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**"FINANCIAL PERFORMANCE TRENDS AND ECONOMIC OUTLOOK FOR THE U.S.
GREENHOUSE, TURFGRASS, AND NURSERY INDUSTRIES"**

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The slow economy is dampening prospects, but grower receipts and expenditures for green industry products are still soaring

The U.S. Green Industry (crop production, wholesaling, retailing, landscaping, and related activites) has slowed since 1990, but is still expanding faster than the rate of real growth in the general economy (measured by the gross domestic product). Grower cash receipts for "green" industry crops (floriculture and environmental horticulture) are outpacing all other major segments of U.S. agriculture. Producer receipts increased from \$6.0 billion in 1986 to \$9.0 billion in 1992, an increase of \$500 million per year or 7.1 percent annually.^{1,2} The wholesale and retail markets have grown even faster than grower receipts due to higher marketing costs and increased imports. Strong consumer and commercial demand for "green" products have also resulted in higher economic levels in the landscaping, interior plantscaping, and related service sectors.

In 1991, grower receipts for floral, nursery, and related products totaled \$8.8 billion, accounting for 11 percent of all farm crop cash receipts and ranking the green industry's crops as number six of all commodity groups in total cash receipts behind beef cattle, dairy products, corn, hogs, and soybeans. Grower receipts for floriculture and environmental horticulture crops are greater than the combined cash receipts for tobacco, plus sugar crops, peanuts, grain sorghum, and food

¹ Includes grower sales of **floriculture** crops (greenhouse and field grown) including cut flowers/greens, potted plants, and bedding/garden plants; and **environmental horticulture** crops including sod (turfgrass), and nursery plants and related products (such as trees, shrubs, ground covers, bulbs, fruit/nut plants, and seedlings and other young plants); excludes cut Christmas trees, seed crops, and greenhouse vegetables. Floricultural crops (including plugs and other greenhouse plants) account for about 45-50 percent of grower receipts while the environmental horticulture crops (including perennial plants, lining-out stock, and turfgrass) account for about 50-55 percent of total grower receipts for green industry crops.

² Data users should note that all receipt and expenditure estimates are preliminary and subject to revision once new data become available, including the 1992 censuses of agriculture, wholesale trade, and retail trade to be published next year by Census Bureau.

grains. Grower receipts for the "green industry" crops are forecast to increase about 5-6 percent this year to \$9.7 billion and to \$10.4 billion in 1994. Grower receipts are expected to continue growing at a moderate rate through the 1990's. Long-run projections using conservative growth rates of 4-6 percent indicate that green industry producer receipts will reach \$13-14 billion by the end of the decade. The green industry crops are expected to be ranked the fifth highest commodity group in grower cash receipts by 1995 and the third or fourth highest by the year 2000.

G/N grower receipts are becoming increasingly important to U.S. agriculture

Commercial production of greenhouse/nursery (G/N) crops occurs in all 50 States and it ranks in the top 4 commodity groups in 20 States. In 5 States, G/N crops rank number one in marketing receipts, and they rank as the second most important commodity group in the major agricultural states of California, Florida, New York, Maryland, and Oregon. They now rank number three or four in the following states which are important contributors to U.S. agriculture: Texas, Alabama, Hawaii, Michigan, Ohio, Pennsylvania, and Oklahoma.

Retail expenditures for green industry products continue to rise

Demand for flowers and plants is expected to surge as the economy continues to improve. The 1994 green industry outlook for retail expenditures and producer receipts is for a gradual expansion at a more moderate rate than the rapid expansion of the 1980's. Total retail expenditures for floriculture and environmental horticulture products by consumers, businesses, landscape contractors, municipalities, and others continue to rise at nearly twice the rate of real growth in the economy (U.S. gross domestic product measured in constant 1987 dollars).

The U.S. gross domestic product (GDP) increased 2.6 percent in 1992 while expenditures for G/N sector products registered a 3.5 percent gain. In 1993, the GDP is expected to rise by 2.7 percent and the G/N sector should experience a 5 percent increase. For 1994, the GDP is forecast to grow 3.0 percent and retail G/N product sales are projected to increase 7.5 percent above this year to more than \$40 billion (\$155 per capita).

Total value of expenditures for floricultural products in 1993 are estimated at \$13.5 billion while expenditures for environmental horticulture products are projected to hit \$24.1 billion. Next year, floriculture expenditures are forecast at \$14.3 billion and environmental horticulture expenditures are predicted to increase to about \$26.1 billion. The floriculture expenditure forecasts for 1994, by commodity groups, are:

- Cut flowers/cut greens, \$6.7 billion, up 5 %
- Flowering plants, \$2.7 billion, up 5-6%
- Foliage plants, \$1.1 billion, down 5-6%
- Bedding/garden plants, \$3.8 billion, up 11%

Insufficient data preclude making expenditure estimates for individual categories of environmental plant products. However, in aggregate, sales of environmental plants should increase 7-9 percent. The total value of expenditures through all market outlets (retail, commercial, municipal, etc.) in

1994 of about \$26.1 billion for environmental plants will consist of the following categories with their approximate marketshare percentages:

- O Shade/flowering (deciduous) trees, 15-17%
- O Evergreens (trees, shrubs, hedges), 34-36%
- O Sod (turfgrass), 14-16%
- O Fruit/nut trees and plants, 6-8%
- O Bulbs, corms, rhizomes, tubers 1-3%
- O Other environmental, 24-26% ³

Per capita consumer expenditures for floricultural plants exceeded \$49 per person in 1992 and are projected to increase to about \$52 this year and \$55 in 1994. Consumer expenditures for environmental plants were about \$90 per capita in 1992, \$93 in 1993, and are projected to rise to \$100 per capita in 1994.

Higher grower numbers caused average farm income to fall in 1991, but 1992 income rebounded; 1993 was another year of some severe regional economic and weather-related losses which will limit gains in receipts and income, but 1994 should be moderately higher

Average net farm income for green industry farm enterprises⁴ grew 10 percent annually from 1987 to 1990, and in 1990 at \$53,589 was the highest among all production specialties and four times higher than the all farm average income of \$13,458. However, even though total grower cash receipts went up in 1991, substantial increases in the number of growers identified as "greenhouse/nursery" enterprises combined with the slow economy and substantial crop losses in some areas of the country caused average sales and average incomes for green industry production enterprises to fall. The average farm income for green industry producers in 1991 was \$22,125, but rebounded in 1992 to \$24,418 and is expected to improve further in 1993 and 1994.

The average net farm income estimate of \$24,418 in 1992 for greenhouse/nursery farms compares with the U.S. all farm income of \$9,634. If only "commercial" farms are considered (those farms whose gross farm sales are over \$40,000), then the g/n farm income jumps to \$80,316 compared with the U.S. all farm average of \$31,331.

The number of farms whose principal source of income is from greenhouse/nursery specialties, including Christmas tree farms, has grown dramatically in the past several years. The estimate is nearly 60,000 for those producers who derive more than 50 percent of their gross farm income from sales of greenhouse/nursery crops. Many of the producers identified in the 1991 and 1992 USDA Farm Costs and Returns Surveys were added to the greenhouse/nursery farm estimate because their g/n sales are now greater than their sales from any other agricultural production specialty; i.e., many are not newcomers, but they have increased their g/n crop sales. Most of these producers that have been "newly added" since 1991 are small (less than \$40,000 in gross

³ Includes rose bushes, ground covers, vines, herbaceous plants, aquatics, ornamental grasses, bonzai, cacti, etc.

⁴ Includes only those farms whose principal source of agricultural receipts (50 percent or more) is from the sale of floriculture and environmental horticulture crops.

sales) and, therefore, when these smaller operators are added they do not significantly increase the total industry receipts, but they do substantially decrease the average net farm income.

Weather-related problems again this year in some regions caused production losses and substantially impacted retail sales which lowered grower receipts. In particular, hurricane Iniki in September, 1992 in Hawaii caused losses last year and slowed recovery in 1993, wind and storm losses again this year in Florida, persistent wet conditions and flooding in the Midwest for much of the spring through fall gardening/landscaping seasons, and drought conditions in the Southeast reduced grower revenues and consumer purchases. These weather-related problems added to the slow economy have limited the gains to growers, wholesalers, retailers, and landscapers significantly in some areas this year, but barring any major disasters in 1994, sales and incomes of green industry participants can be expected to make moderate gains.

Other recent analysis by the Economic Research Service indicates that 85 percent of greenhouse/nursery growers are commercial farms (over \$250,000 in sales), where at least 95 percent of their agricultural production is greenhouse/nursery crops, and 83 percent of their production is from 1 or 2 specialized enterprises. Since growers of greenhouse and nursery crops are typically not well diversified, in terms of other types of agricultural enterprises, and their operations are usually localized and concentrated on small acreages, complete crop eligibility for crop insurance which is not currently available to all greenhouse/nursery growers would provide the necessary assistance programs as the need arises.

Sales trends and net incomes vary widely by region, crop types, and size of operation

The Southern region⁵ was number one in grower receipts for greenhouse and nursery crops at \$3.36 billion in 1992, up 3 percent from 1991. Receipts were 14 percent higher for greenhouse crops, but nursery crop receipts were off 1 percent. This one region accounts for more farm cash receipts than the U.S. tobacco grower cash receipts. Nursery crops accounted for \$2.30 billion or 68 percent of the G/N receipts in the Southern region. The West was the second most important region last year with \$2.79 billion in grower cash receipts, down nearly 2 percent. This is the first decline in the Western region due to the significant reduction in California's sales, but several other western states were also lower which resulted from recessionary impacts and a continued decline in floral receipts due to higher imports. Both nursery and greenhouse receipts in the West were down about 2 percent from 1991. The Northeast region receipts were up 3 percent totaling \$1.28 billion. Greenhouse receipts were up sharply, but nursery crop receipts were off slightly. The North Central region grower receipts registered the highest gain, increasing 5 percent to \$1.56 billion. Greenhouse crop receipts jumped 9 percent and nursery crops were 3 percent higher.

Grower receipts in 1992 were very mixed by product category

Floricultural product (mostly greenhouse crops) grower receipts fared better during the recession of 1990-92 than did nursery or turfgrass grower receipts. This trend carried over into 1993. Grower receipts for nursery and turf are expected to make a stronger comeback in 1994 as business and residential construction picks up momentum. Grower receipts for cut flowers and foliage plants have trended downward over the past three years due to competitive factors while grower receipts for bedding/garden plants, potted flowering plants, cut greens, and unfinished greenhouse plants

⁵ See map attachment for States included in each region.

and related products have continued to trend upward. These trends are expected to continue next year with slight declines in domestic production of cut flowers and potted foliage plants.

Imports continue to take a larger share of the U.S. cut flower/cut green market

Following the slump in 1991 and a very modest gain in 1992, retail floral expenditures made a moderate comeback this year and next year the market should experience a stronger showing of consumer and business spending. Per capita consumer expenditures reached an estimated \$23.90 in 1992, are estimated at \$24.75 for 1993, and are expected to rise nearly \$1.00 more per capita in 1994. Although the retail market in dollar terms has languished over the past several years (with the exception of this year's comeback), retailers have actually sold more on a quantity basis, i.e., consumers have purchased more at lower prices.

Domestic grower cash receipts for cut flowers may have peaked in 1990 and have continued on a downward track, but domestic grower cash receipts for cut cultivated greens continue to trend up. Meanwhile, floral imports are continuing to increase their marketshares. Current year imports are projected to hit 4.1 billion stems, 10 percent higher than 1992 and accounting for nearly two-thirds of the total market. In quantity terms (stems per capita), the market has continued to increase at a faster rate than dollar expenditures, from about 22.8 stems per capita in 1991 to about 23.8 stems in 1992 and 24.9 stems in 1993.

Potted flowering plant market and grower receipts continue strong

Grower cash receipts for potted flowering plants exceeded \$1 billion in 1992, 9 percent higher than 1991, and are projected to increase another 10 percent this year, and next year receipts should reach \$1.2 billion. Per capita consumer expenditures next year at \$10.50 are estimated to be twice the per capita expenditures in 1986. Expenditures have slowed in the 1990's, but are expected to continue rising.

Potted foliage plant market and grower receipts continue to slip lower

Grower cash receipts for potted foliage plants peaked in the mid-80s and again in 1990 at about \$600 million, but have continued to slip lower each year even though export sales have made moderate gains. Small reductions in cash receipts (3-6%) for foliage growers are expected this year and into 1994. Per capita consumer expenditures for foliage plants reached \$5.75 in 1986, but have fallen to \$4.75 per capita in 1992 and are expected to decline further to \$4.25 in 1994. This trend is expected to continue as consumers will likely spend relatively more on cut flowers, flowering plants, bedding plants, and other horticultural products.

Bedding/garden plants continue to be the hottest sellers

Grower cash receipts for bedding and garden plants continue to rise faster than any other category of floricultural and environmental horticulture crops. Grower receipts exceeded the \$1.3 billion mark in 1992 and are projected to hit \$1.5 billion in 1993 and nearly \$1.7 in 1994. Per capita expenditures (including the value of plants purchased by consumers, businesses, landscapers, and institutions) for bedding and garden plants are estimated at nearly \$12 in 1992 compared with less than \$6 in 1986. The 1993 per capita expenditures will be about \$13 and the 1994 consumption level will exceed \$14 per capita.

Competitive factors are lowering prices and limiting receipts for environmental plant producers

Nursery product and turfgrass producer sales have been significantly impacted by the sluggish economy and lack of residential and business construction. Wholesale nursery and turf growers in California have been especially hard hit due to the State's economic recession. This has also substantially impacted grower sales in other western states including Arizona, Oregon, and Hawaii. Grower cash receipts for environmental crops (nursery stock, landscaping plants, turfgrass, and bulbs) reached \$5.6 billion in 1992, a modest increase of 2 percent over 1991. In 1993, grower receipts for environmental plants should increase about 4 percent to \$5.8 billion and then are projected to increase about 8 percent in 1994 to \$6.3 billion. Even though the U.S. economy is showing signs of improvement there is a "lag-effect" for nursery product sales of at least 6-12 months before the nursery industry is significantly impacted by a pickup in business and residential construction activity.

Sales of sod and field grown nursery stock (B&B and bare root) were affected the most in 1992 by the slow retail demand and sluggish construction activity while container grown landscaping plants fared better than most other types of nursery stock because consumers and landscapers were buying more of these products for replacements and to "spruce-up" their outdoor landscapes. However, the entire nursery and environmental plant sector has been affected by the slower consumer demand which has led to a build-up in supplies, reduced unit sales, and heightened unit price competition which are limiting total receipts for all sellers in the marketing chain. Nursery plant and turf growers, wholesalers, landscapers, and retail garden center operators saw a modest improvement in total units sold and prices for 1993, but this was dampened by the economic problems in the West, flooding and incessant rains in the Midwest, and drought in the Southeast. However, in 1994 a turnaround is expected, but it will likely be uneven across regions and will vary considerably depending on local economic conditions.

Future success of the U.S. green industry will depend on unity in purpose, information access, and research funding; economic analysis can immensely boost the green industry's position and provide a basis for program and policy changes

The nursery, floral, and turf agricultural sector is being challenged by more costly and competitive production and marketing and the general lack of economic knowledge about itself. These difficulties can be mitigated by an in-depth economic research program focused on the green industry's information needs. This effort would greatly benefit the activities of trade associations and other industry participants, but more importantly it would improve the floral, nursery, and turf sector's performance through an enhanced knowledge of supply, demand, price, and related economic variables impacting the green industry. Currently, the green industry has no economic research program such as those available to other agricultural sectors. Some of the major economic and policy issues challenging the green industry include:

- Environmental regulation impacts;
- Labor legislation and other labor related impacts;
- Promotion and research (market orders, MPP funds for exports);
- Trade policy (GATT, NAFTA, Q-37);
- Other industry/government programs such as crop insurance.

These and other economic/policy issues can best be addressed by more complete and accurate statistical and economic data for the green industry such as the following:

- Production and marketing channel (buyer types) data bases;
- Product sales by segment and region;
- Trade data (imports and exports) detailed by product;
- Regional market supply and demand (U.S., Canada, and overseas);
- Costs and returns by enterprise type;
- Industry contributions and economic impact of sales, employment, and taxes;
- Seasonal variations in sales volumes and product prices;
- Industry structural changes (numbers and concentration);
- Financial performance, efficiencies, and characteristics.

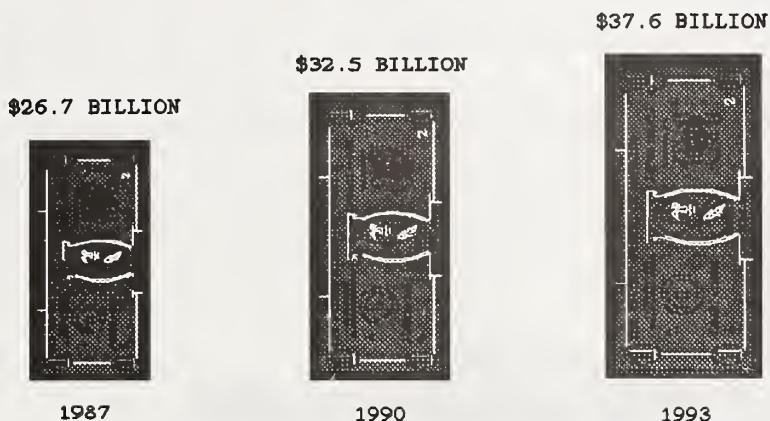
Economic data and analysis covering all aspects from growing to landscaping can help the U.S. green industry to expand and prosper in the years to come. The future of the industry will hinge on its ability to be identified as a major segment of agriculture, environmentally friendly, and essential to our general well-being. The green industry must come together as one voice, promote itself, and capture its equitable share of the federally funded research dollars which now is a mere .019 percent!

Data users should note that income and cash receipts for green industry crops are usually conservative, incomplete, and not necessarily comparable with agriculture in general

Data users should be aware that comparisons of cash receipt estimates for floriculture and environmental horticulture crops are generally conservative from year to year. Since preliminary data for the current year are usually low because of incomplete data, revisions in the following year often necessitate significantly higher estimates, but these revisions more accurately reflect the actual year-to-year changes in the green industry. In addition, cash receipts for floriculture and environmental horticulture crops are not comparable to cash receipts for other agricultural commodities for several reasons. Cash receipts for many agricultural commodities include the "value of home consumption" whereas floriculture and environmental horticulture receipt estimates include only commercial production. Current USDA surveys do not cover all States and categories of greenhouse, nursery, turgrass, and related green industry crop production. Some categories that are generally considered a part of the green industry are simply excluded or are not specifically surveyed such as cut Christmas trees and horticultural seeds. Other categories such as dried flowers, plugs, and other unfinished plant materials are covered under broad classifications and are not surveyed specifically to obtain accurate information.

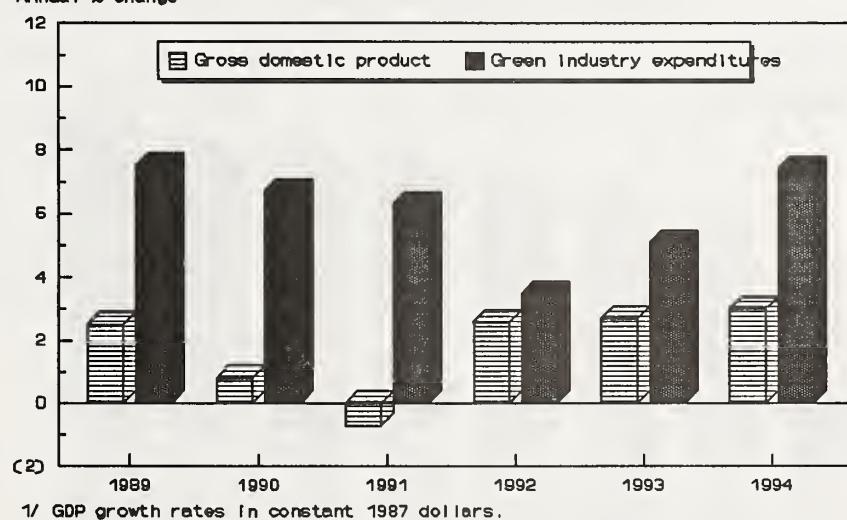
Income estimates for greenhouse/nursery farms are also not comparable with most other types of farm enterprises because horticultural farms generally receive little or no direct government payments while other farm types such as cotton, cash grain, dairy, and livestock enterprises receive significant federal program payments. Green industry crops receive the least of any agricultural commodity group in direct government payments, only .02 percent of all payments in 1990 and only .12 percent of all Federal agricultural research dollars.

GROWTH IN U.S. GREEN PRODUCT EXPENDITURES



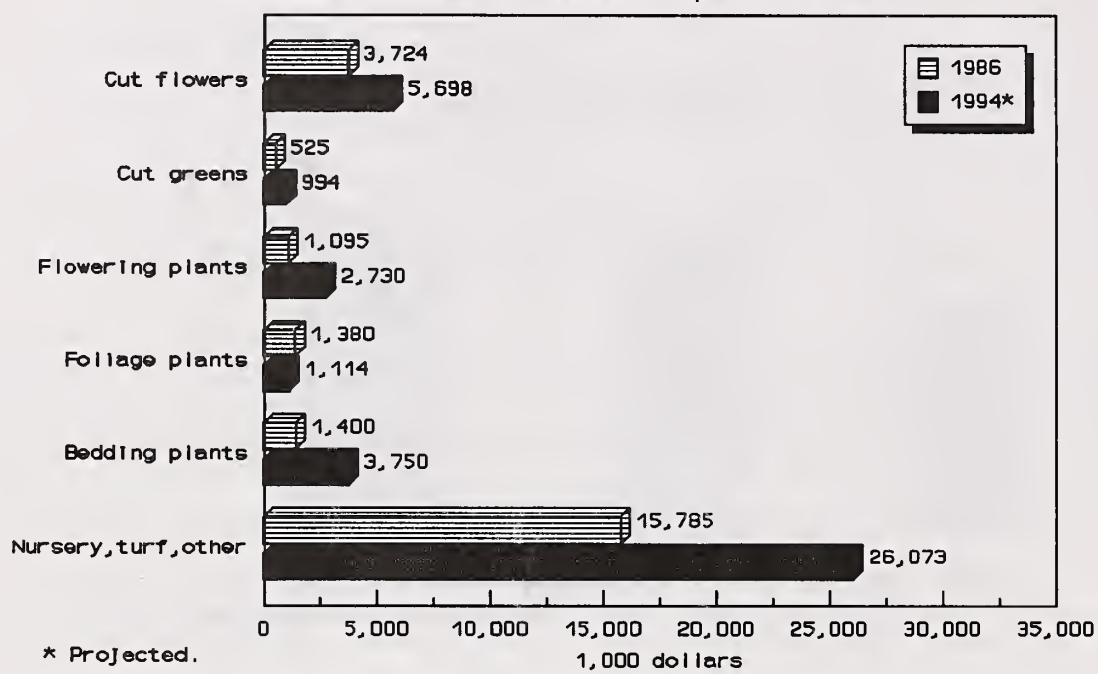
Sales of flowers, plants and related green materials through retail, commercial, and other outlets soared 22% from 1987-90, then 16% more from 1990-93!

Annual Changes in Gross Domestic Product vs.
 Annual Changes in Green Industry Expenditures 1/
 Annual % change



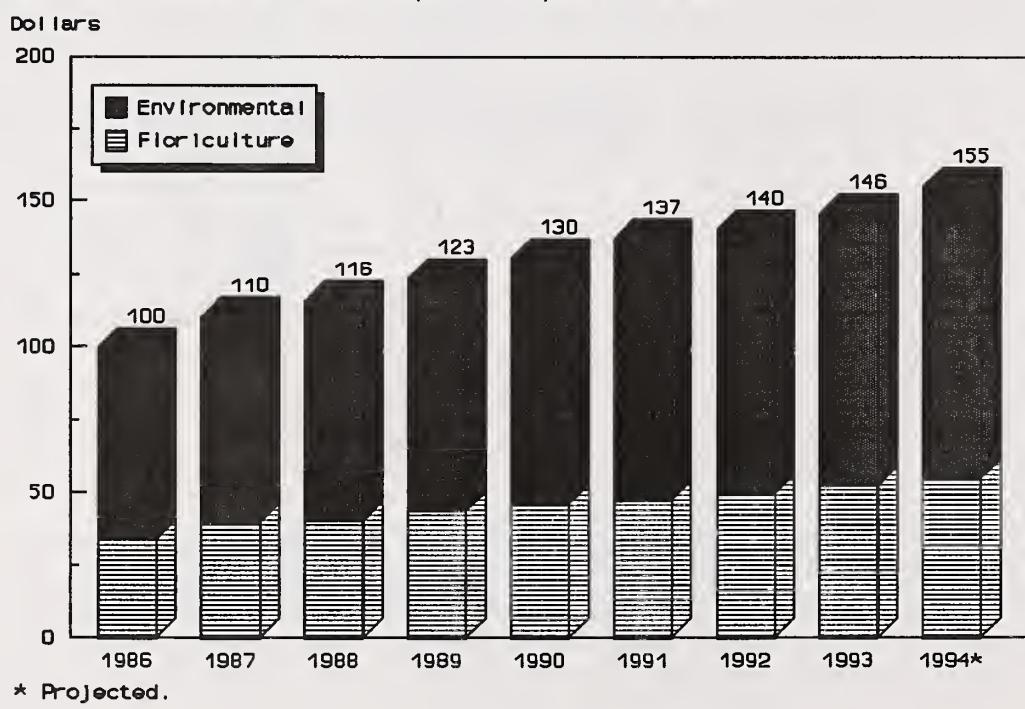
1/ GDP growth rates in constant 1987 dollars.

Trends In Green Product Expenditures



* Projected.

Green Products: Per Capita Expenditures



* Projected.

EXPENDITURES FOR GREEN INDUSTRY PRODUCTS 1/

\$37.6 billion in 1993

FLORICULTURE
(\$13.5 billion)

CUT FLOWERS/GREENS--\$6.4 billion
FLOWERING PLANTS--\$2.6 billion
FOLIAGE PLANTS--\$1.1 billion
BEDDING PLANTS--\$3.4 billion

ENVIRONMENTAL HORTICULTURE
(\$24.1 billion)

SHADE/FLOWERING TREES-- 15-17%
EVERGREENS-- 34-36%
TURFGRASS-- 14-16%
FRUIT/NUT PLANTS-- 6-8%
BULBS-- 1-3%
OTHER ENVIRONMENTALS-- 24-26%
(Deciduous shrubs, vines, aquatics, roses,
ground covers, herbaceous plants, bonzai,
cacti, ornamental grasses, etc.)

EXPENDITURES FOR GREEN INDUSTRY PRODUCTS 1/

\$40.4 billion in 1994

FLORICULTURE
(\$14.3 billion)

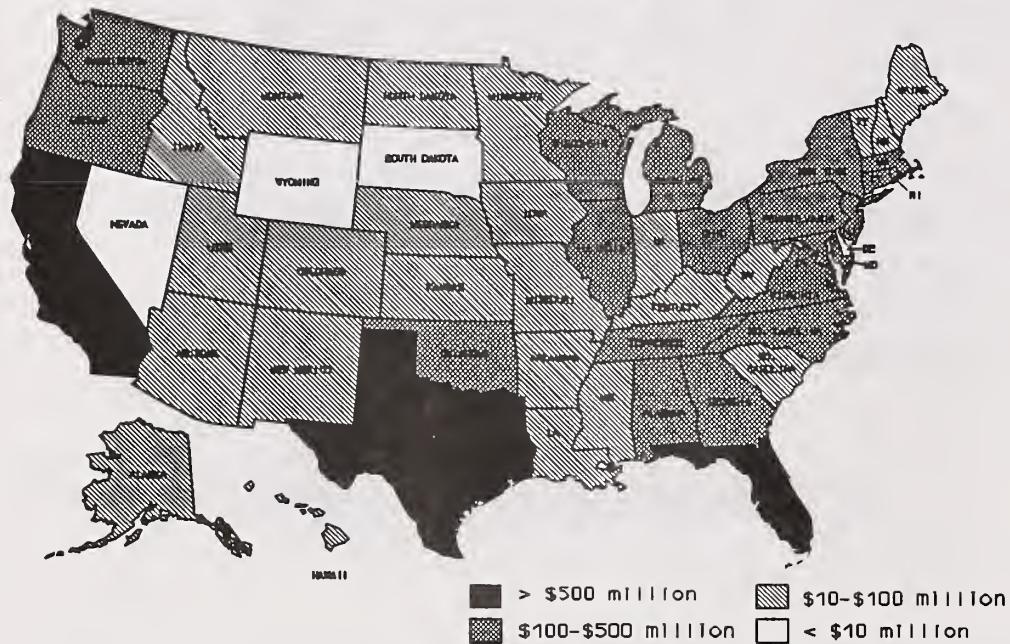
CUT FLOWERS/GREENS--\$6.7 billion
FLOWERING PLANTS--\$2.7 billion
FOLIAGE PLANTS--\$1.1 billion
BEDDING PLANTS--\$3.8 billion

ENVIRONMENTAL HORTICULTURE
(\$26.1 billion)

SHADE/FLOWERING TREES-- 15-17%
EVERGREENS-- 34-36%
TURFGRASS-- 14-16%
FRUIT/NUT PLANTS-- 6-8%
BULBS-- 1-3%
OTHER ENVIRONMENTALS-- 24-26%
(Deciduous shrubs, vines, aquatics, roses,
ground covers, herbaceous plants, bonzai,
cacti, ornamental grasses, etc.)

1/ Sales through all outlets (commercial, retail, municipal) of flowers, plants,
and other closely related green materials valued on an "as sold" basis;
excludes hard goods, landscape installation, maintenance, other services.

Grower Cash Receipts for Floriculture and Environmental Horticulture Crops in 1992 were \$9 billion



Greenhouse/ Nursery Grower Receipts, \$9 billion in 1992

WEST: \$2.79, -1.6%

Greenhouse: \$0.96, -1.5%
Nursery: \$1.83, -1.6%



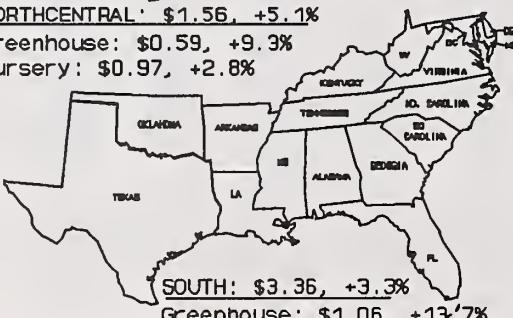
NORTHEAST: \$1.28, +2.7%

Greenhouse: \$0.50, +8.6%
Nursery: \$0.78, -0.8%



NORTHCENTRAL: \$1.56, +5.1%

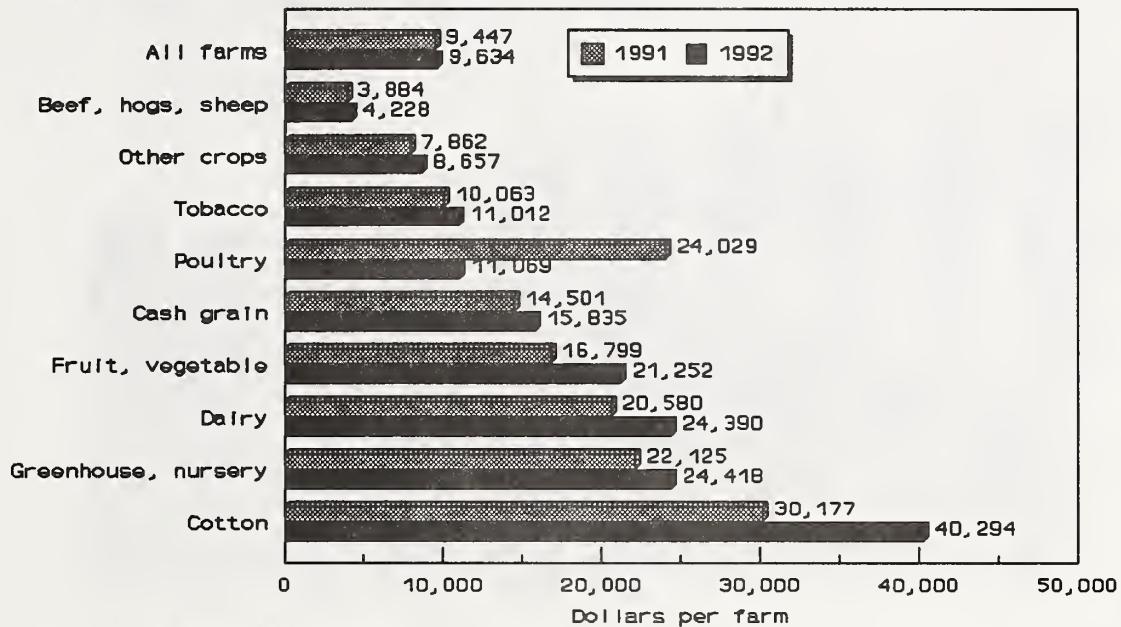
Greenhouse: \$0.59, +9.3%
Nursery: \$0.97, +2.8%



SOUTH: \$3.36, +3.3%

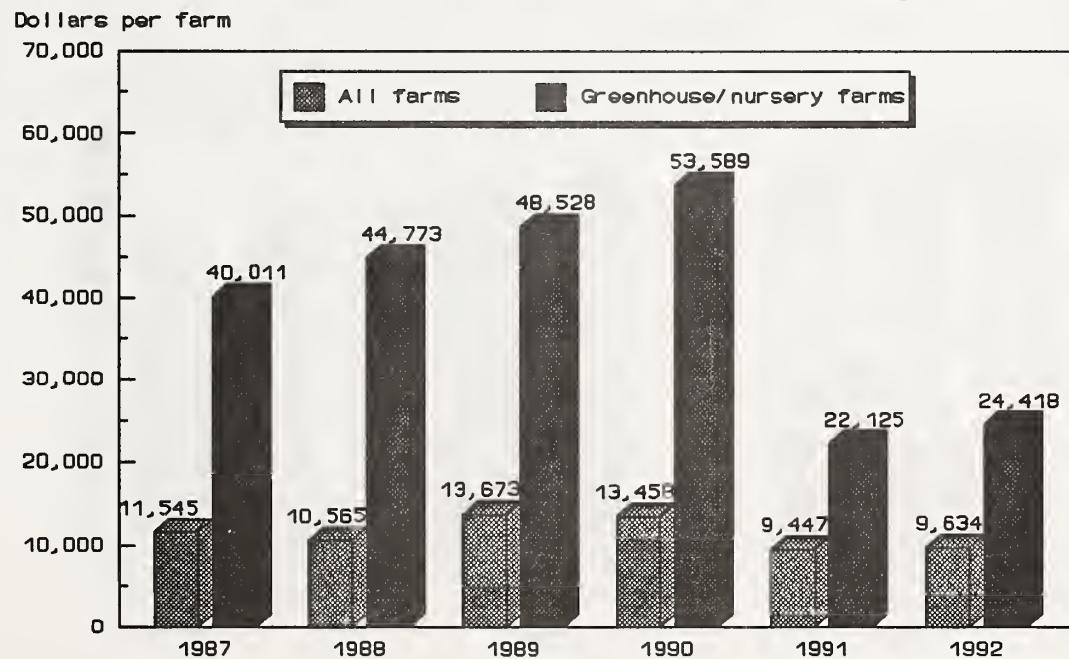
Greenhouse: \$1.06, +13.7%
Nursery: \$2.30, -1.0%

Greenhouse/Nursery Grower Net Farm Income
Compared with Other Production Specialties 1/



1/ Includes direct government payments.

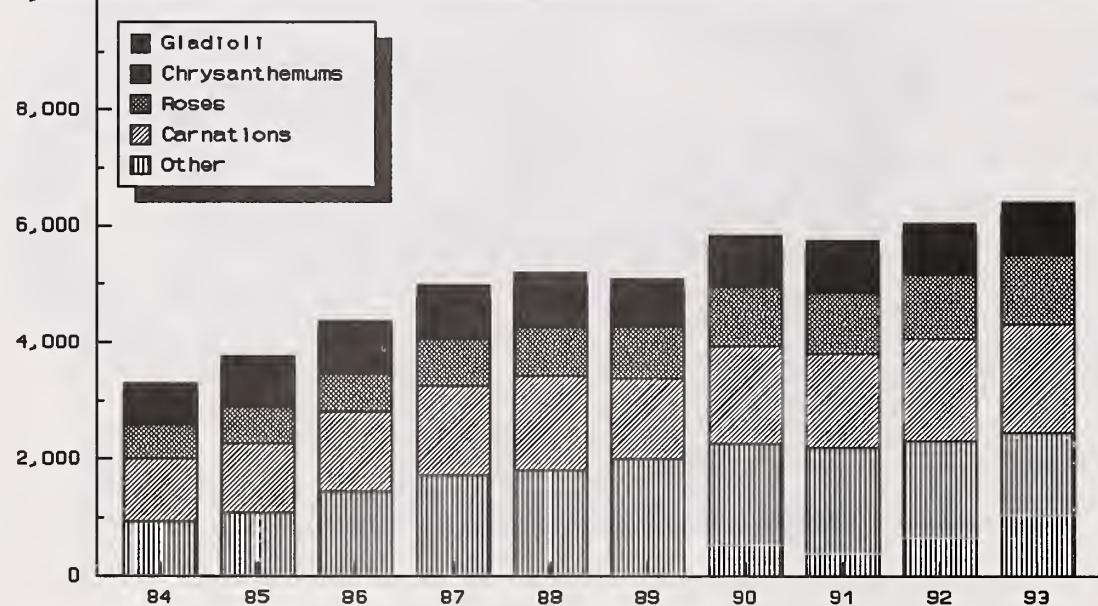
Greenhouse/Nursery Grower Net Income Rebounding



Cut Flowers: Total Consumption

1,000 stems

10,000



Cut Flowers: Marketshare Trends, Imports vs. Domestic Supply

1,000 stems

2,500

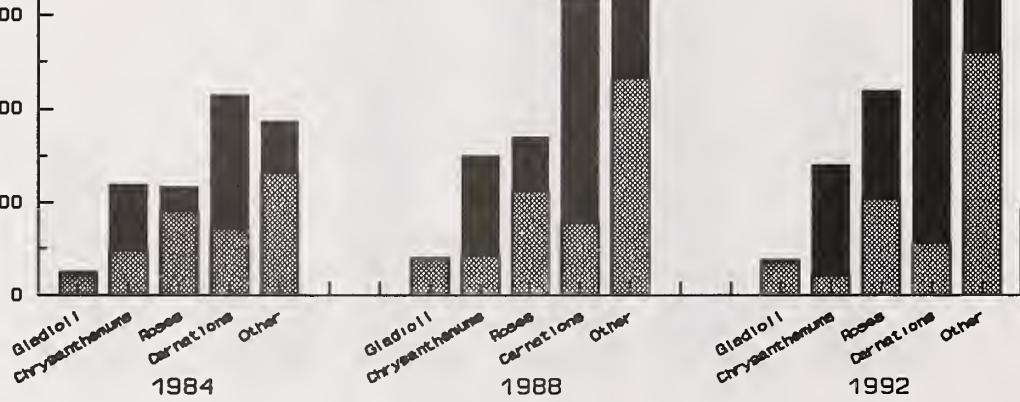
2,000

1,500

1,000

500

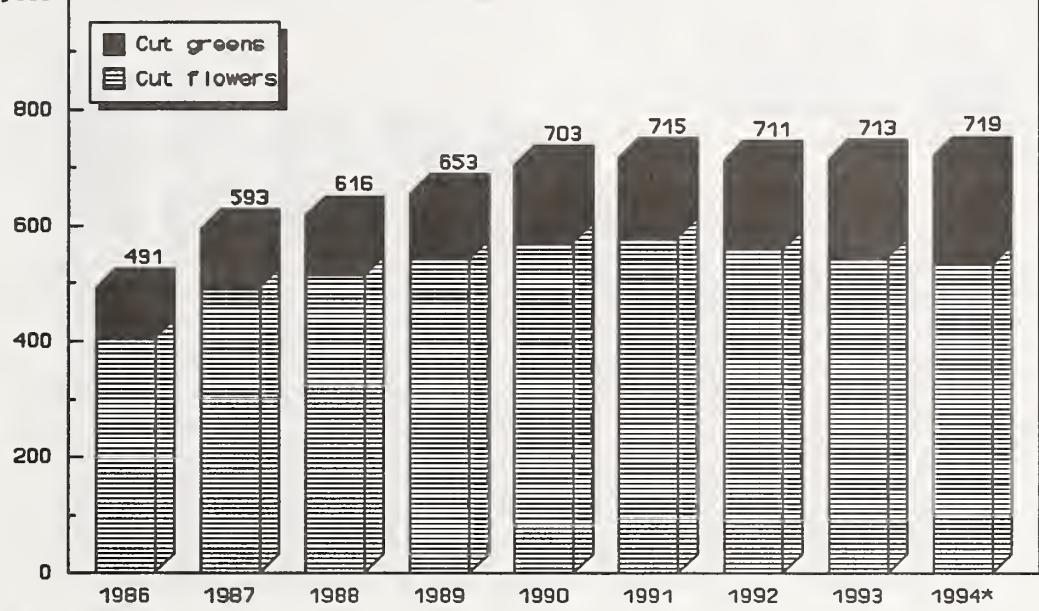
0



Cut Flowers/Greens: Grower Cash Receipts

\$ million

1,000



* Projected.

Cut Flowers/Greens: Per Capita Expenditures

Dollars

35



* Projected.

Potted Plants: Grower Cash Receipts

\$ million

2,000

1,500

1,000

500

0

Foliage plants
Flowering plants

1,105

1,253

1,209

1,256

1,481

1,528

1,578

1,669

1,703

1986

1987

1988

1989

1990

1991

1992

1993

1994*

* Projected.

Potted Plants: Per Capita Expenditures

Dollars

20

15

10

5

0

Foliage plants
Flowering plants

10.30

11.60

11.05

11.50

13.30

13.60

13.95

14.60

14.75

1986

1987

1988

1989

1990

1991

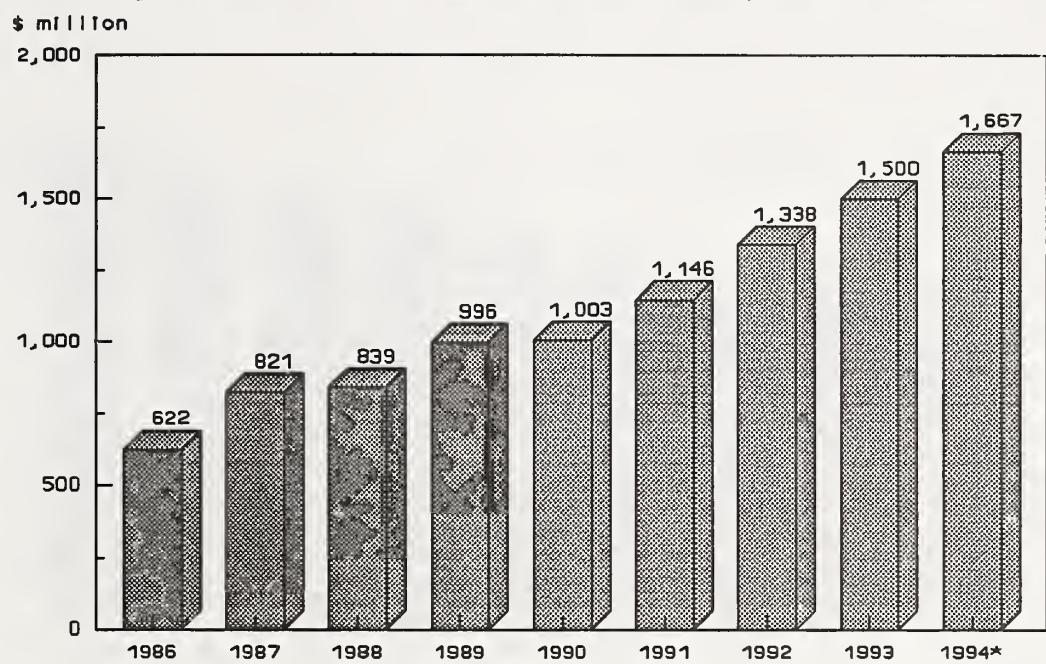
1992

1993

1994*

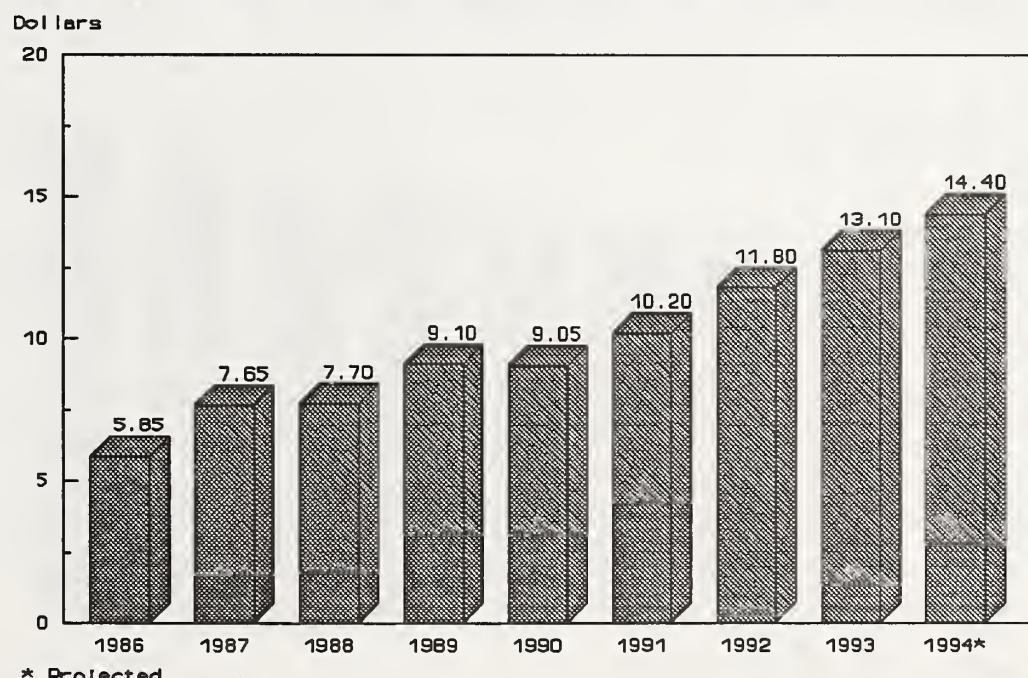
* Projected.

Bedding/Garden Plants: Grower Cash Receipts



* Projected.

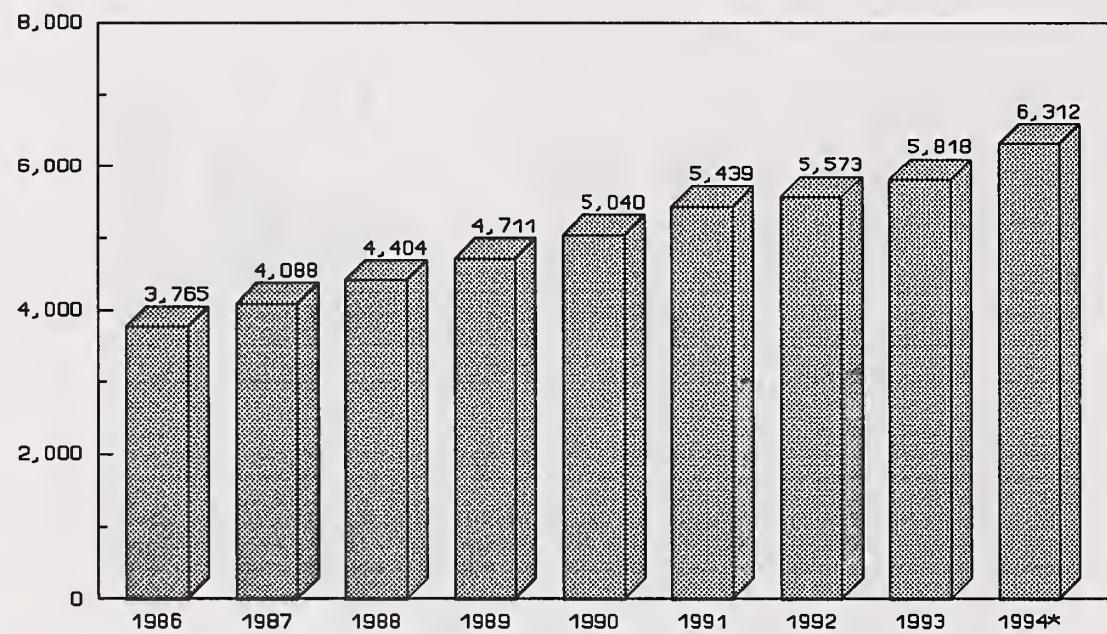
Bedding/Garden Plants: Per Capita Expenditures



* Projected.

Environmental Plants: Grower Cash Receipts 1/

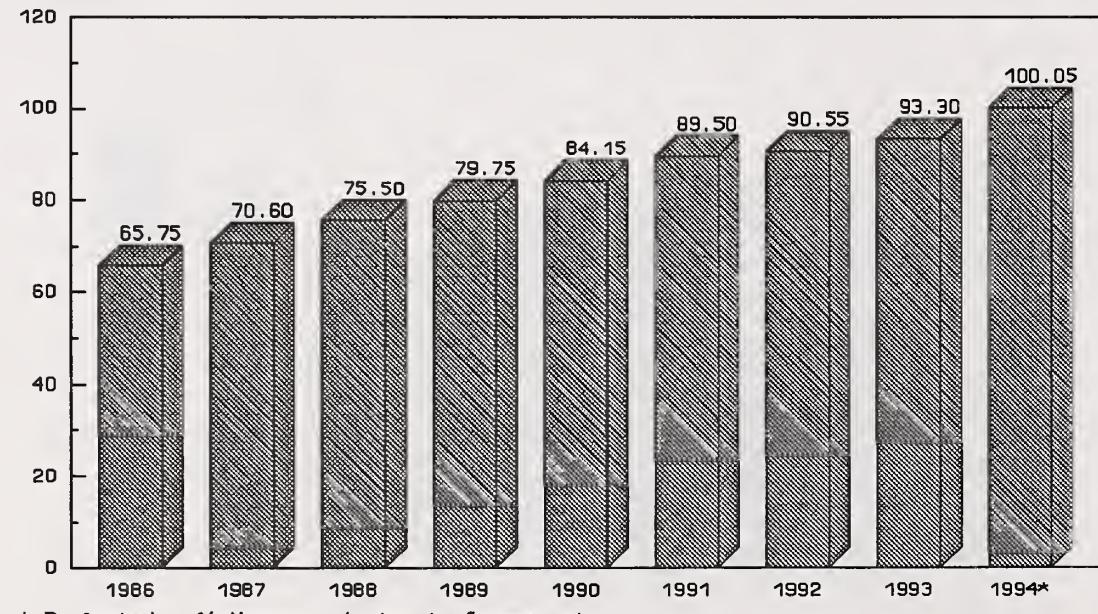
\$ million



* Projected. 1/ Nursery plants, turfgrass, etc.

Environmental Plants: Per Capita Expenditures 1/

Dollars



* Projected. 1/ Nursery plants, turfgrass, etc.