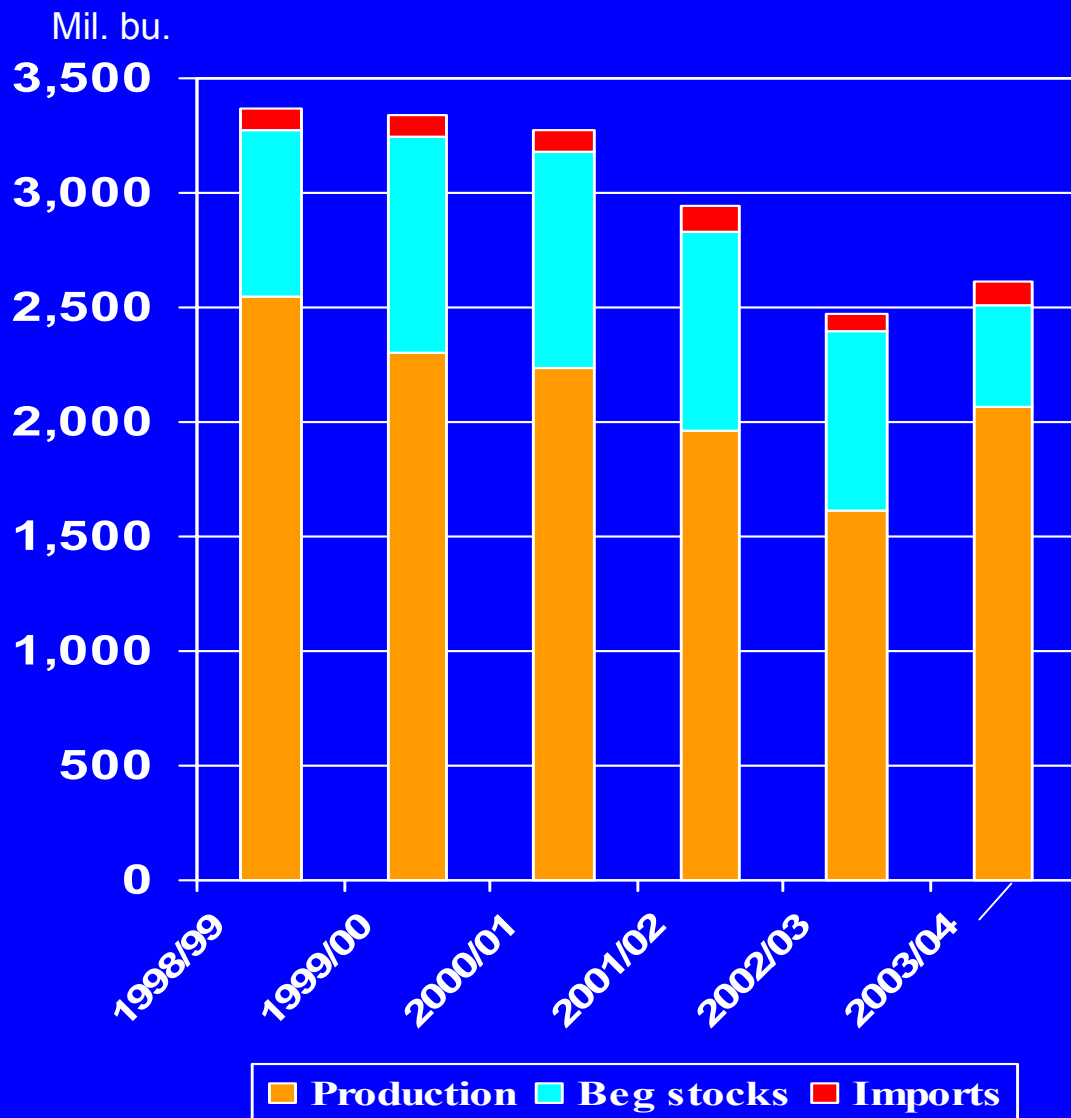
# Planted Acreage Corn, Wheat, and Soybeans

Mil. acres



# 2003 Wheat Supply Up Modestly

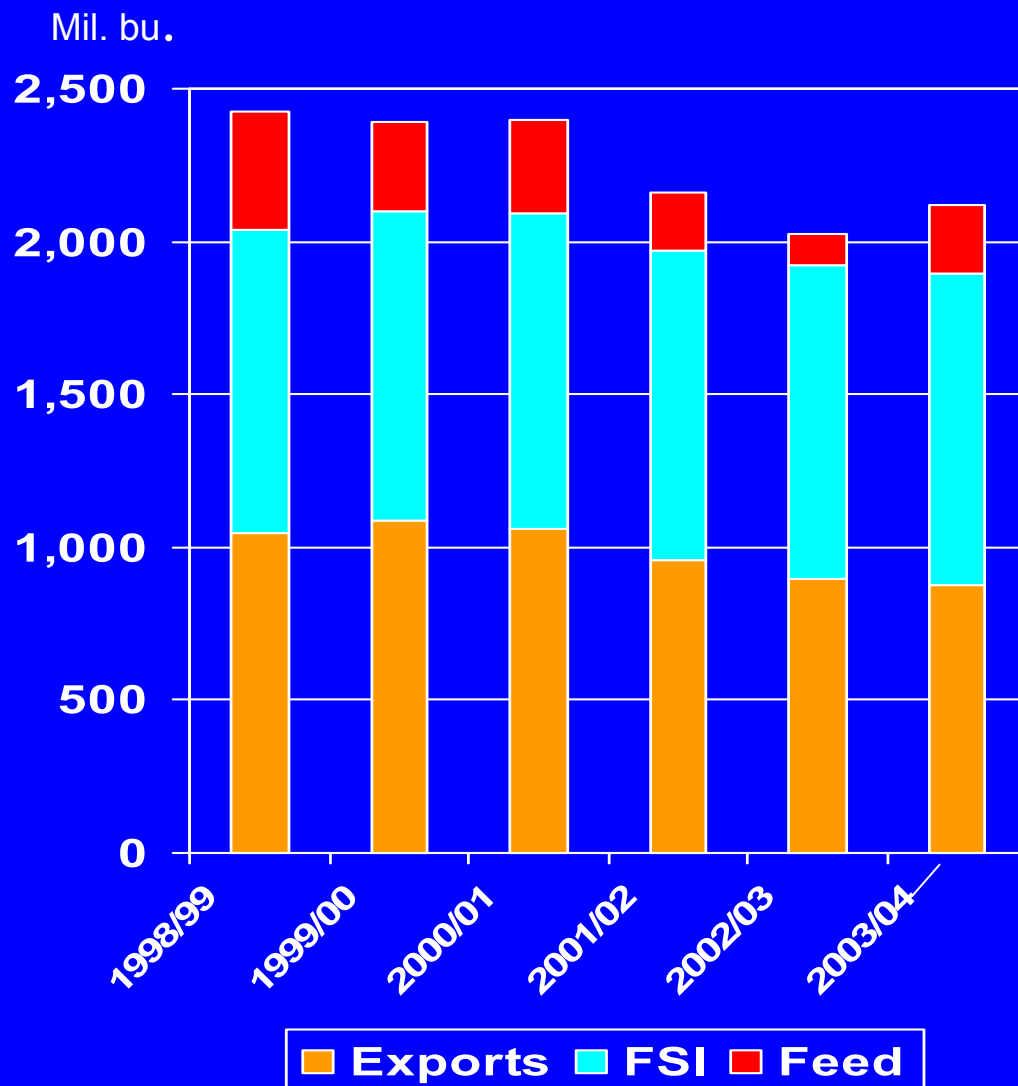
## *Production Gain Offsets Small Carryin*



- Area Harvested 53.4 mil. acres
- Yield 38.7 bushels up from 35.3
- million bushels
- Production 2065 (+28%)
- Begin Stocks 445 (-43%)
- Imports 100 (+33%)
- Supply 2610 (+ 6%)

# Wheat Use to Rise Slightly

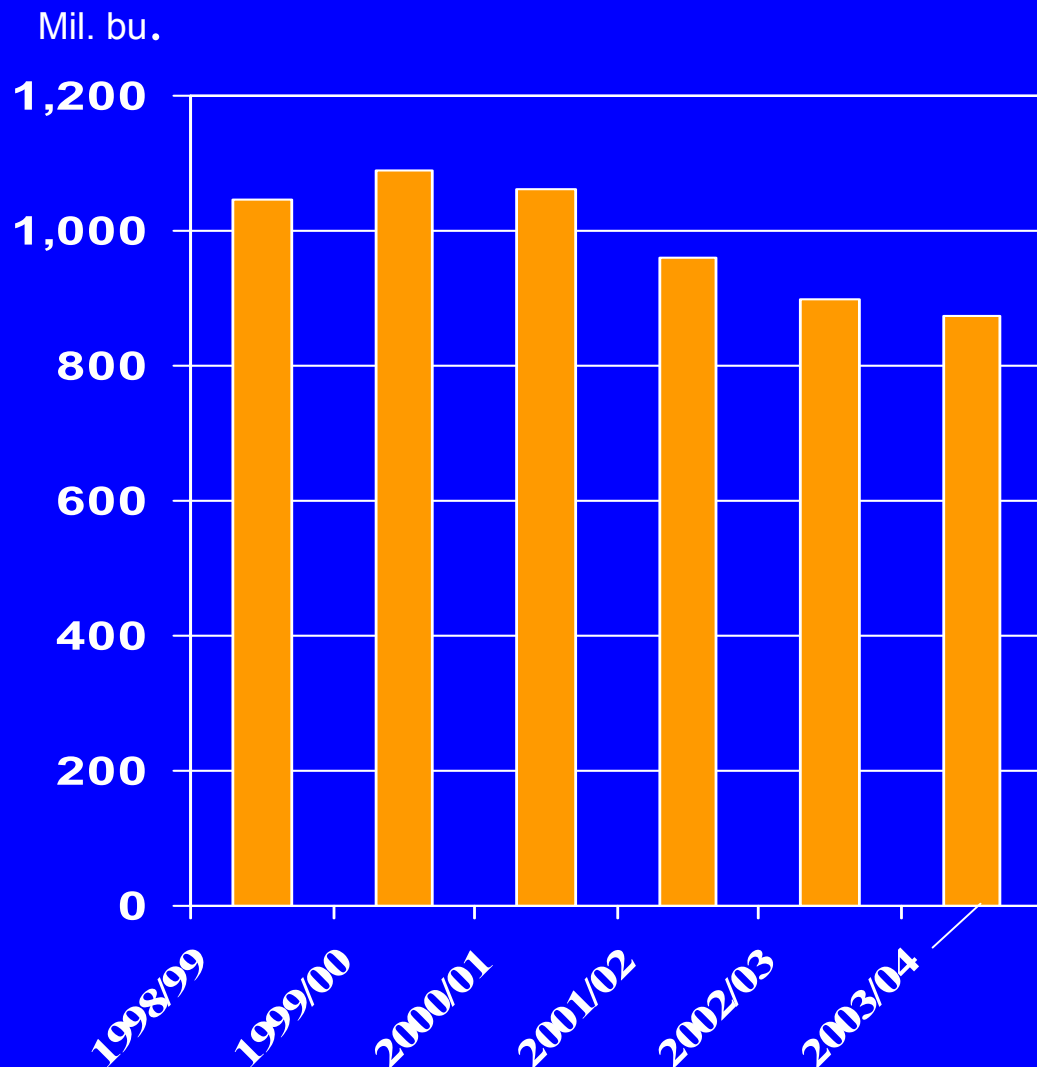
## *Exports Continue to Slide, Food Use Flat*



Million bushels

- Food, seed, indus. (FSI) 1,020 (=)
- Feed and residual 225 (+125%)
- Exports 875 (-3%)
- End Stocks 490 (+10%)

# U.S. Wheat Exports to Remain Weak

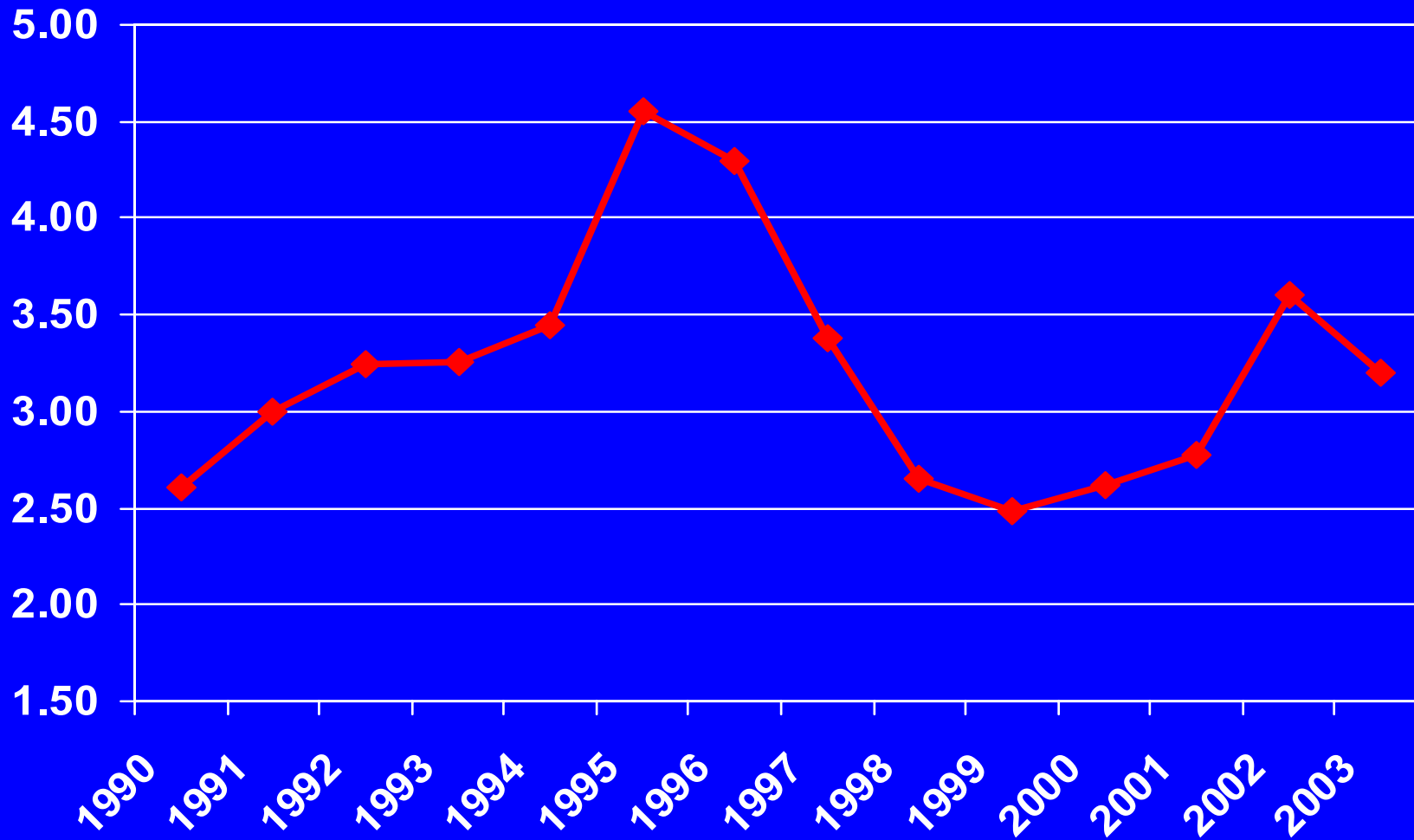


- Exports from Australia and Canada to recover
- Russia and Ukraine wheat shipments decline, but remain substantial
- Will importers return to traditional suppliers?



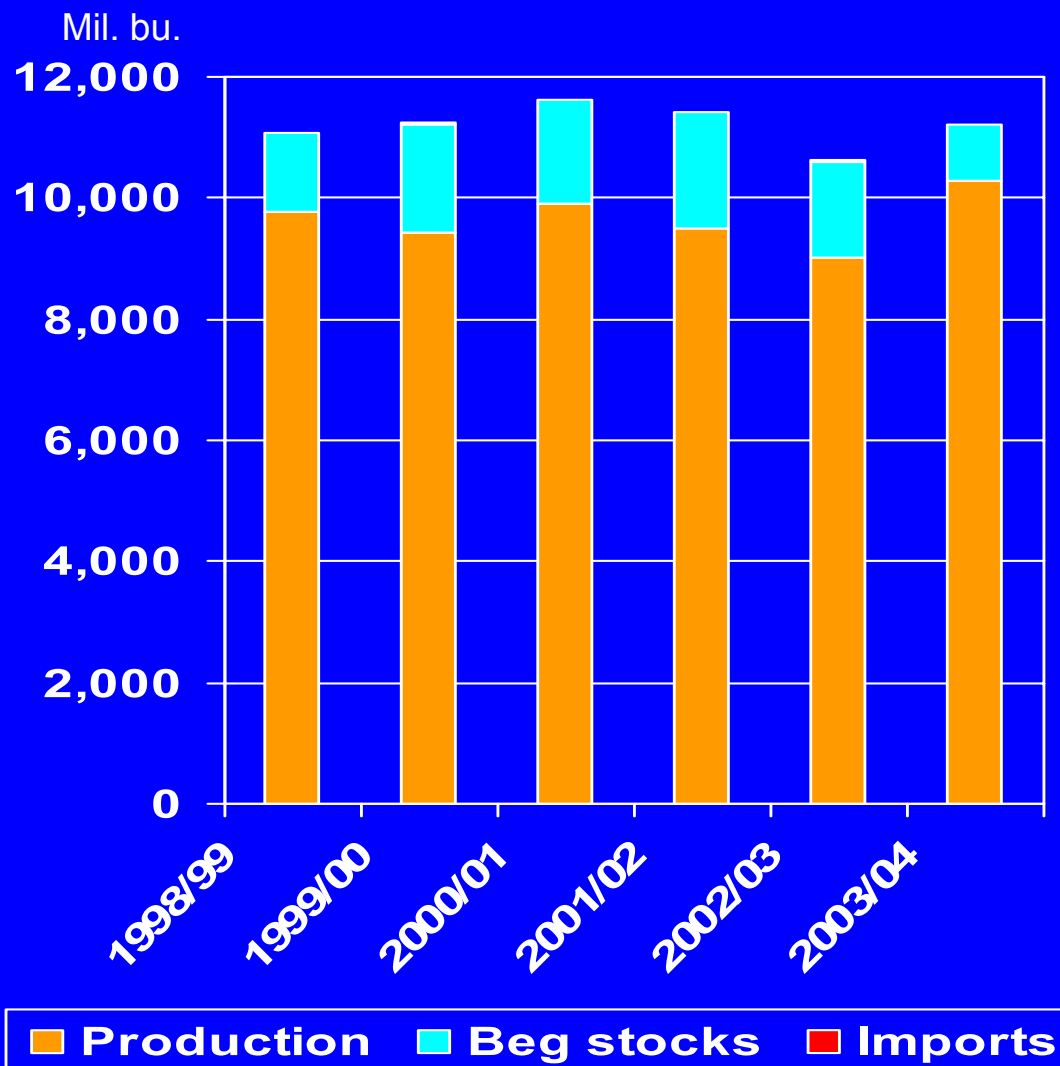
# Wheat Farm Price Projected at \$3.20 in 2003

\$ per bu.



# Rebound in Corn Production to Boost Supply

## *Trend Yield and More Acres Will Lead to Record Crop*



- Yield 139.7 bu., up from 130
- million bushels
- Production 10,270 (+ 14%)
- Begin Stocks 929 (-42%)
- Imports 10 (-33%)
- Supply 11,209 (+ 6%)

# Corn Use to Near 10 Billion Bushels

## *Sharp Rise in Ethanol, Modest Gains for Exports*

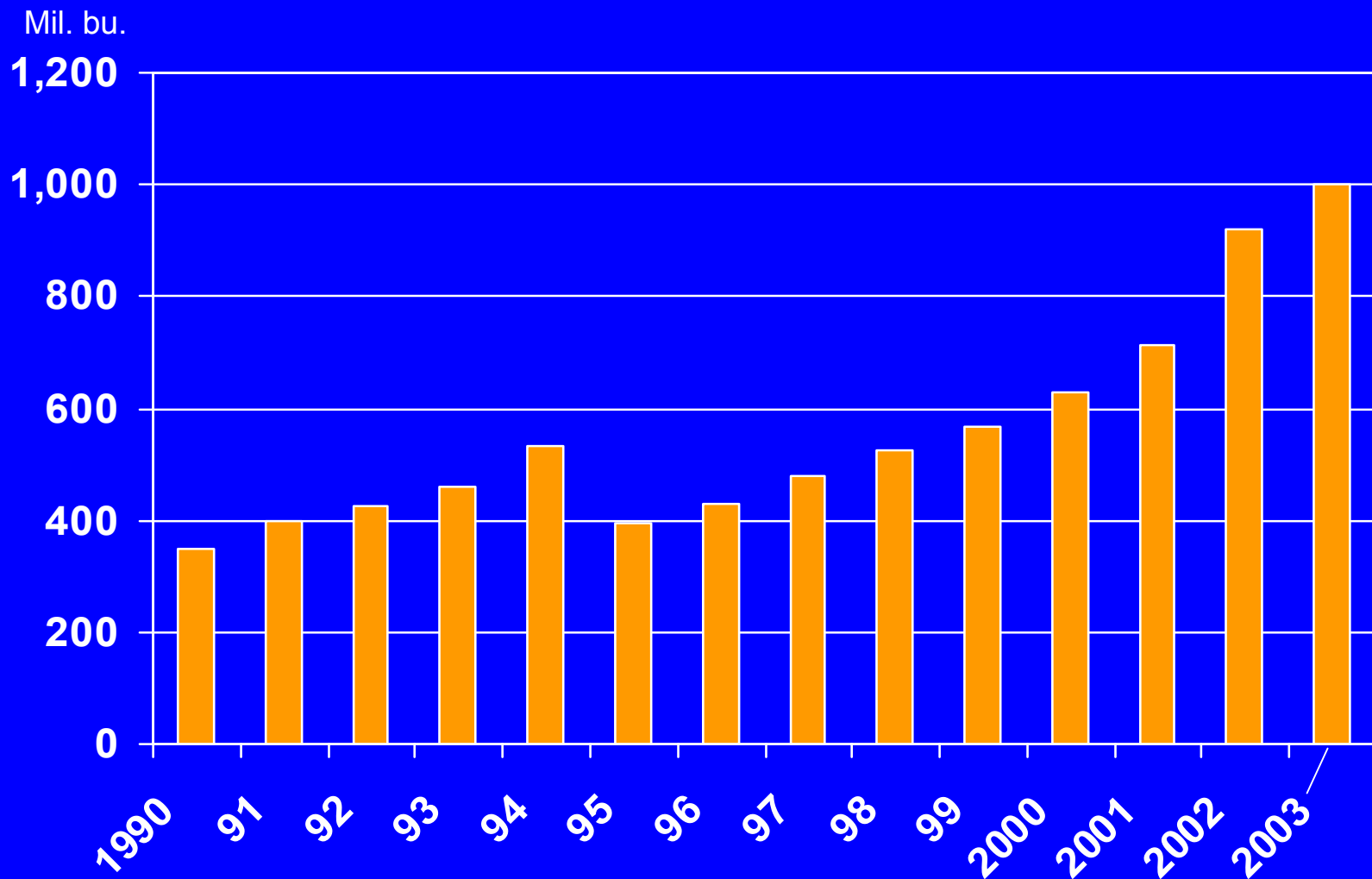


Million bushels

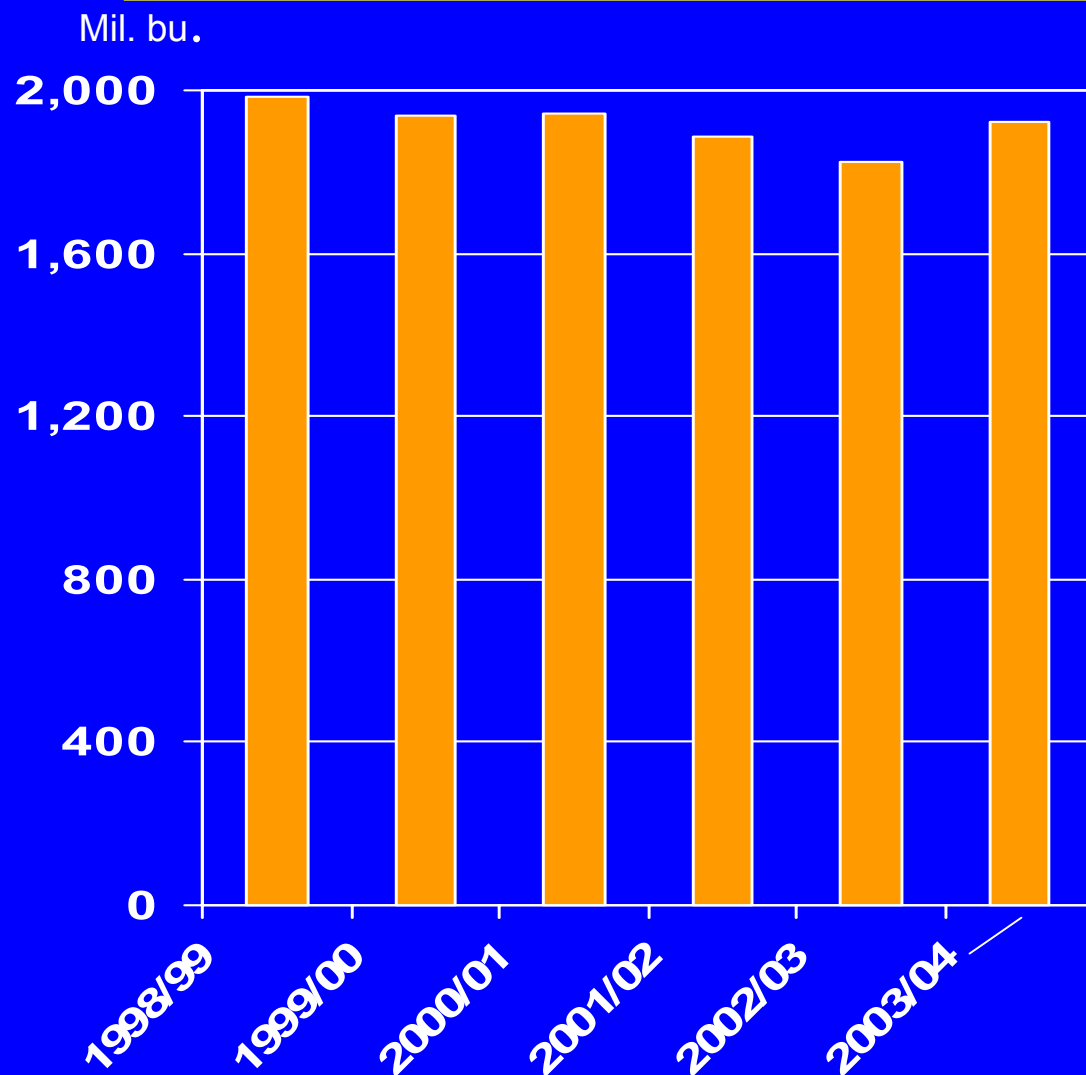
- Feed and residual  
5,650 (+1%)
- FSI 2,360 (+4%)
- Exports 1,925 (+6%)
- End Stocks  
1,274 (+37%)

# Corn Used for Ethanol Soars

## *Use Has More Than Doubled Since 1996*



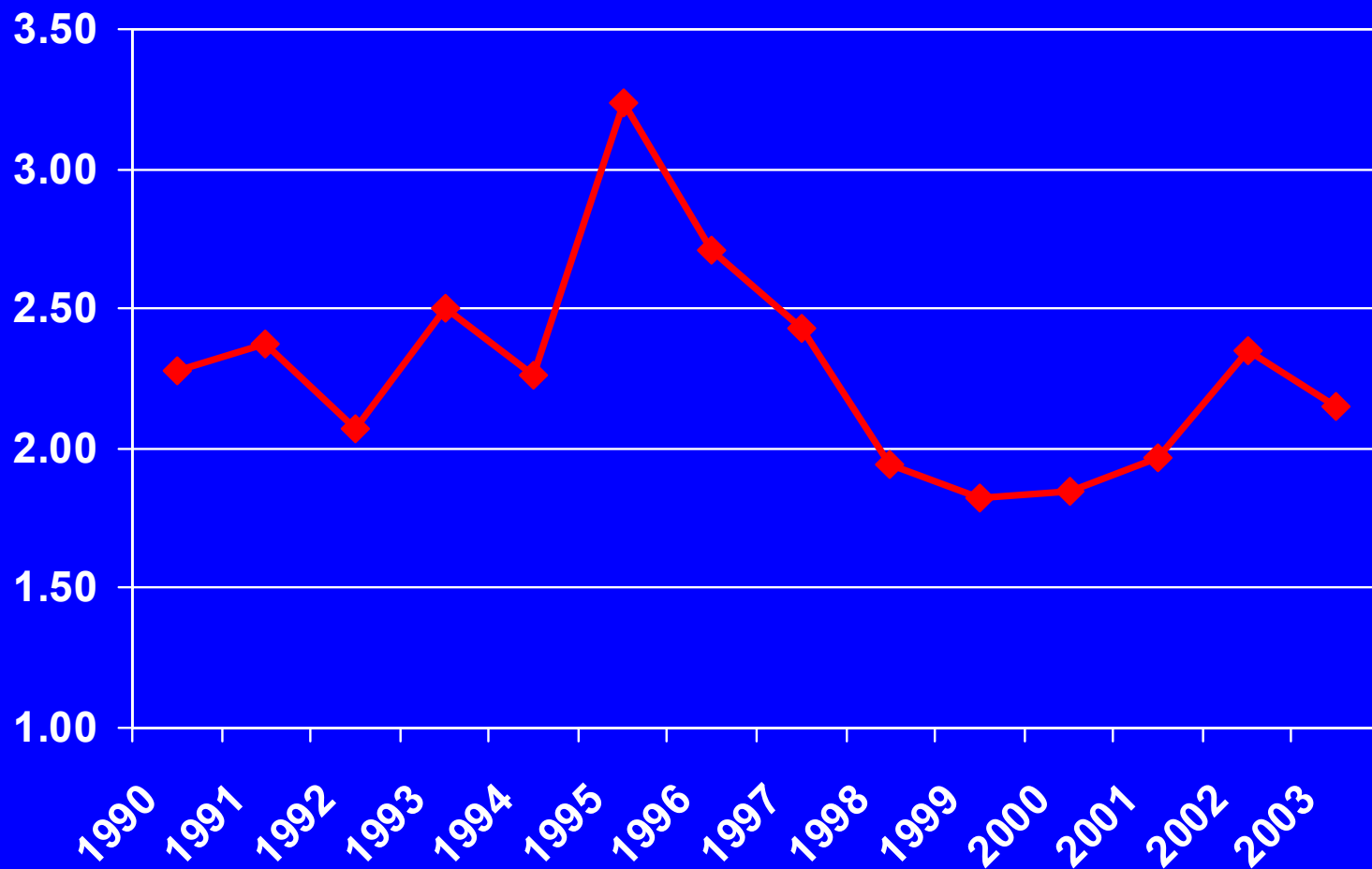
# U.S. Corn Exports: Modest Gains in 2003



- Lower prices should make U.S. more competitive
- China's exports likely to decline somewhat, but no dramatic shift assumed
- Steady outlook for Argentina's exports, will rival China as number two exporter

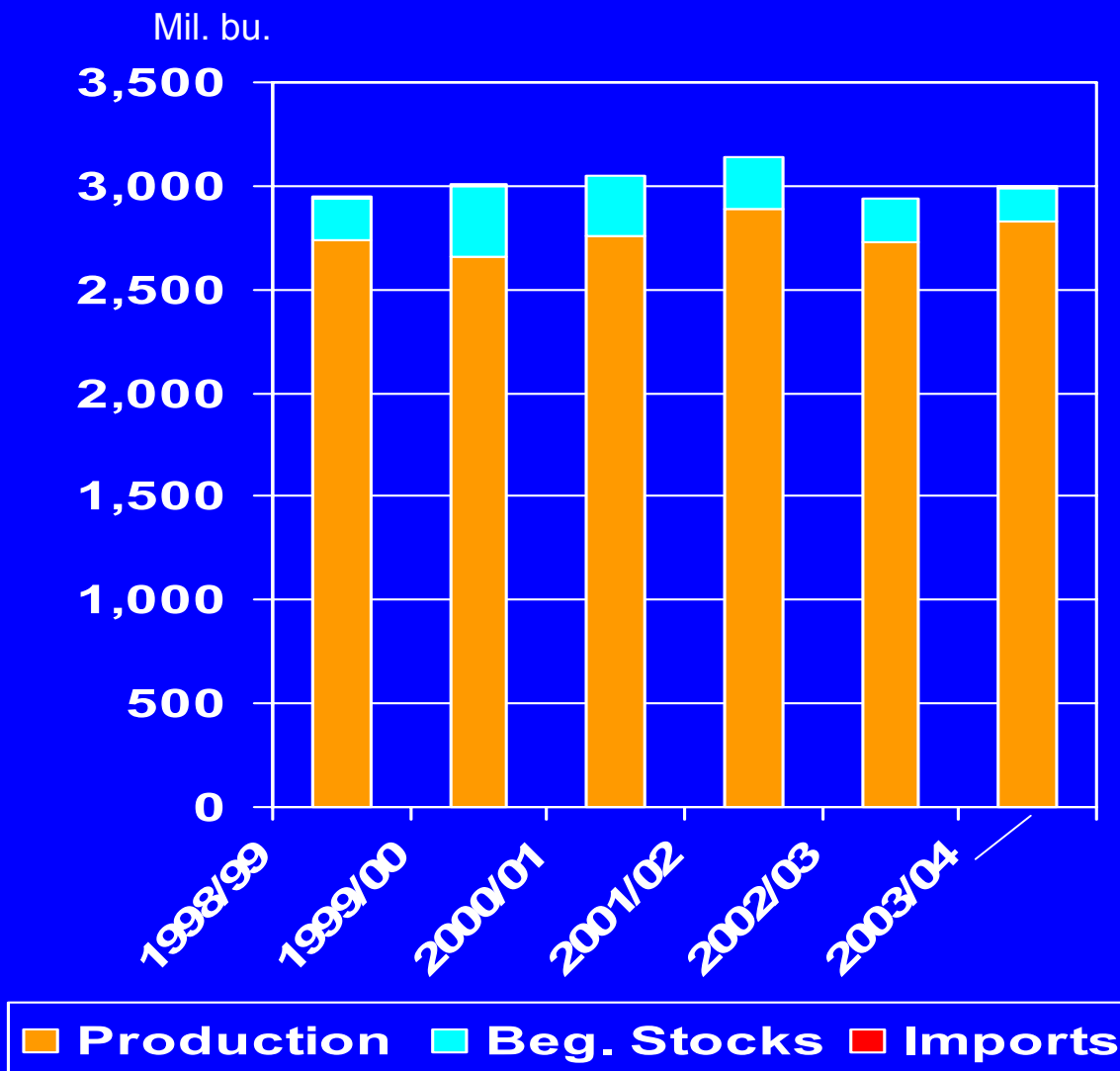
# Corn Farm Price Projected at \$2.15 in 2003

\$ per bu.



# Larger Crop Raises Soybean Supply

## *Despite Drop in Area, Higher Yield Boosts Production*



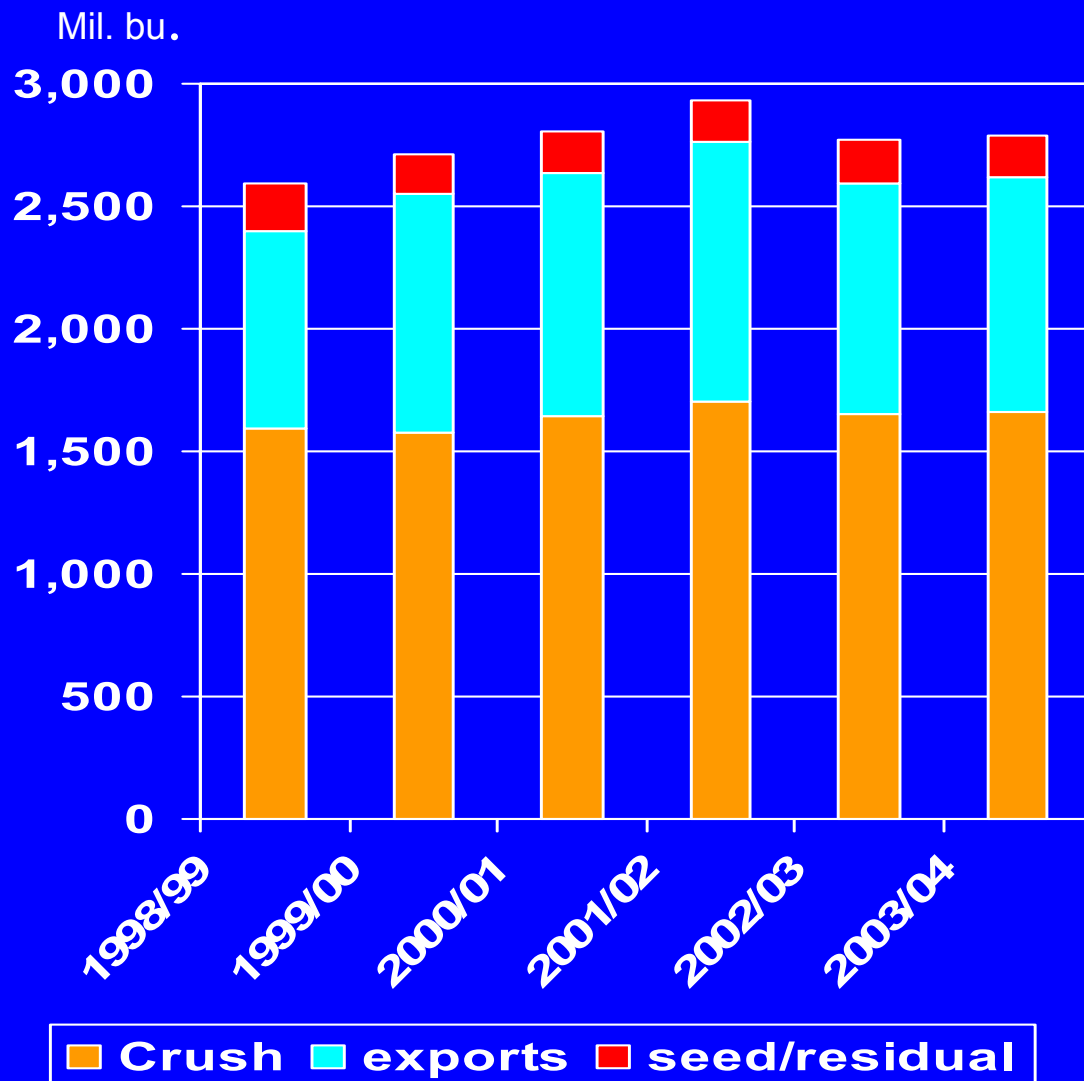
- Yield 39.7 bu., up from 37.8

million bushels

- Production  
2,815 (+ 3%)
- Begin Stocks  
165 (-21%)
- Supply  
2,985 (+ 2%)

# Soybean Use Shows Little Growth

*Crush and Exports Stay Below 2001 Records*

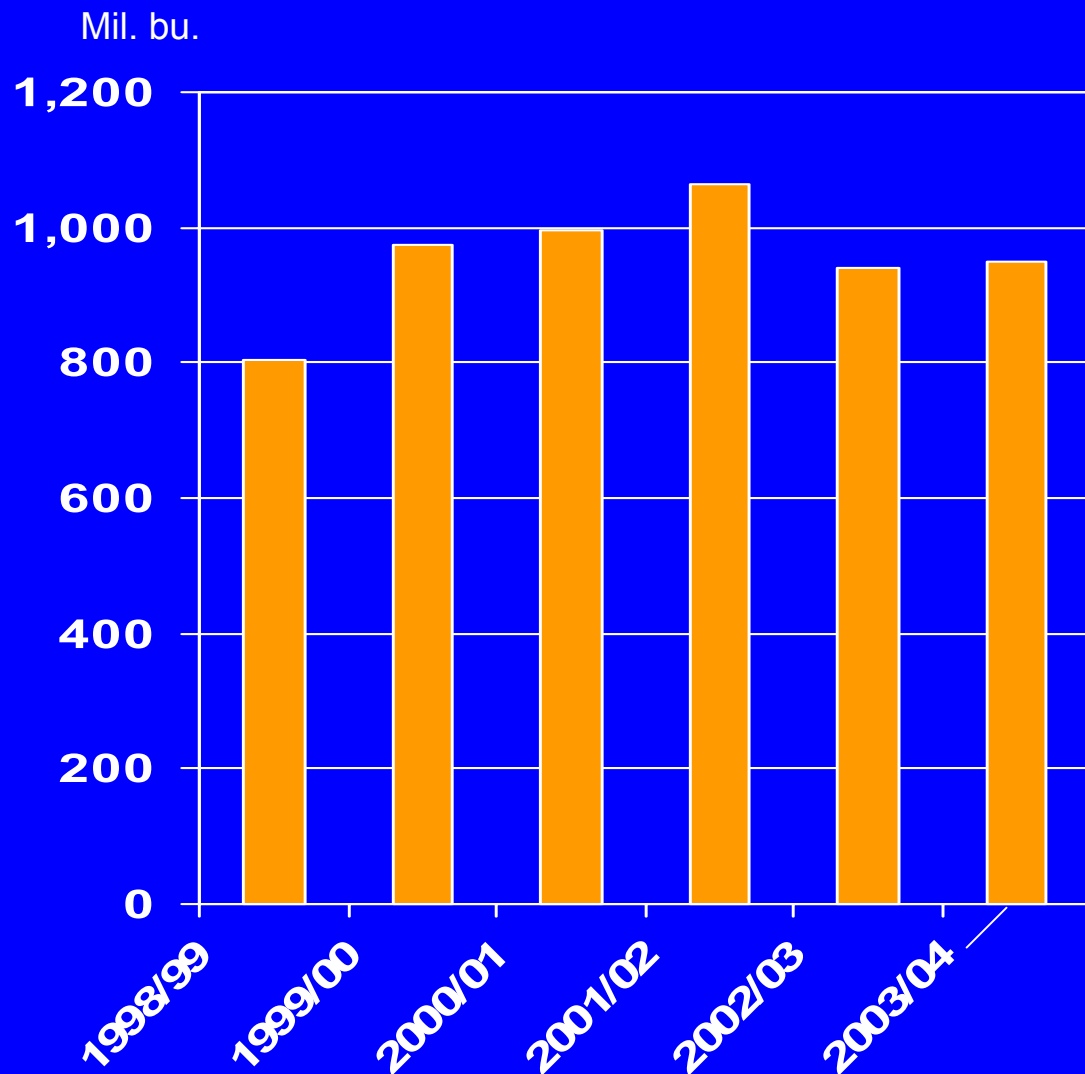


Million bushels

- Crush 1,670 (+1%)
- Exports 950 (+1%)
- Seed/residual 169 (-6%)
- End Stocks 195 (+25%)



# U.S. Soybean Exports Up Slightly

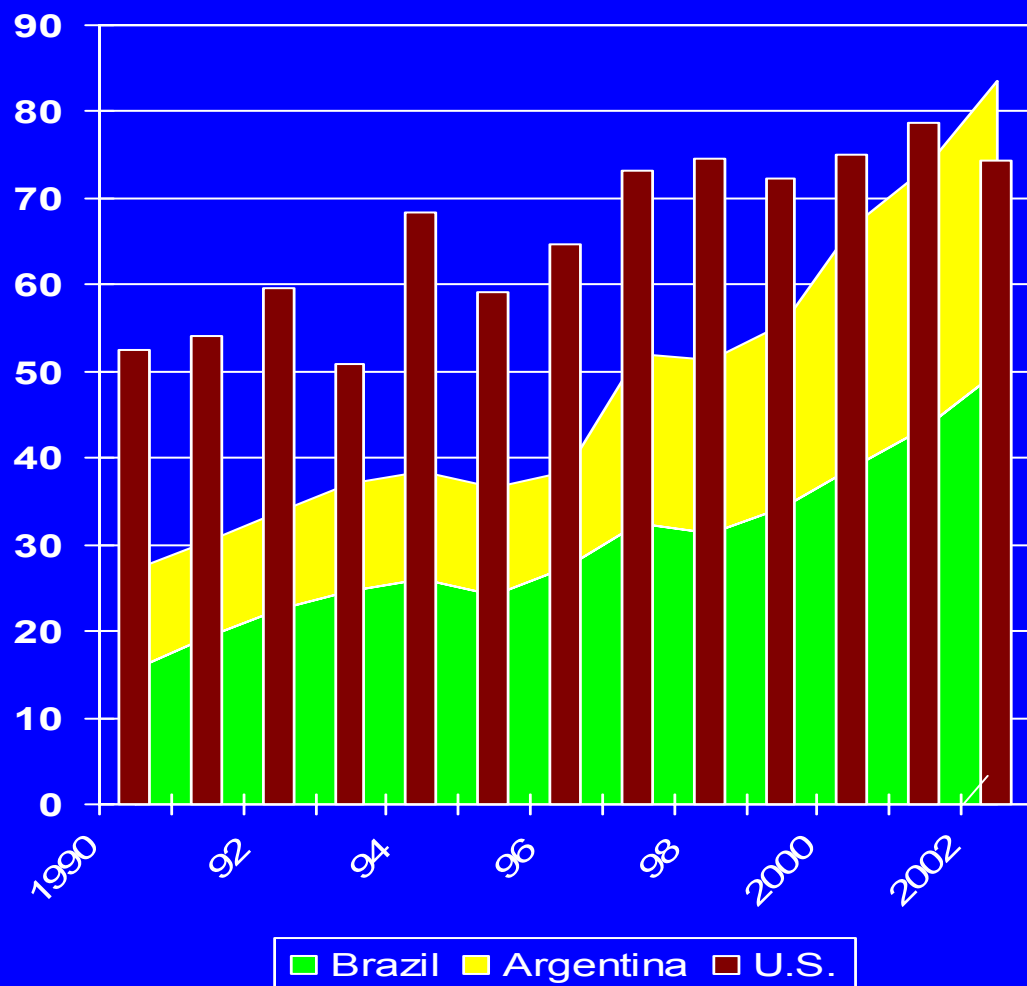


- Despite bigger crop, exports not projected to rebound to previous highs
- Brazil will continue strong competition for soybean markets
- China's dramatic import growth expected to slow in 2003

# Soybean Production

## *Argentina and Brazil Surpass U.S. in 2002*

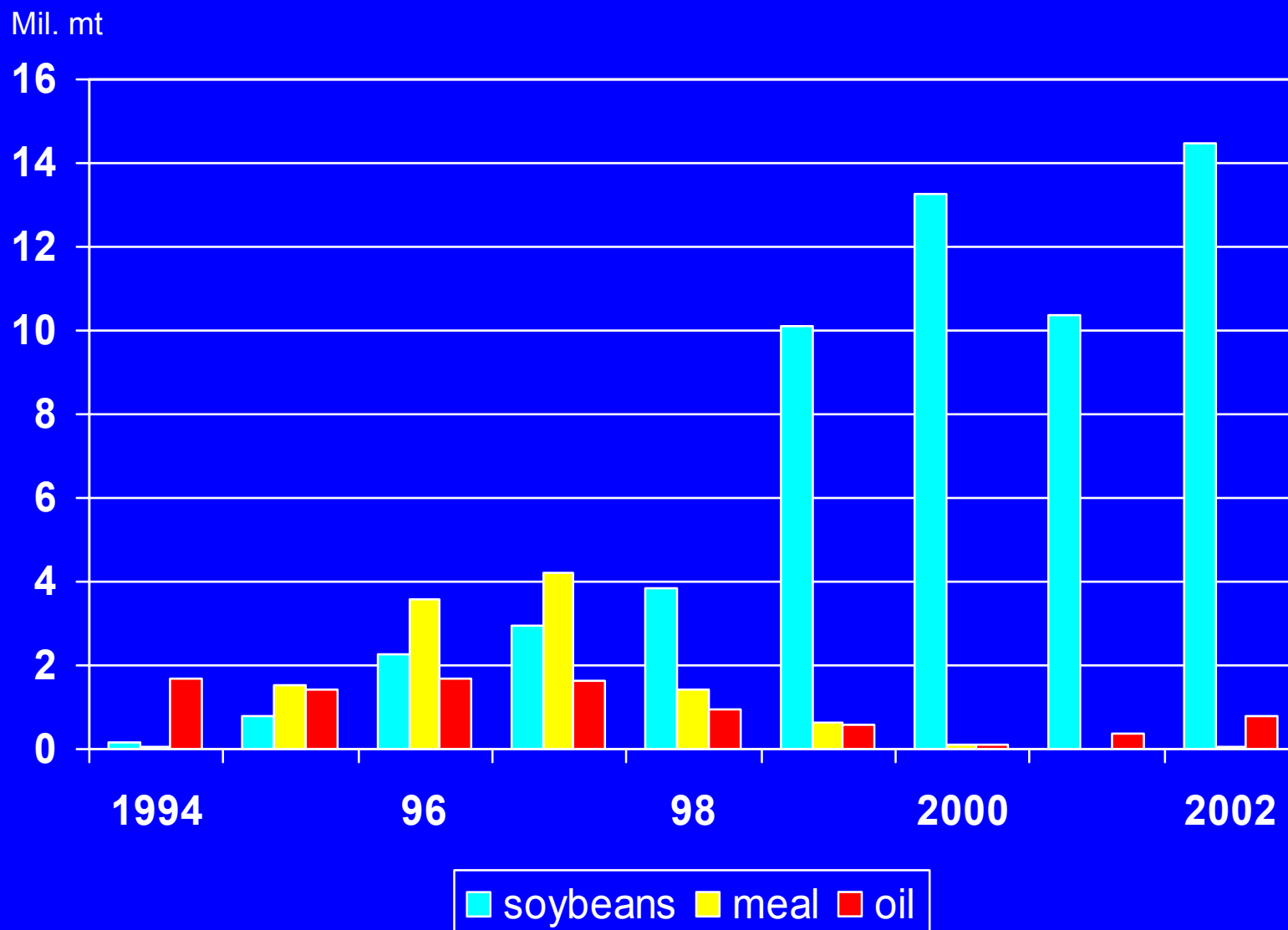
Mil. mt.



- Argentina and Brazil's combined production surpassed the U.S. in 2002
- While U.S. up over 40 percent from 1990 to 2002, production in Argentina and Brazil more than tripled
- U.S. share of world production fell to 39% in 2002 from 51% in 1990

# China: Imports of Soybeans and Products

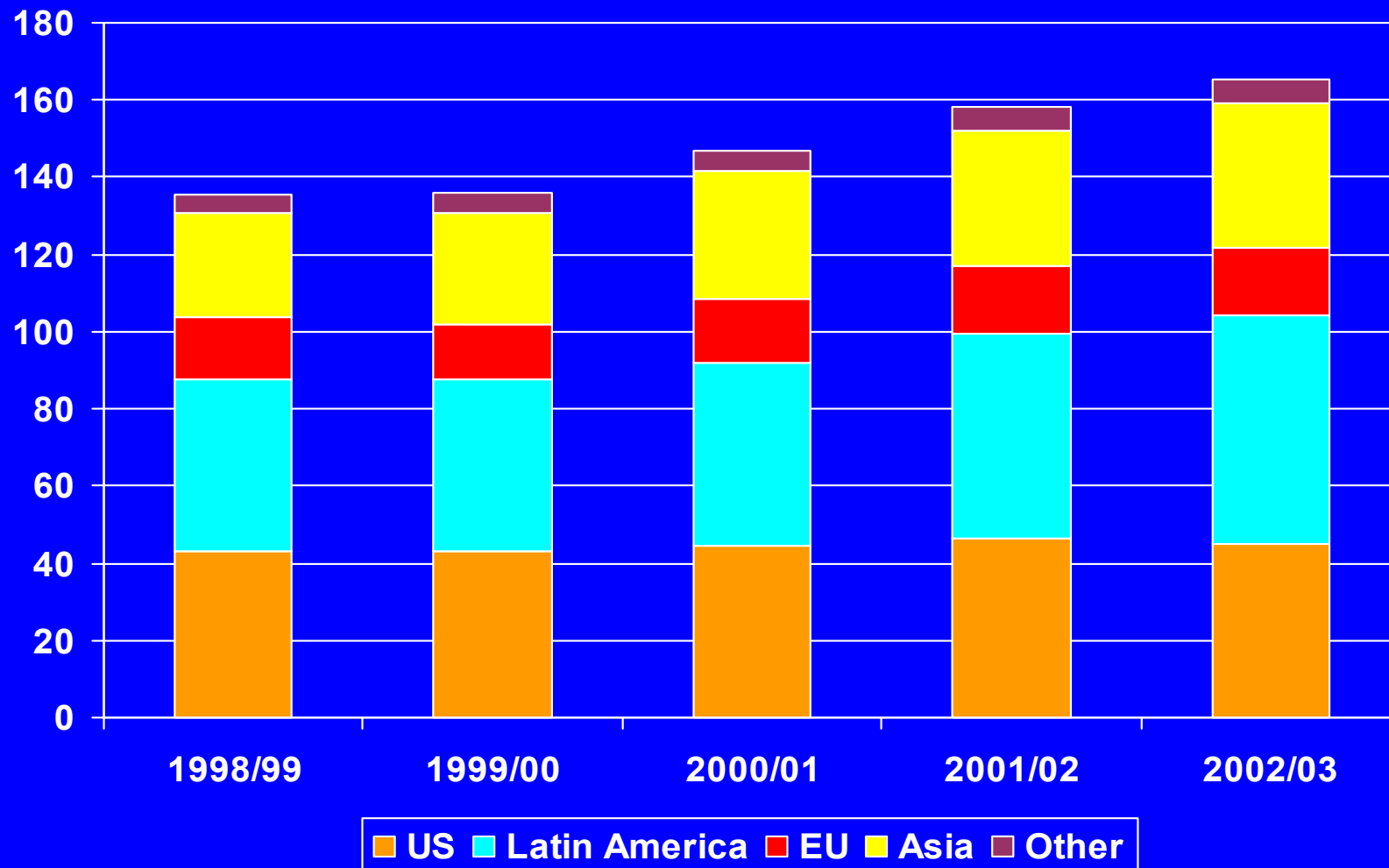
*Soybeans surge, while meal and oil decline*



# World Soybean Crush: Share by Region

## *Latin America and China expanding, U.S. slips in 2002*

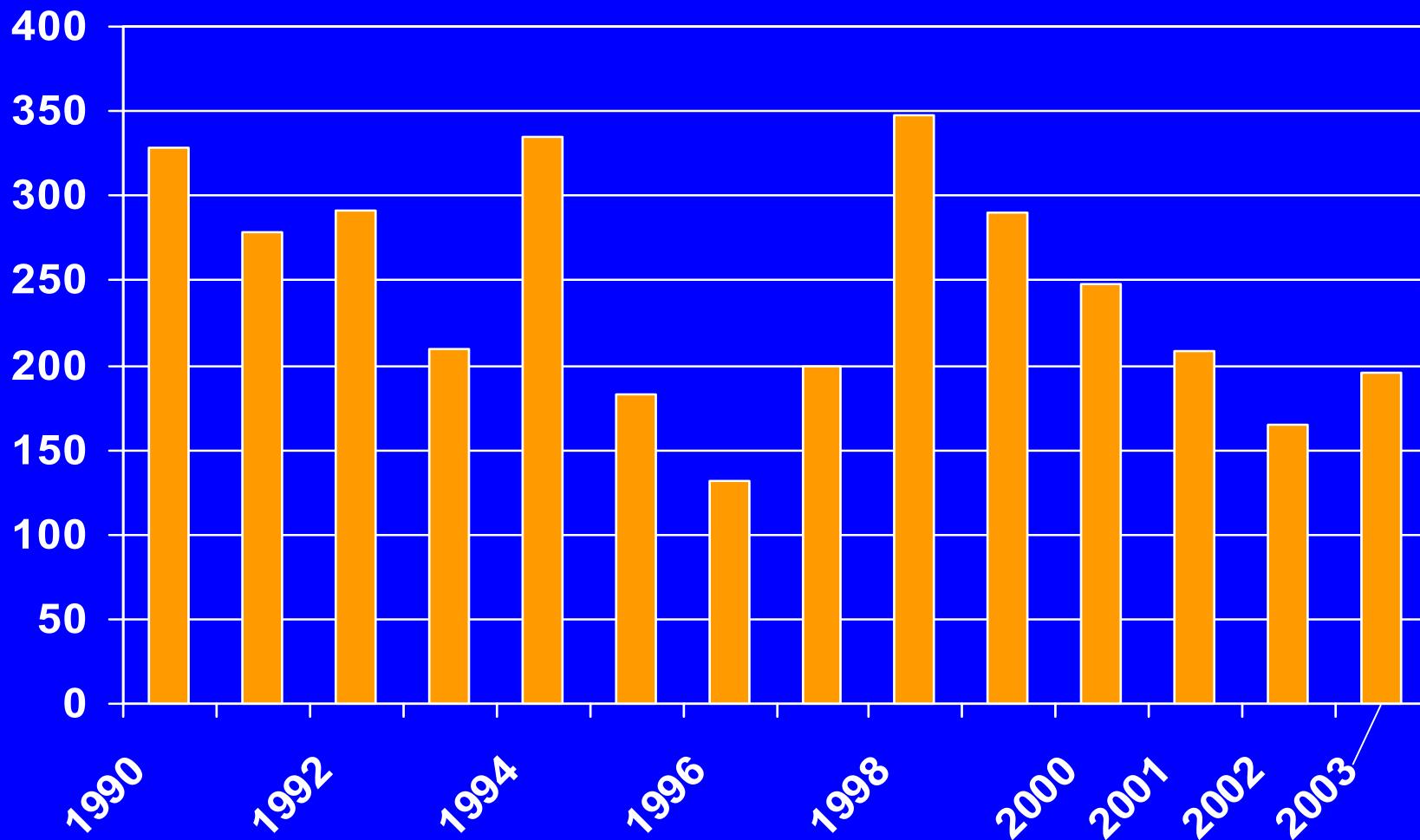
Mil. mt



# Modest Rise in Soybean Ending Stocks

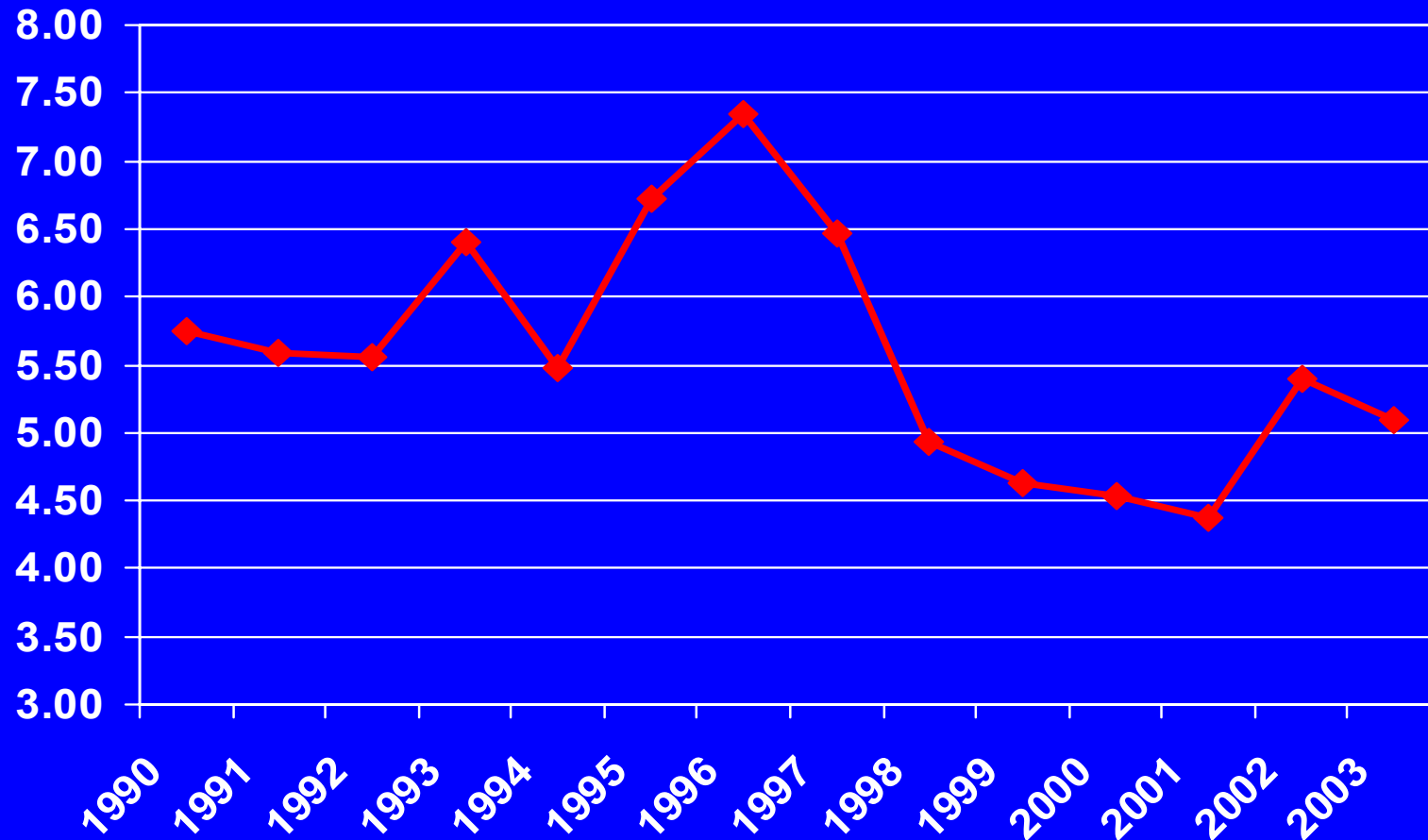
## *Price Response to Low 2002 Stocks Limited*

Mil. bu.



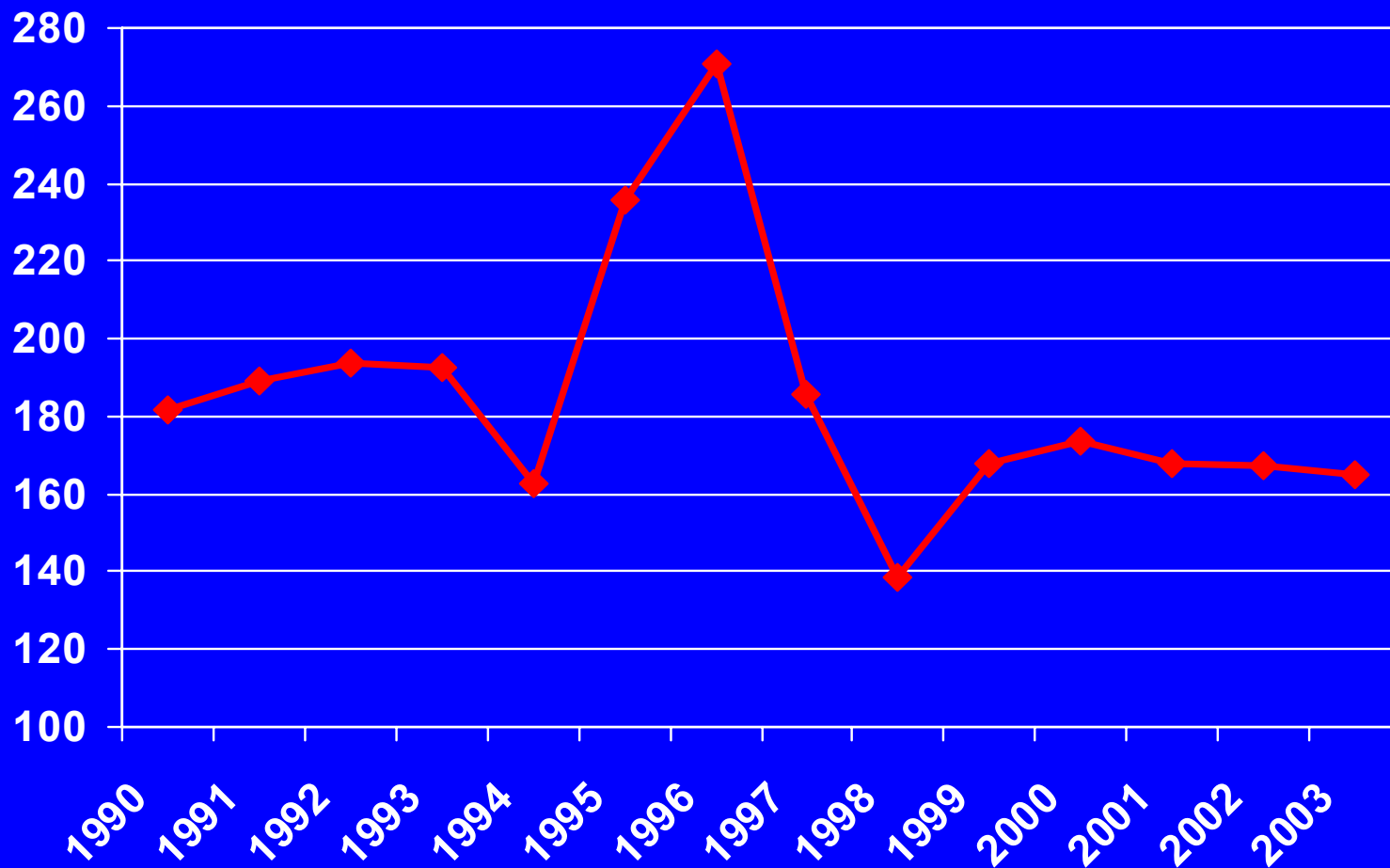
# Soybean Farm Price Projected at \$5.10 in 2003

\$ per bu.



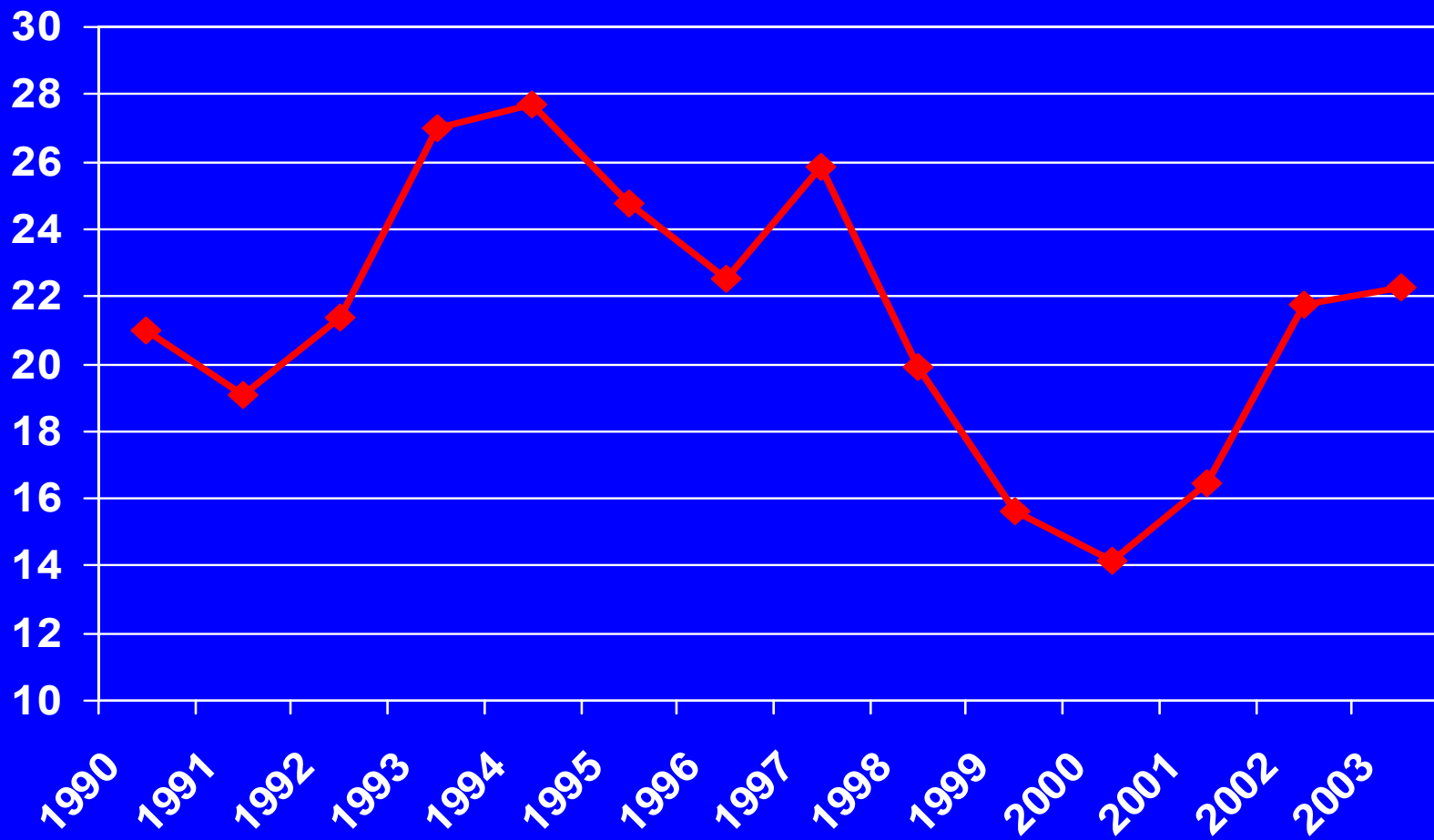
# Soybean Meal Price Projected at \$165 in 2003

\$ per ton



# Soybean Oil Price Projected at 22.3 Cents in 2003

Cents per lb.







# Reserve slides

---

- 34 Soy price & S/U Ratio
- 35 Yields Wheat
- 36 “ Corn
- 37 “ Soybeans

## Counter-cyclical pmts

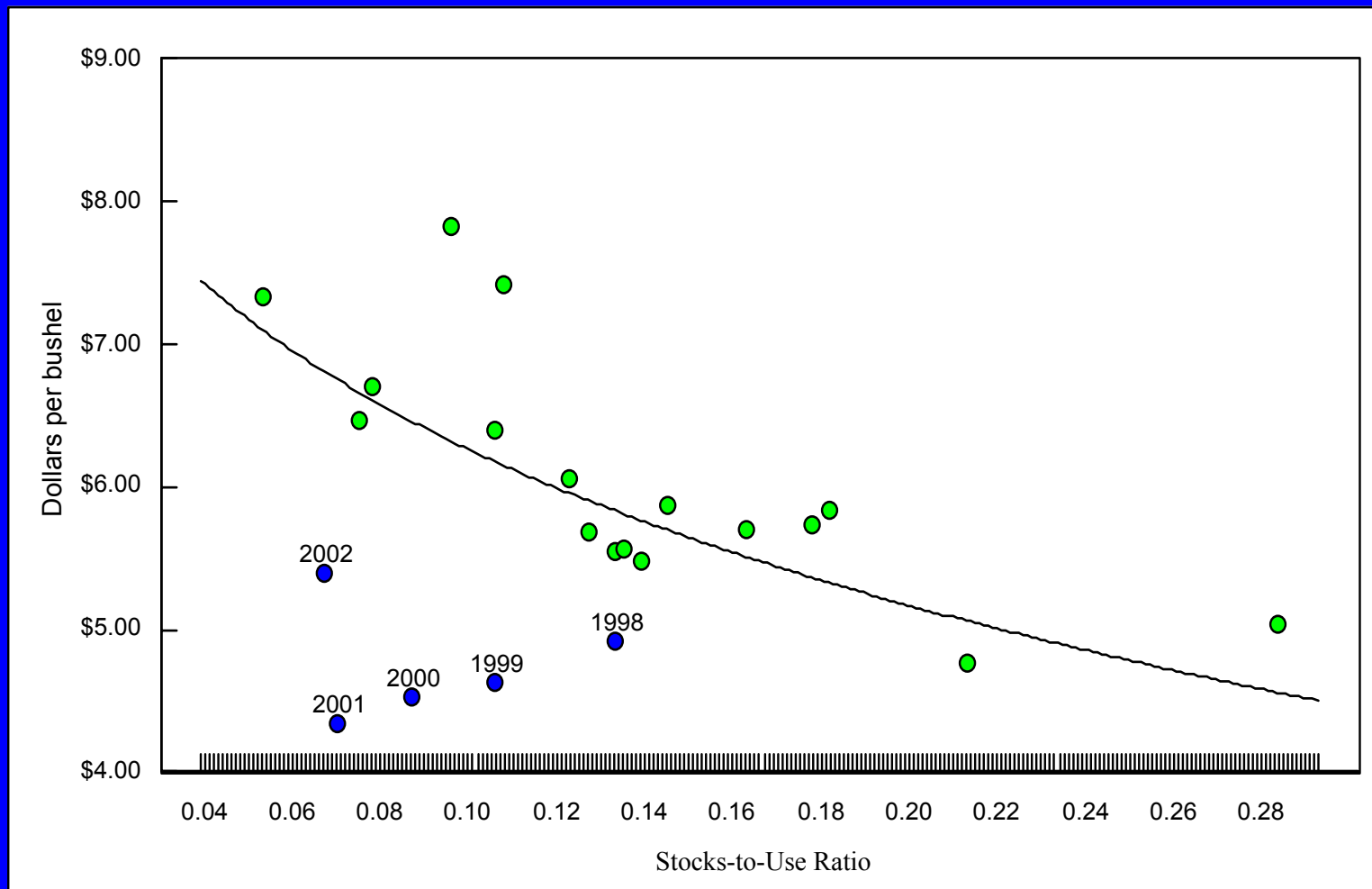
- 38 Wheat
- 39 Corn
- 40 Soybeans
- 41-44 China: wheat trade
- .....per cap wheat
- .....corn prod/cons
- .....corn trade

- 45 End Stocks Wheat
- 46 “ Corn
- 47 Nitrogen rates corn
- 48 Corn seasonal price pattern
- 49 Soymeal disappear
- 50 Soy crush

## Sector Revenue 98-02

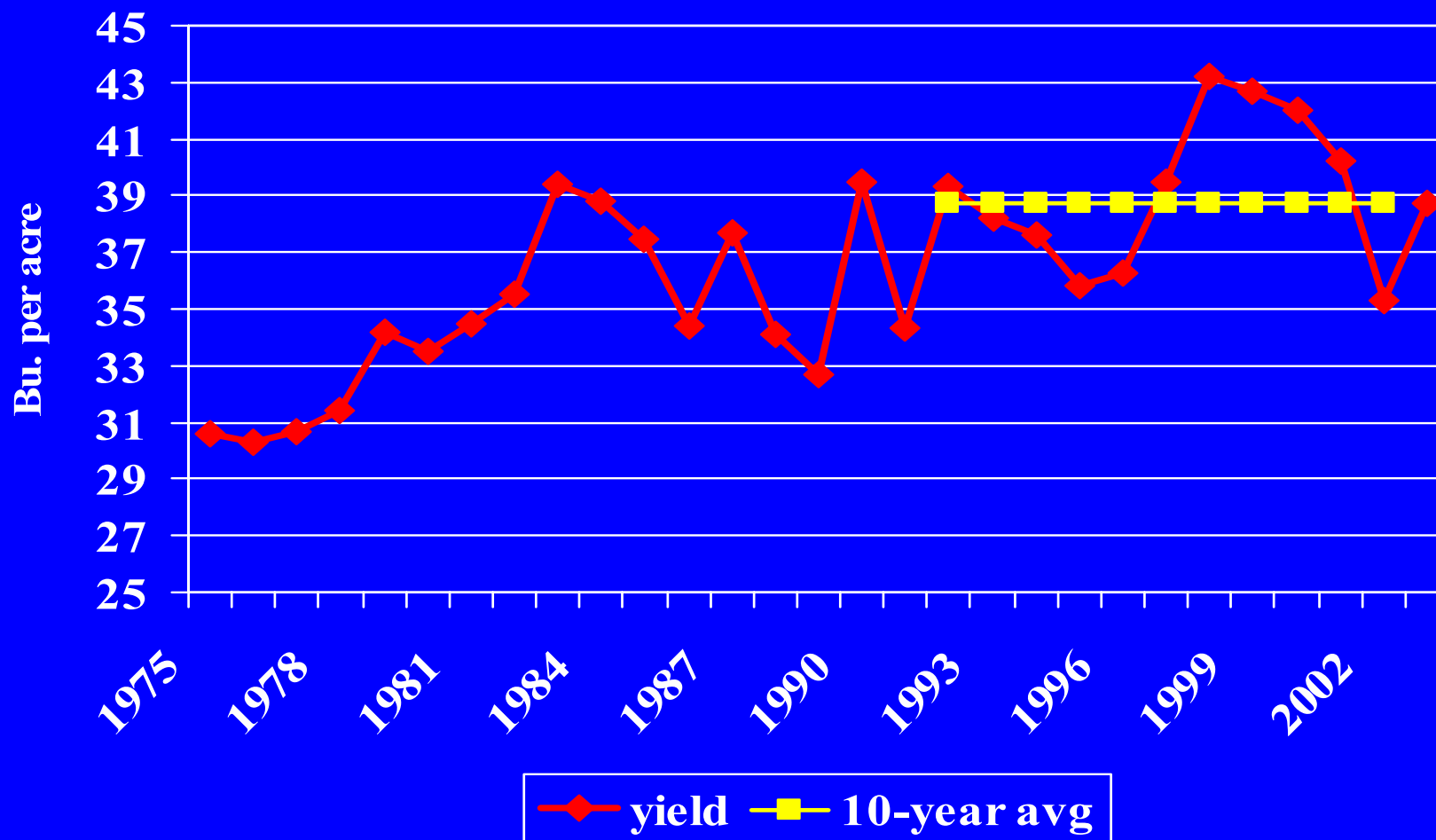
- 51 Wheat
- 52 Corn
- 53 Soybeans
- 54 Population
- 55 Loan Activity 98-02
- 56 LDPs 98-02

# Soybeans Stocks-to-Use Ratio vs. Price 1980-2002

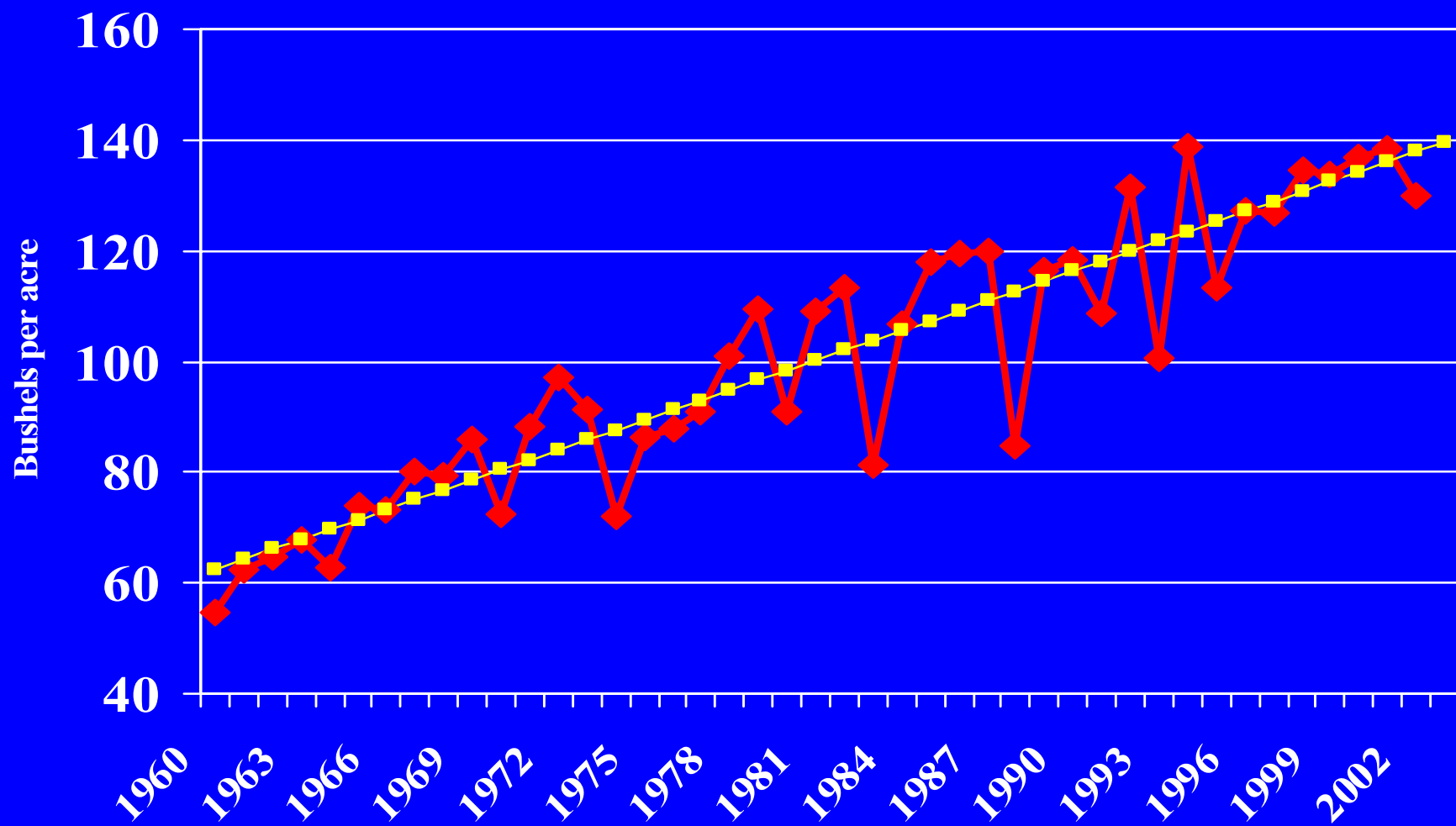


# Wheat Yields and 10-year Average by State

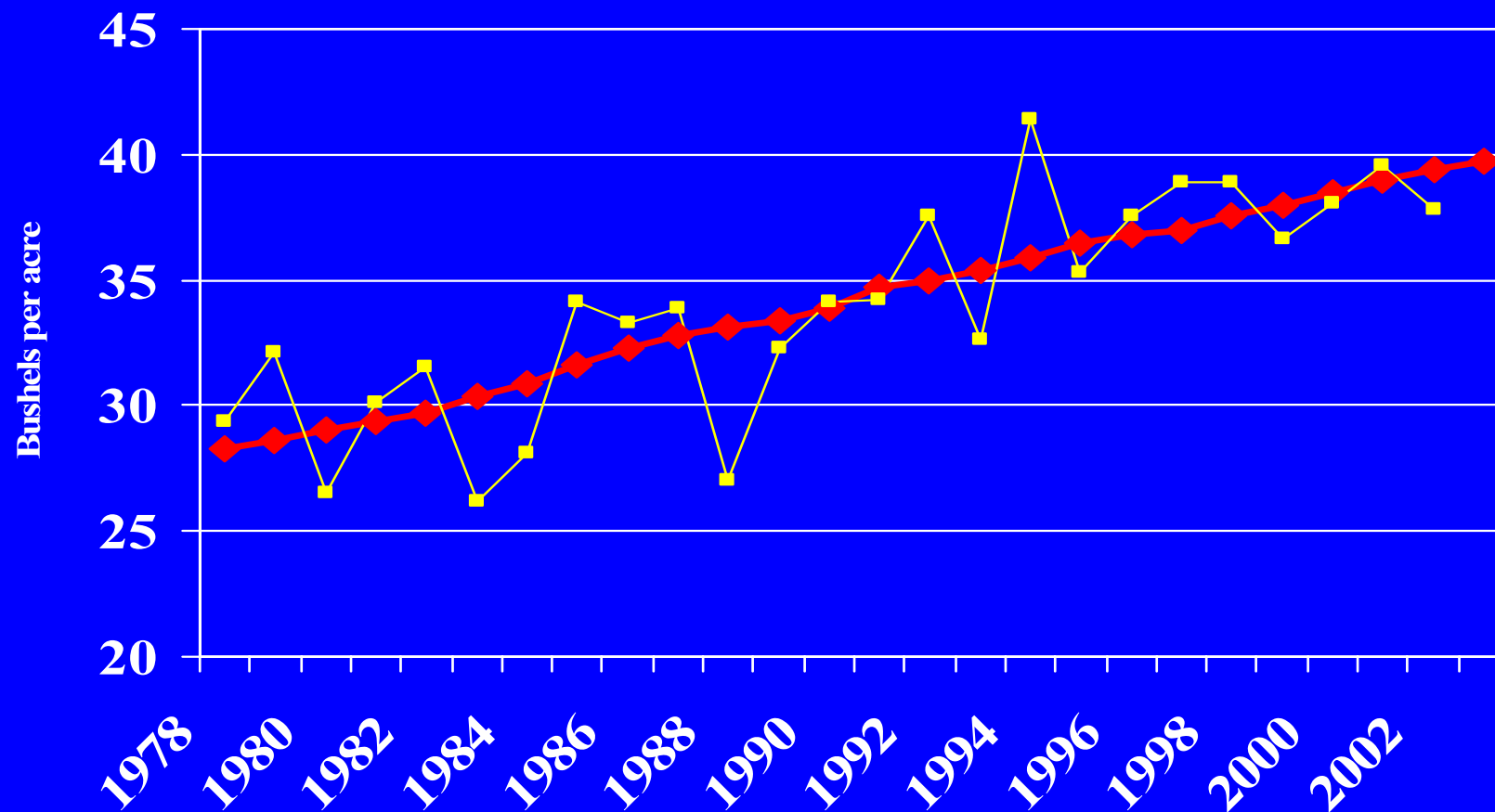
## *No Clear Trend Apparent*



# Corn Yields and Trend



# Soybean Yields and Trend



# Counter-Cyclical Payments for Wheat

---

## 2002

*Market Price* = \$ 3.60

*Target Price* = \$ 3.86

*Loan Rate* = \$ 2.80

*Direct Rate* = \$ 0.52

*CCP rate* = \$0.00

- Paid on 85% of base acres x CCP yield
- Trigger point: average farm price below \$3.34
- Maximum rate \$0.54

## 2003

*If Market Price* = \$ 3.20

*Target Price* = \$ 3.86

*Loan Rate* = \$ 2.80

*Direct Rate* = \$ 0.52

*Then CCP rate* = \$0.14

# Counter-Cyclical Payments for Corn

---

## 2002

*Market Price* = \$ 2.35

*Target Price* = \$ 2.60

*Loan Rate* = \$ 1.98

*Direct Rate* = \$ 0.28

*CCP rate* = \$0.00

- Paid on 85% of base acres x CCP yield
- Trigger point: average farm price below \$2.32
- Maximum rate \$0.34

## 2003

*If Market Price* = \$ 2.15

*Target Price* = \$ 2.60

*Loan Rate* = \$ 1.98

*Direct Rate* = \$ 0.28

*Then CCP rate* = \$0.17



# Counter-Cyclical Payments for Soybeans

---

## 2002

*Market Price* = \$ 5.40

*Target Price* = \$ 5.80

*Loan Rate* = \$ 5.00

*Direct Rate* = \$ 0.44

*CCP rate* = \$0.00

- Paid on 85% of base acres x CCP yield
- Trigger point: average farm price below \$5.36
- Maximum rate \$0.36

## 2003

*If Market Price* = \$ 5.10

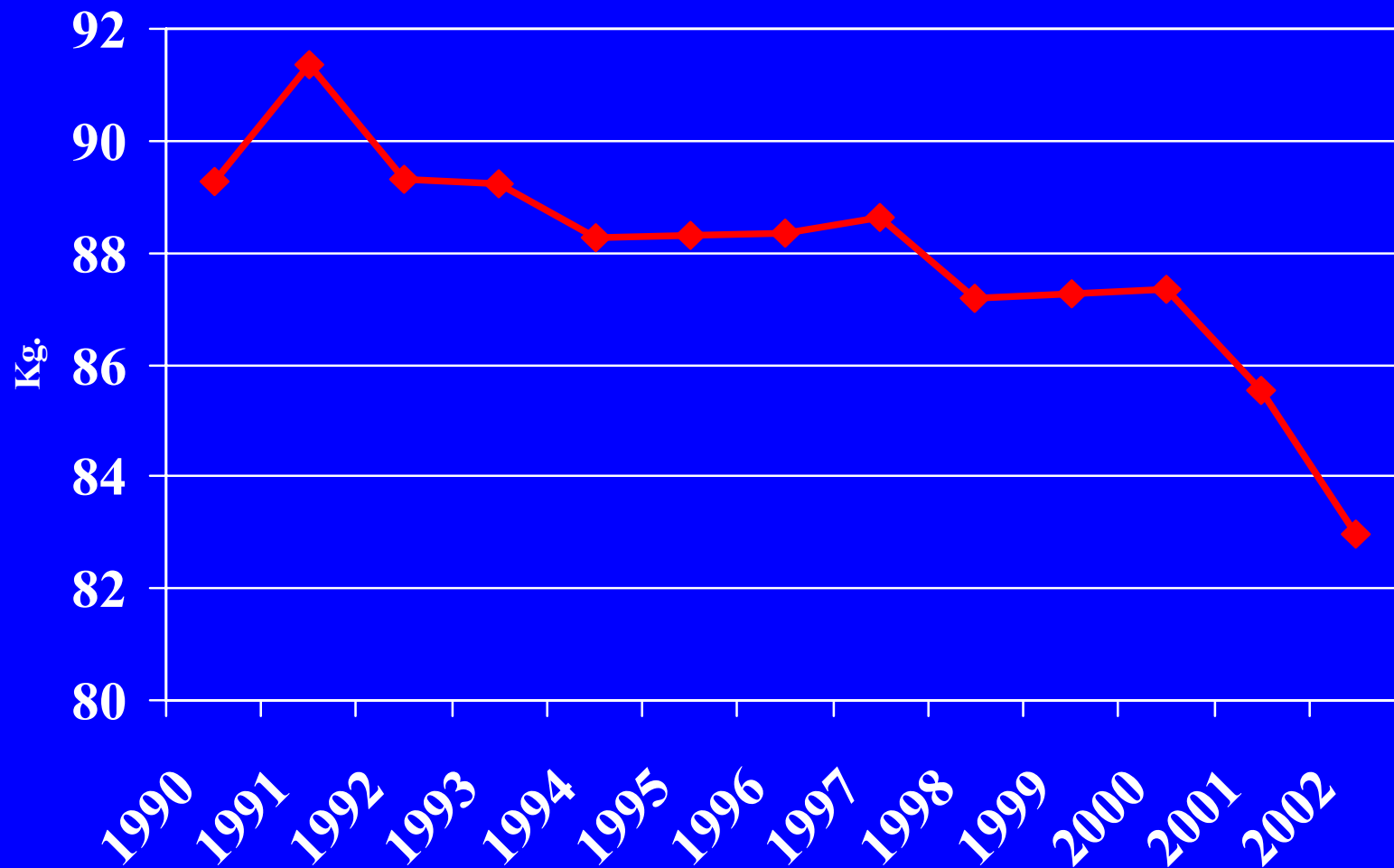
*Target Price* = \$ 5.80

*Loan Rate* = \$ 5.00

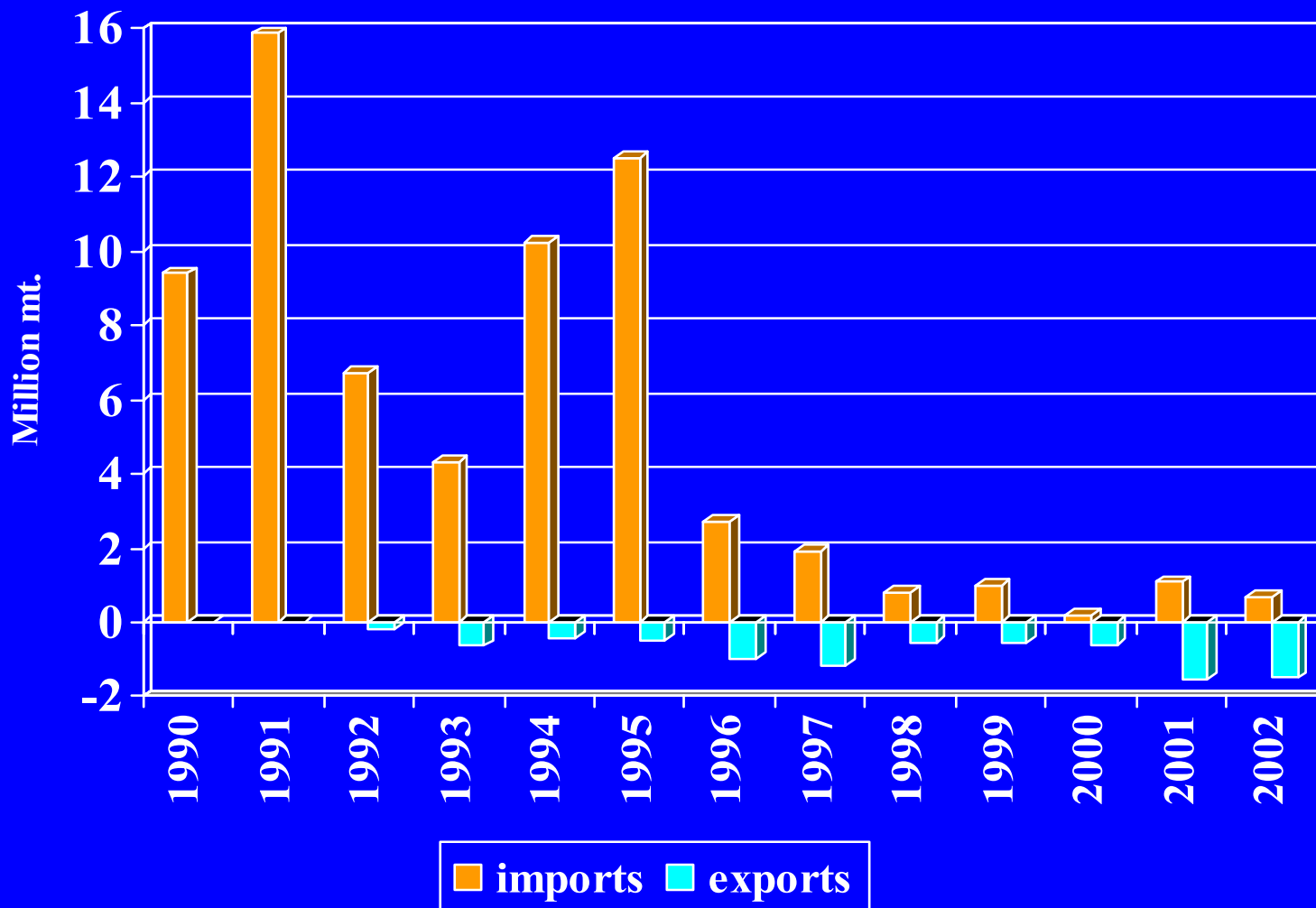
*Direct Rate* = \$ 0.44

*Then CCP rate* = \$0.26

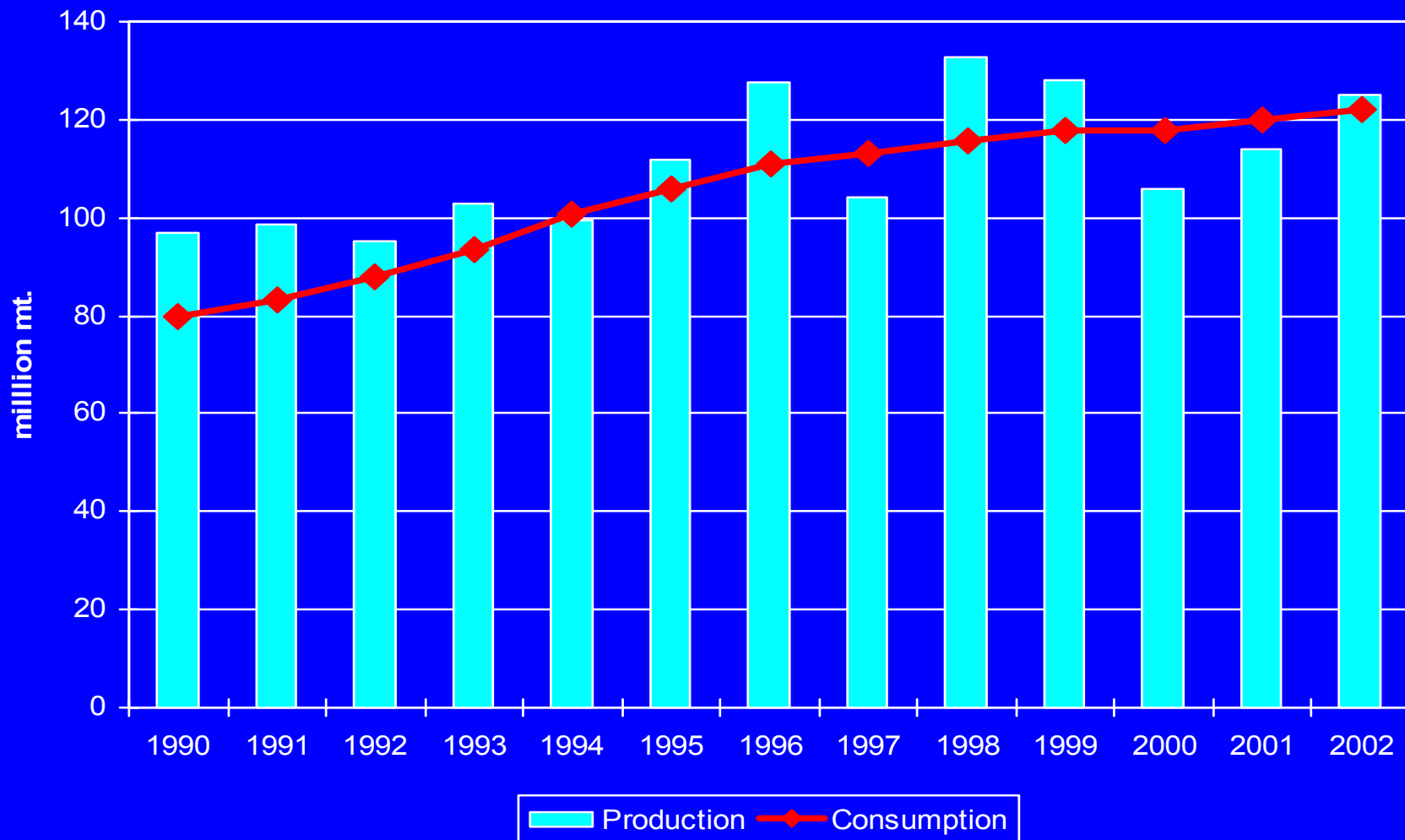
# China Per Capita Wheat Disappearance



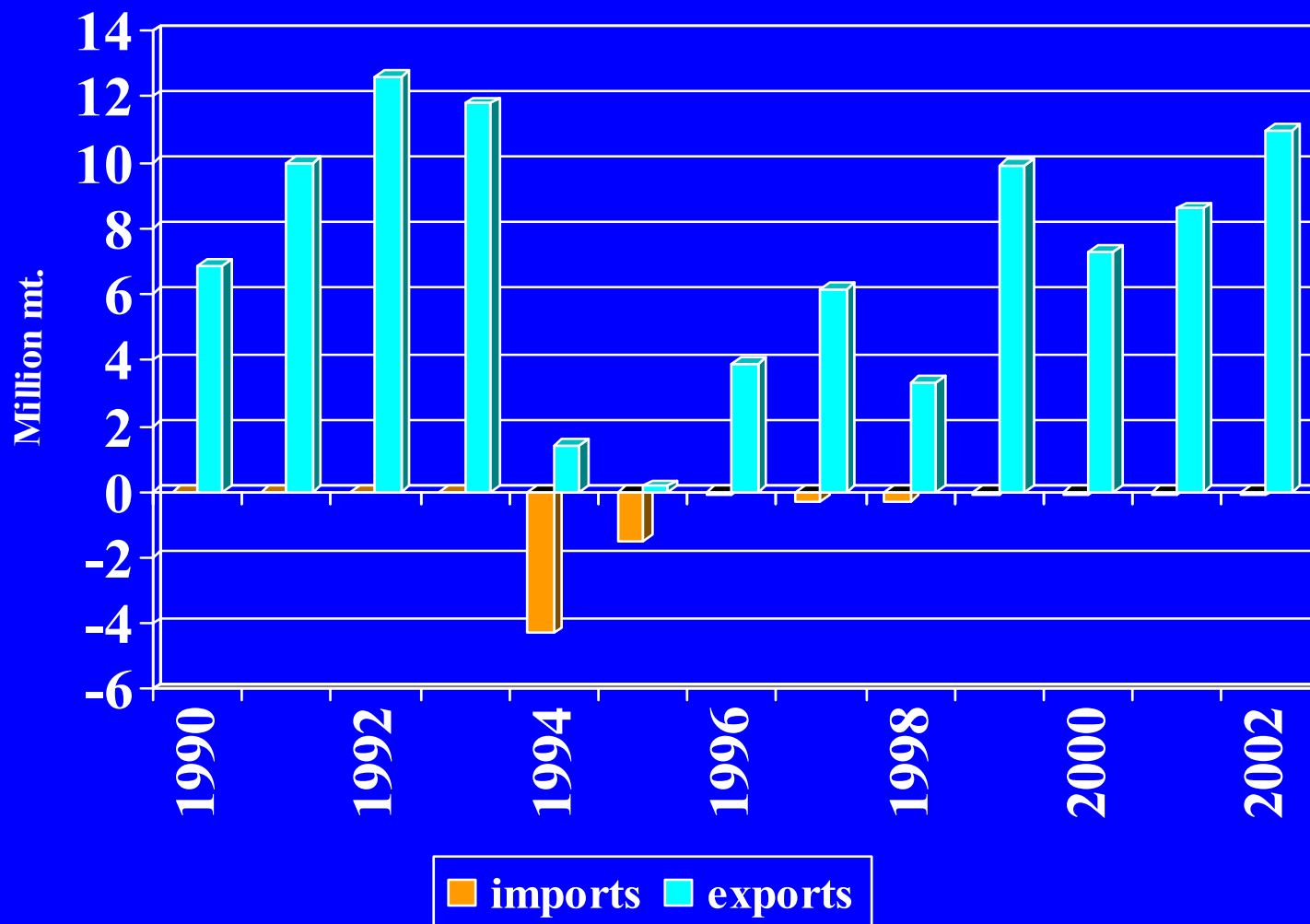
# China Wheat: Exports and Imports



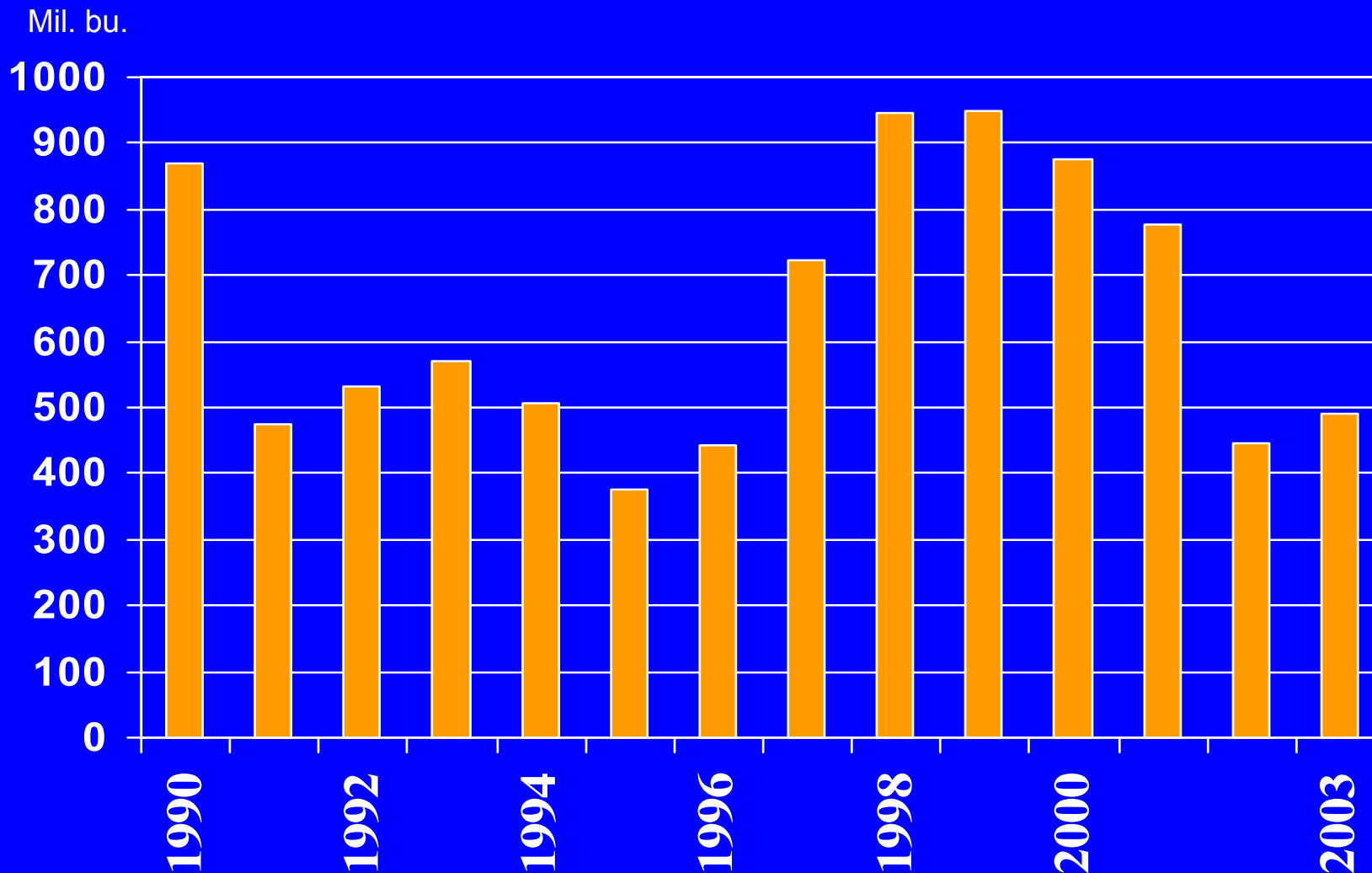
# China Corn Production and Use



# China Corn: Exports and Imports

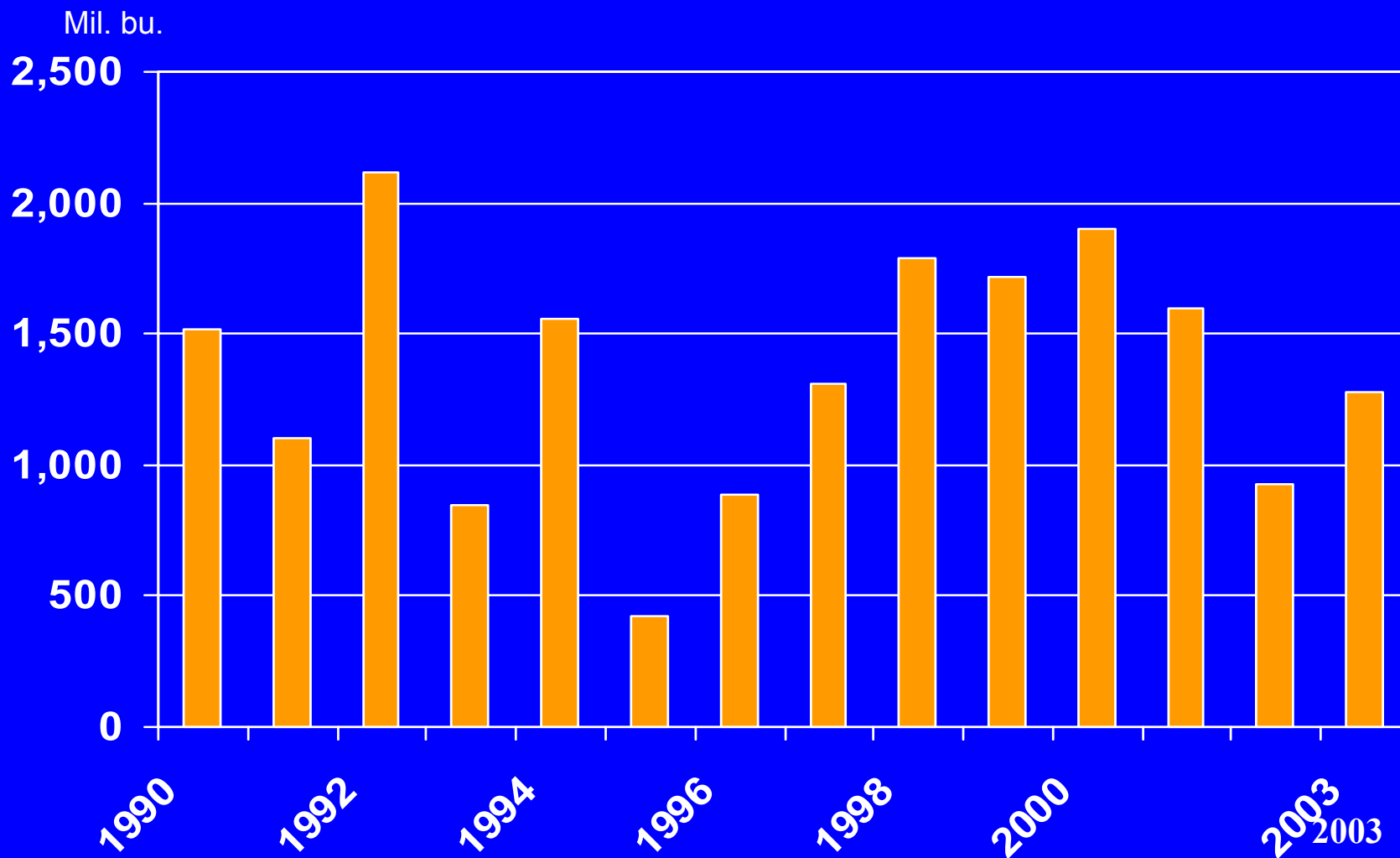


# Wheat Ending Stocks to Stay Low

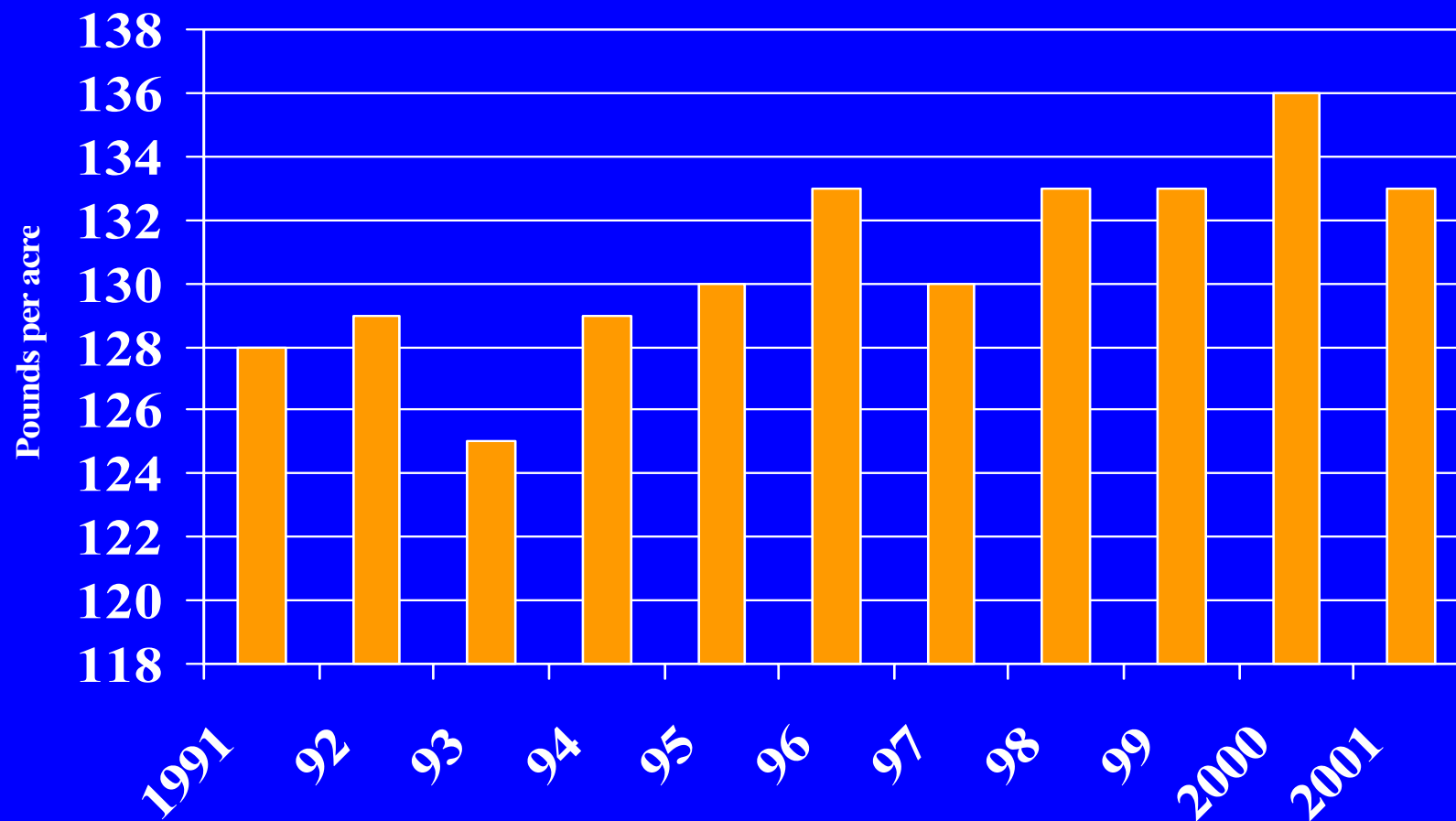


# Corn Ending Stocks to Increase

## *But Remain Lower Than the Late 1990s*



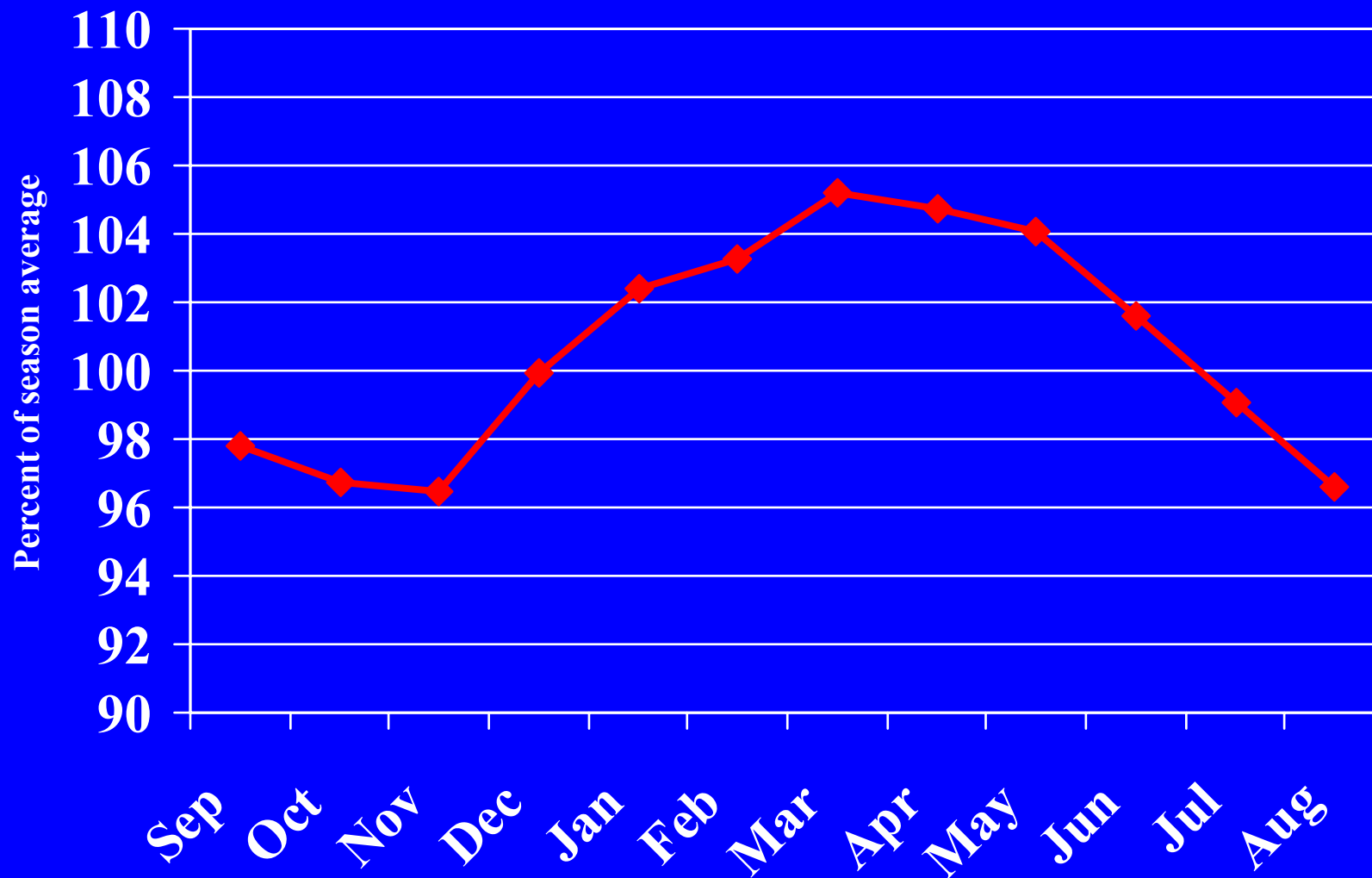
# Nitrogen Fertilizer Application Rate for Corn





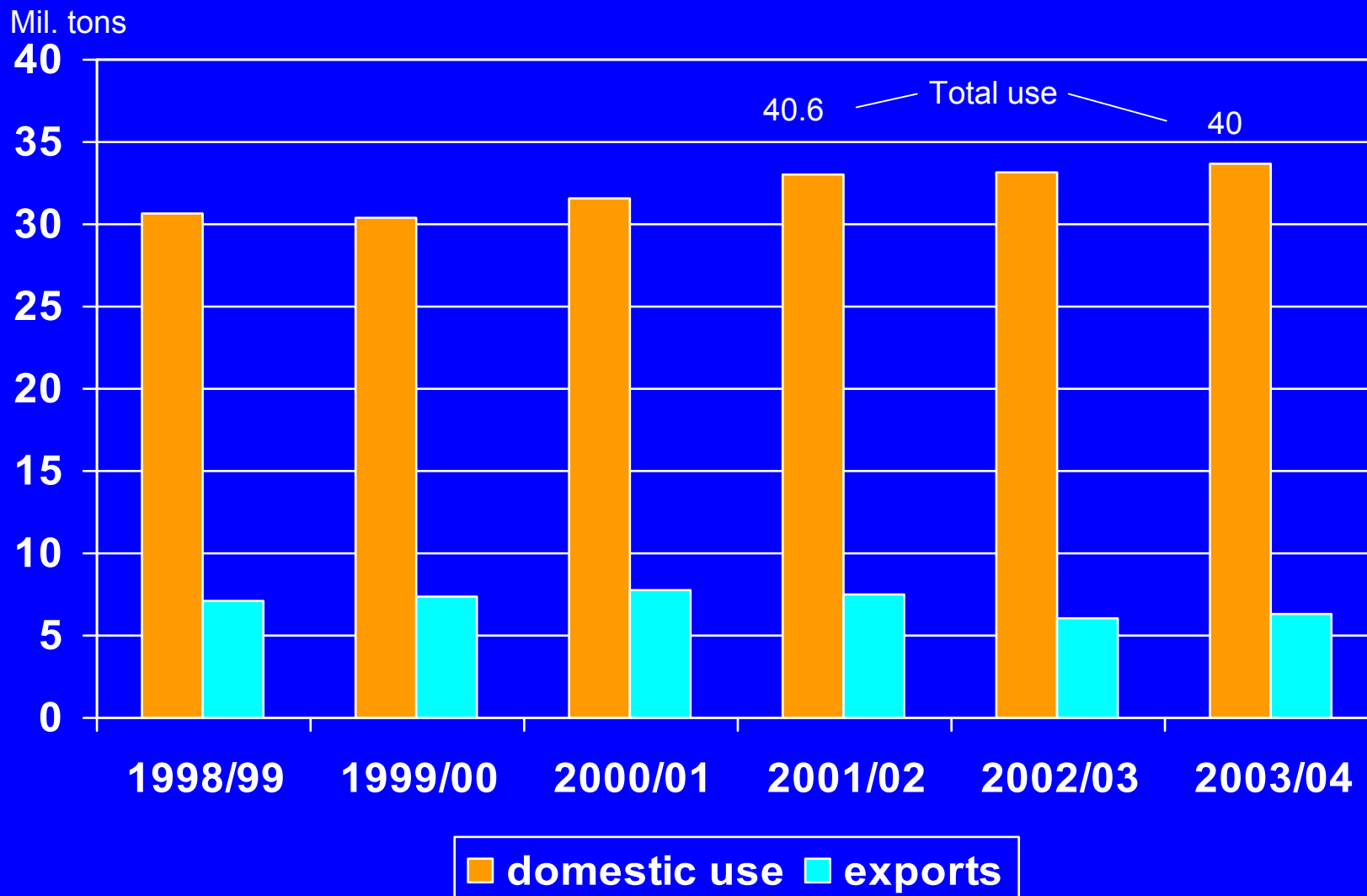
# Corn: “Normal” Seasonal Price Pattern

1990s excluding 1993, 1995, 1996

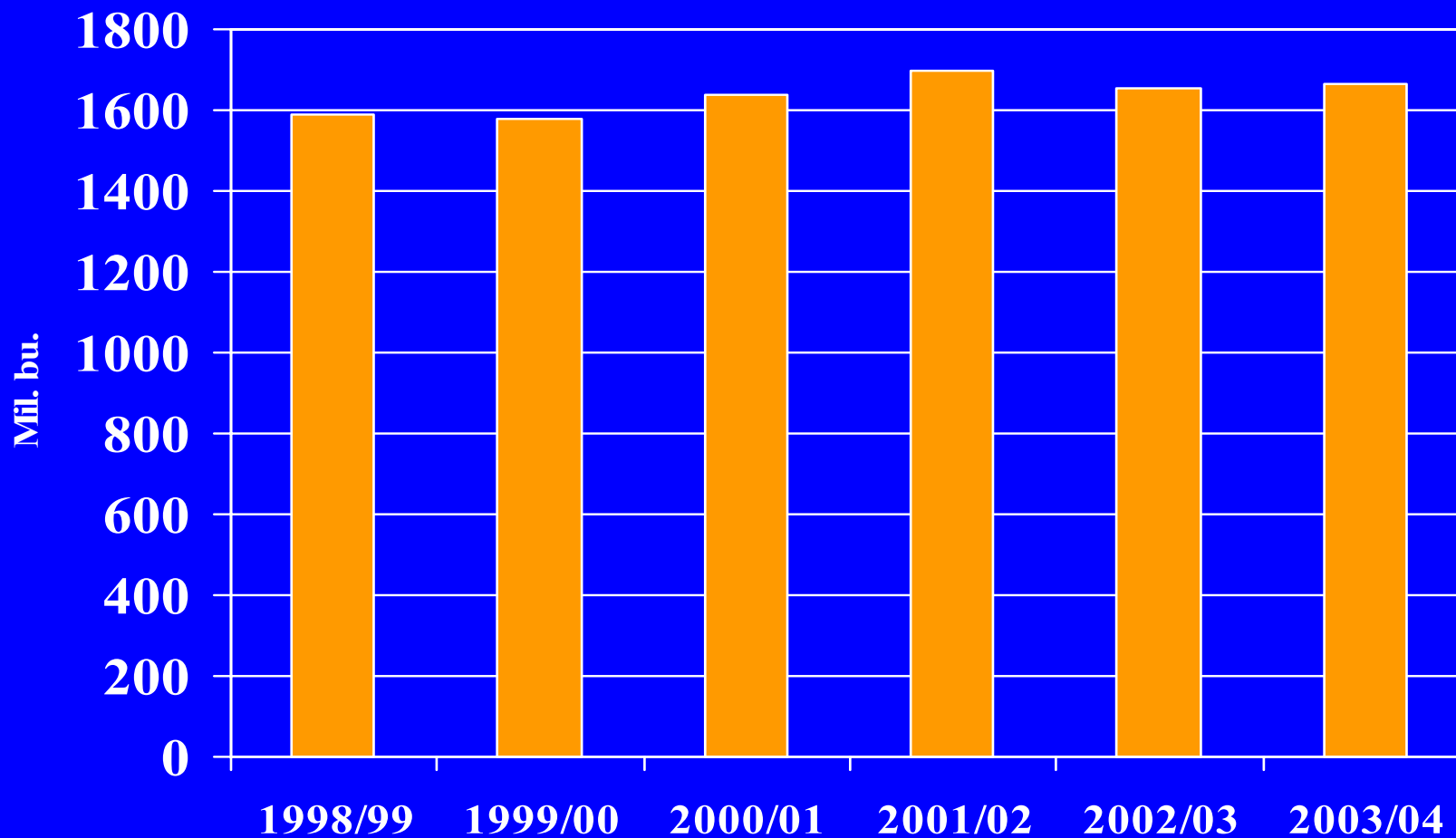


# Soybean Meal Disappearance

*Domestic use record high, exports below 2000 peak*

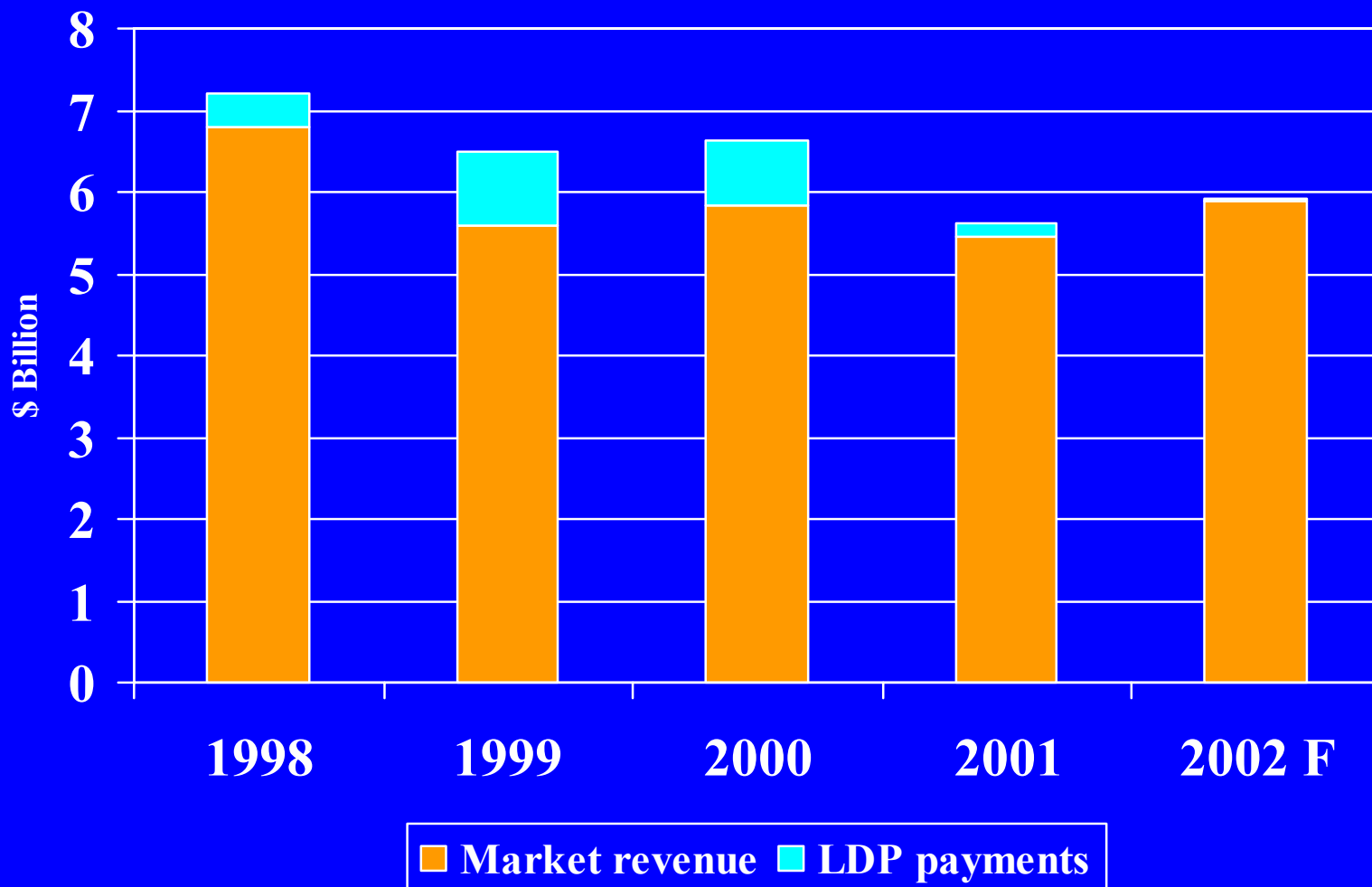


# Soybean Crush



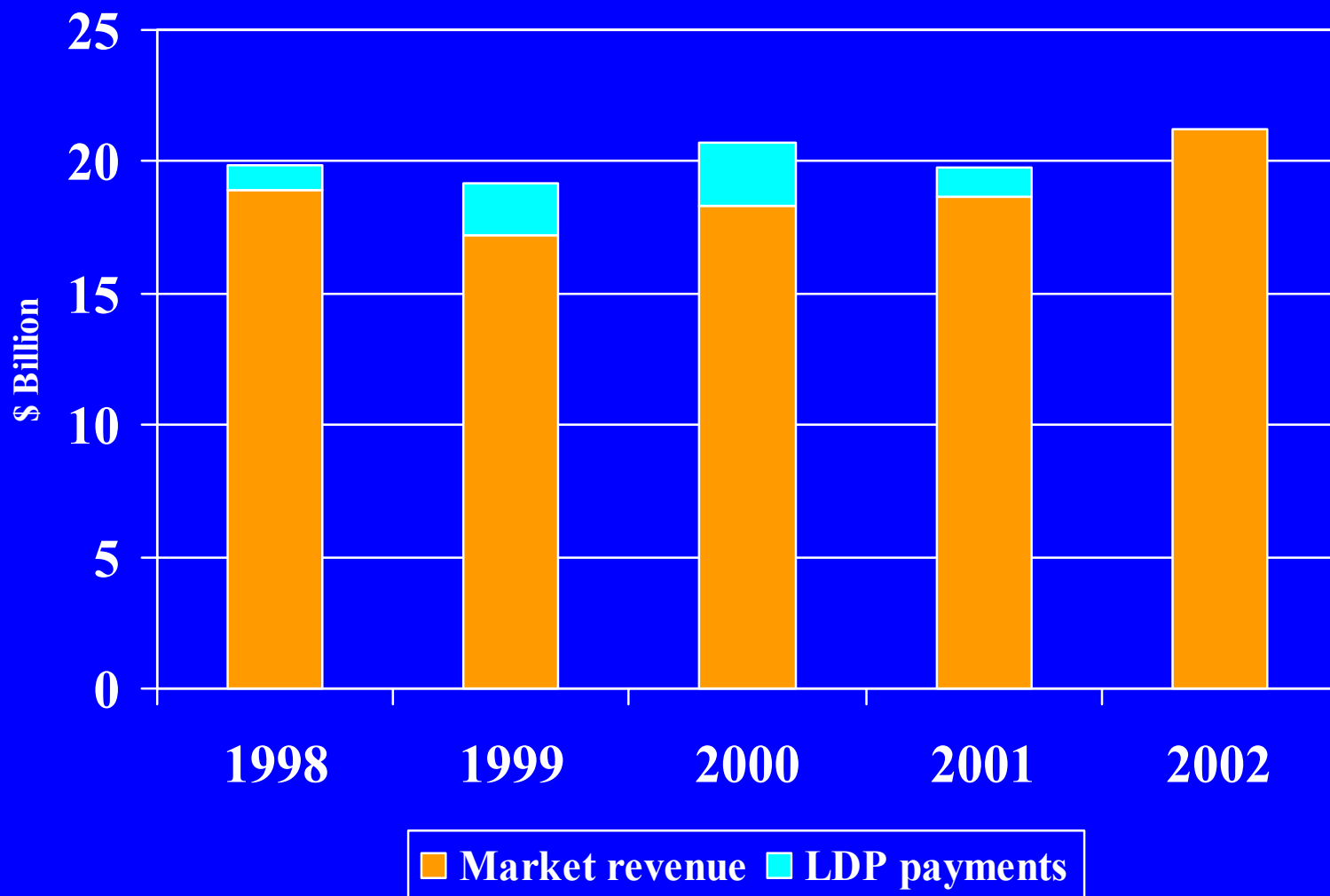
# Wheat Sector Revenue Up in 2002

## Higher prices outweigh lower crop and loss of LDPs



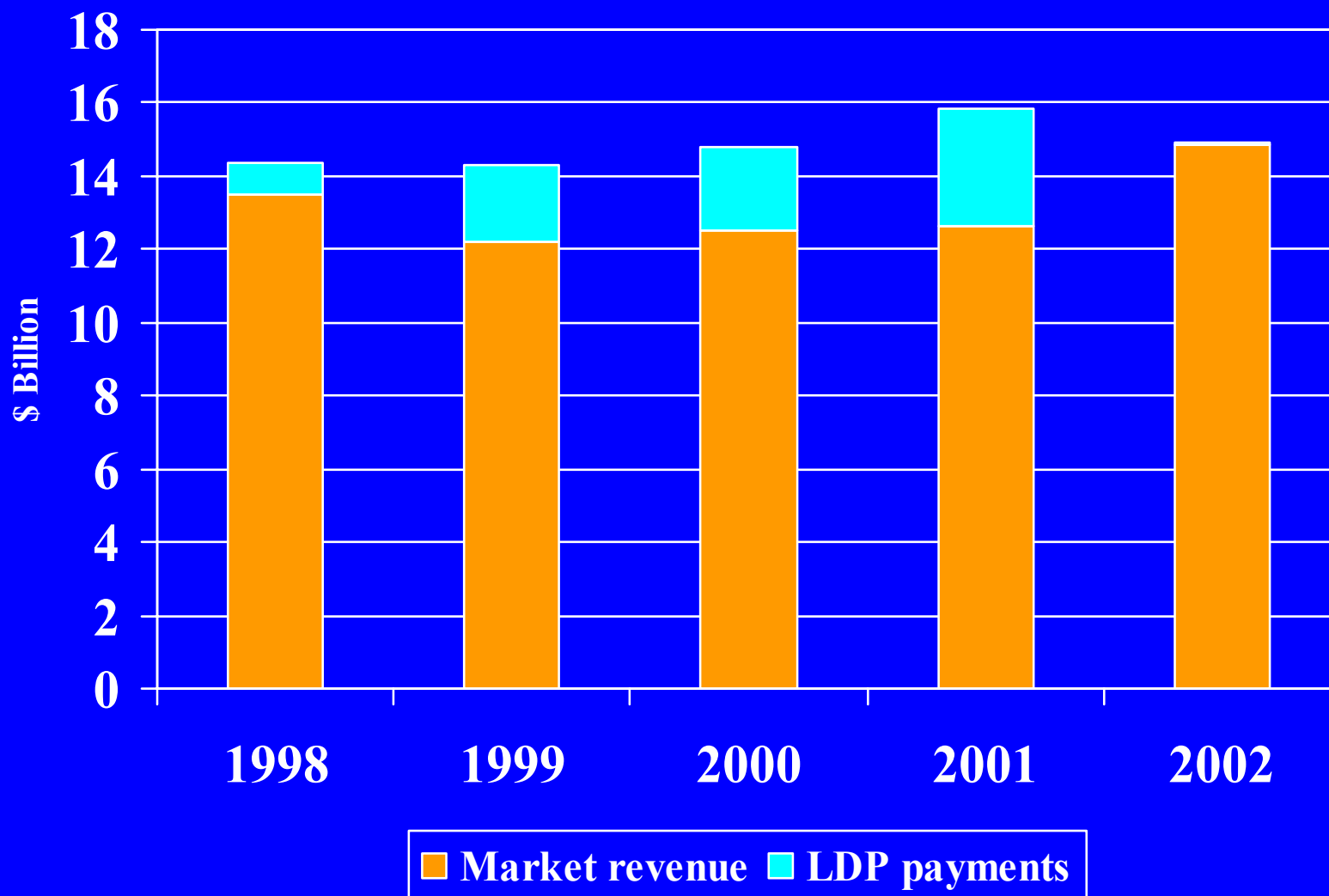
# Corn Sector Revenue Up in 2002

## Higher prices outweigh lower crop and loss of LDPs



# Soybean Revenue Down in 2002

**Loss of LDPs and smaller crop outweigh price rise**



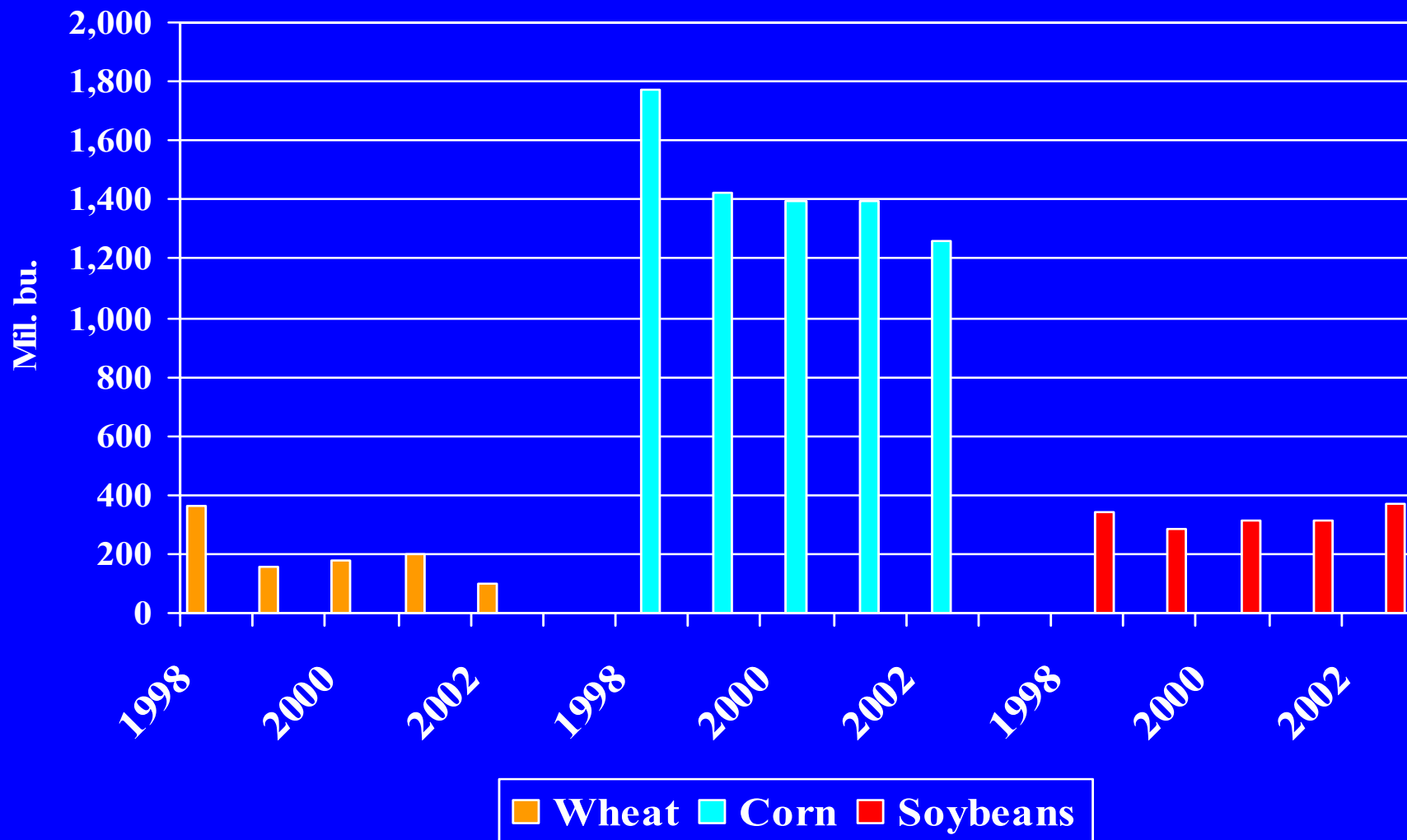
# Population Growth

---

- World population growth slowing
- 2003 growth rate projected at 1.16 percent, down from 1.58 percent in 1990
- This will amount to 74 million more people to feed in 2003
- US. growth rate projected at 0.9 percent, adding 2.7 million people in 2003

# Crops Placed Under Loan 1998-2002\*

through Jan.2003





# Loan Deficiency Payments, 1998-2002

