Ser

AGRICULTURAL OUTLOOK CONFERENCE 1985

# AGROCON LANVOKON '85

LANDBOU-VOORUITSKOUINGSKONFERENSIE 1985

PRESENTED BY —

- Agricultural Economics Association of South Africa
- Co-ordinating Committee of Agricultural Marketing Boards
- Department of Agricultural Economics and Marketing
- Department of Agriculture and Water Supply
- SA Agricultural Union

## CSIR CONFERENCE CENTRE
## Pretoria

16 AND 17 JANUARY 1985

# TRENDS IN CROP PROTECTION AND VETERINARY CHEMICAL INPUTS

## INTRODUCTION

Crop protection chemicals comprise those chemicals applied by the farmer to protect his crops and to promote their growth and quality. These chemicals include herbicides, insecticides, fungicides, growth regulants, trace elements and adjuvants. Veterinary chemicals comprise those products used by the stock farmer to protect his animals against diseases and pests and to regulate and promote their growth. These chemicals include ectoparasiticides, endoparasiticides, vaccines, growth hormones, antibacterials and other remedies.

These chemicals have become an indispensable and indeed integral part of modern agriculture and farmers generally recognise that they are essential for optimum production at minimum cost.

## THE SITUATION TO DATE

The estimated market in crop protection chemicals during the period 1974 to 1985 is given in Table 1. These figures are reflected in Figure A, which depicts the growth in market values, market volume and price increases by percentage during this period.

This figure illustrates that prior to 1981 both the use of crop protection chemicals and the turnover of the industry as a whole experienced an upward trend, with price increases lagging behind because the steady increase in volume, resulting in lower unit costs, enabled the industry to absorb many of the cost increases caused by local inflation and the increasing cost of imported raw materials.

Since 1981, there has been a decline in the use of crop protection chemicals and during the past three years sales volumes have remained virtually static. This is mainly due to the low rainfall situation, particularly in the summer rainfall cropping area. It should be noted that 30% of crop protection chemicals are used on maize and that approximately 50% are used on all crops in the summer rainfall area.

GG



Table 2 contains a comparison between the consumer price index and price increases of crop protection chemicals in the years 1975 to 1984. This information is reflected graphically in Figure B. This figure indicates that price increases of crop protection chemicals in fact lagged well behind increases in the consumer price index and that this trend lasted up to 1981. Since then, price increases have tended to reflect the same trend as the consumer price index but the gap between these two indices has remained substantial up to 1984.

Tables 3 and 4 contain details of increases in the gross producer prices of yellow maize and sorghum in the years 1974 to 1984. This information is compared graphically with the price increases of crop protection chemicals (derived from Table 1 in Figure C.) From this figure it is clear that manufacturers and distributors of crop protection chemicals have played a meaningful role to date in keeping the farmer's production cost increases to a minimum. Indeed, the price increases of crop protection chemicals during the years 1974 to 1984 were well below those of other production inputs.

The industry experienced a particularly bad year in 1983, as can be seen from the reduction in turnover shown in Figure 1. This led to an increase in the prices of many products, particularly towards the end of 1984. The full impact of these price increases have not yet been felt because they came late in the season.

The tremendous reduction in the value of the Rand compared to foreign currencies such as the Dollar, particularly during 1984, has had a drastic effect on the cost of chemicals. Table 5 presents the increase in the cost of the Dollar since 1981. The weakening of the Rand compared to other currencies such as the Pound, Swiss franc, Deutschmark, etc., has aggravated the situation. Although some local manufacture of crop protection chemicals takes place, many of the intermediates used must still be imported. Due to the very low volumes involved, the cost of locally manufactured products is furthermore higher than that of imported finished products. It is estimated that 90% of finished products and intermediates are imported and are paid for in foreign currencies. Nearly 50% of all imports are paid for in Dollars.

In the field of veterinary chemicals a similar situation exists and it is evident that the profit margin enjoyed by many veterinary companies from the sale of these products has been halved in the last four years, due mainly to the exchange rate problem, coupled with the effects of local inflation and the market constraints which have forced companies to restrict price increased to a minimum. Table 6 reflects details of the sale of veterinary chemicals since 1982. The increases of R7,5 million and R6 million respectively in 1983 and 1984 were mainly due to factors such as minor market developments in areas such as the feedlot industry and the greater use of instruments by farmers as well as minor price increases. These figures tend to mask the fact that the major market sectors, namely ecto and endoparaciticides, have remained static and that some sub-sectors, such as the market in stock remedies for cattle, have reduced substantially as a result of the drought and other factors. Price increases for veterinary chemicals have averaged about 10% per annum during the past ten years but the latter part of 1984 witnessed more substantial increases being forced on veterinary companies by the factors mentioned previously.

## FUTURE TRENDS

There is no doubt that unless there is a change in the rainfall pattern, no increase in the volumes of crop protection and veterinary chemicals used in South Africa can be expected in the future. These usage volumes may in fact decrease still further in areas where:

- integrated control is being developed
- band treatments are replacing overall treatments and wider row spacing is being introduced to combat the dry conditions
- corrective rather than preventive treatments are being carried out, particularly where monitoring devices are becoming available
- better herd management practices lead to a reduction in the use of veterinary chemicals
- the introduction of broad spectrum remedies replace a range of older remedies

There appear to be very few chemicals currently under development that are likely to increase the size of the market, such as in the case of the cereal fungicides at present. Most new chemicals being developed will merely replace older, less efficient chemicals.

Commodity chemicals will remain a very important part of the market. Whereas the prices of these products have remained fairly stable during the past few years and were in some cases even declining, we can expect sharp increases in the prices of these products in the coming year and beyond. Table 7 reflects the average price increases of the major commodity chemicals during the past eight years as well as predictions for 1985. These commodities represent at least 50% of the crop protection chemicals used on maize.

The methyl isocyanate debacle at Bopal, India, may have serious price repercussions in the crop protection chemicals market. There is a possibility that production of this raw material may be stopped or reduced and its use restricted in many countries. This chemical is used in the production process of many important crop protection chemicals and new methods of manufacture may have to be developed to replace this chemical. These new methods and processes will almost certainly be more costly. Shortages of these essential crop protection chemicals could also occur and this could start a chain reaction with more costly and/or less effective chemicals replacing them. The situation is at present not clear at all and the industry is awaiting developments with great concern.

The prices of crop protection chemicals are likely to increase as long as the Rand continues to weaken and operating costs continue to increase due to inflation and lower unit sales. Price increases of the order of at least 20% may be expected during the course of 1985 to enable manufacturing and distributing companies to maintain the minimum profitability considered essential to their continued viability. Should there be a further deterioration of the Rand or further increases in the rate of inflation, additional price increases will have to follow.

GG



SUMMARY

The prices of crop protection and veterinary chemicals have not kept pace with cost increases and this sector of the industry has reached a crisis situation. To remain in business, manufacturers and distri= butors of these products will be forced to increase prices considerably. The well-being of these companies, like that of the farmer, is very much dependent on the weather and until such time as more favourable agricultural conditions prevail, the prices of these products will have to keep pace with the general inflation rate and not lag behind as happened in previous years.

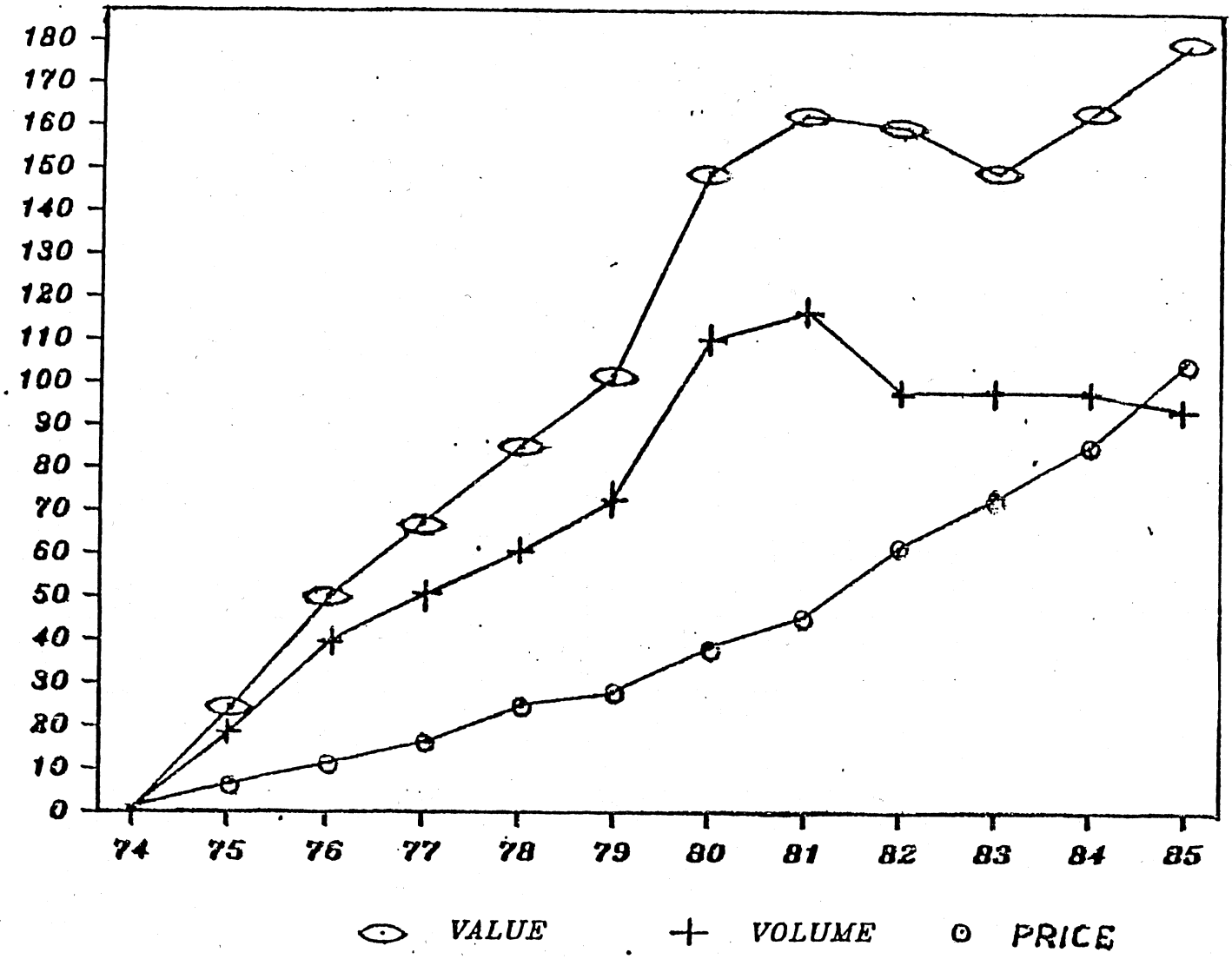
## ESTIMATED SOUTH AFRICAN AGRICULTURAL CHEMICALS' MARKET : 1974 - 1985

TABLE 1

| YEAR | MARKET R'M | TOTAL MARKET RAND VALUE GROWTH PERCENTAGE | PERCENTAGE INCREASE IN MARKET RAND VALUE | PERCENTAGE VOLUME GROWTH | TOTAL VOLUME GROWTH | PERCENTAGE PRICE INCREASE P A | TOTAL PRICE INCREASES |
|---|---|---|---|---|---|---|---|
| 1974 | 51,2 | - | - | - | - | - | - |
| 1975 | 63,5 | 24,0 | 24,0 | 18,5 | 18,5 | 5,5 | 5,5 |
| 1976 | 80,0 | 50,0 | 26,0 | 21,0 | 39,5 | 5,0 | 10,5 |
| 1977 | 93,0 | 66,3 | 16,3 | 11,1 | 50,6 | 5,2 | 15,7 |
| 1978 | 110,2 | 84,8 | 18,5 | 9,5 | 60,1 | 9,0 | 24,7 |
| 1979 | 127,7 | 100,7 | 15,9 | 12,8 | 72,9 | 3,1 | 27,8 |
| 1980 | 188,3 | 148,4 | 47,5 | 37,2 | 110,1 | 10,3 | 38,1 |
| 1981 | 213,6 | 161,8 | 13,4 | 6,7 | 116,8 | 7,7 | 45,8 |
| 1982 | 208,8 | 159,5 | - 2,3 | - 19,2 | 97,6 | 16,9 | 62,7 |
| 1983 | 190,0 | 149,5 | - 10,0 | 0 | 97,7 | 10,0 | 72,7 |
| 1984 (Est.) | 215,0 | 162,6 | 13,1 | - 0,6 | 97,1 | 12,5 | 85,7 |
| 1985 (Est.) | 250,0 | 178,8 | 16,2 | - 3,8 | 93,3 | 20,0 | 105,7 |

FIG A: SOUTH AFRICAN AGRICULTURAL CHEMICALS' MARKET

1974 - 1985

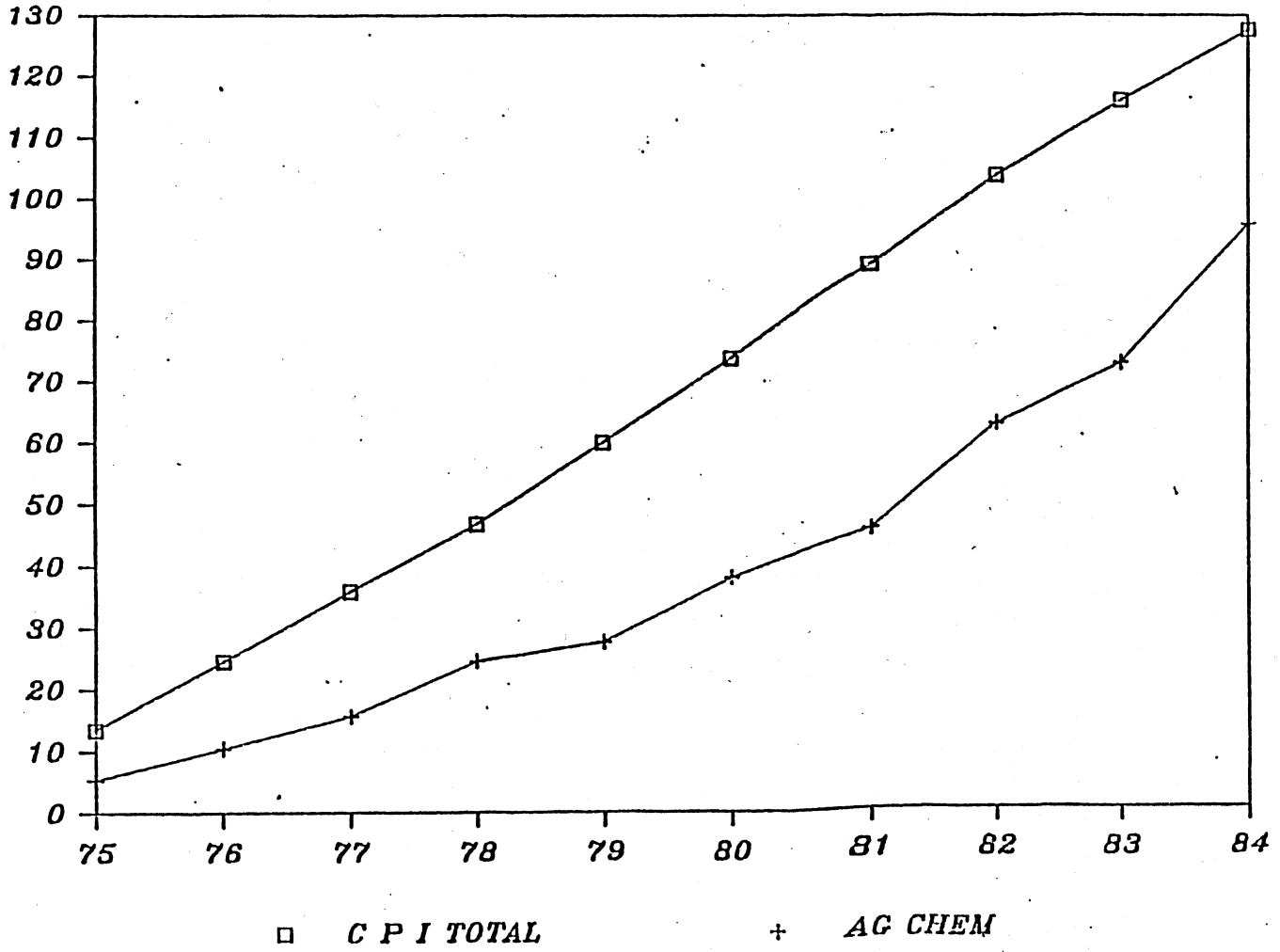


COMPARISON OF CONSUMER PRICE INDEX AND CROP PROTECTION CHEMICAL PRICE INCREASES

TABLE 2

| YEAR | C P I | C P I TOTAL | CROP PROTECTION CHEMICALS | CROP PROTECTION CHEMICALS' TOTAL |
|---|---|---|---|---|
| 1975 | 13,5 | 13,5 | 5,5 | 5,5 |
| 1976 | 11,1 | 24,6 | 5,0 | 10,5 |
| 1977 | 11,3 | 35,9 | 5,2 | 15,7 |
| 1978 | 10,9 | 46,8 | 9,0 | 24,7 |
| 1979 | 13,2 | 60,0 | 3,1 | 27,8 |
| 1980 | 13,8 | 73,8 | 10,3 | 38,1 |
| 1981 | 15,2 | 89,0 | 7,7 | 45,8 |
| 1982 | 14,7 | 103,7 | 16,9 | 62,7 |
| 1983 | 12,3 | 116,0 | 10,0 | 72,7 |
| 1984 | 11,6 | 127,6 | 12,5 | 95,7 |

FIG B : COMPARISON OF CONSUMER AND CROP PROTECTION CHEMICALS' PRICE INCREASES



## GROSS PRODUCER PRICE : YELLOW MAIZE

TABLE 3

| YEAR-END | R / TON | PERCENTAGE INCREASE | TOTAL PERCENTAGE INCREASE |
|---|---|---|---|
| 1974 | 50 | - | - |
| 1975 | 56 | 12,0 | 12,0 |
| 1976 | 65 | 16,0 | 28,0 |
| 1977 | 74 | 13,8 | 41,8 |
| 1978 | 84 | 13,5 | 55,3 |
| 1979 | 102 | 21,4 | 76,7 |
| 1980 | 122 | 19,6 | 96,3 |
| 1981 | 134 | 9,8 | 106,1 |
| 1982 | 155 | 15,7 | 121,8 |
| 1983 | 170 | 9,7 | 131,5 |
| 1984 | 214 | 25,8 | 157,3 |

## GROSS PRODUCER PRICE : SORGHUM

TABLE 4

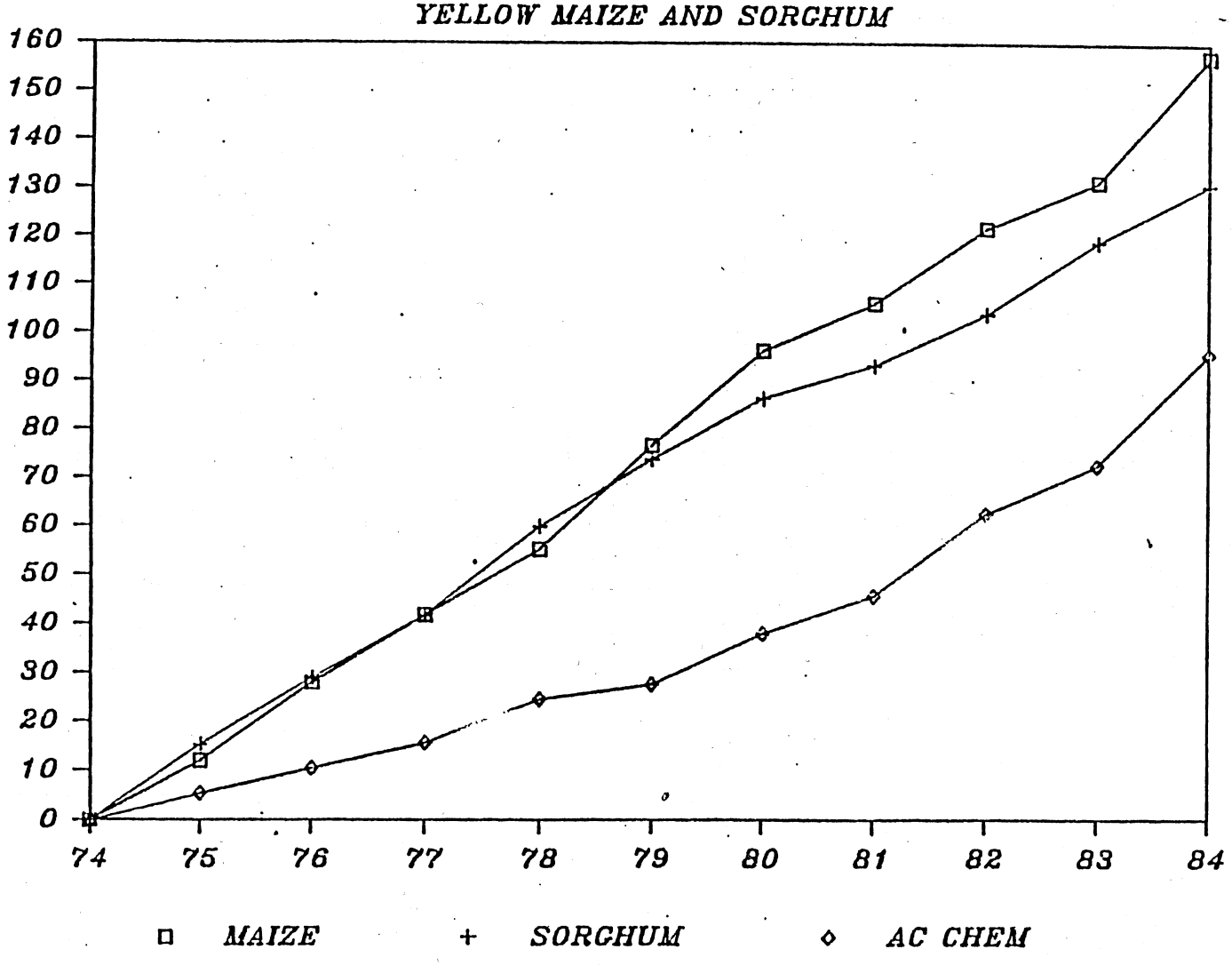
| YEAR-END | R / TON | PERCENTAGE INCREASE | TOTAL PERCENTAGE INCREASE |
|---|---|---|---|
| 1974 | 54,8 | - | - |
| 1975 | 63,2 | 15,3 | 15,3 |
| 1976 | 71,8 | 13,6 | 28,9 |
| 1977 | 81,0 | 12,8 | 41,7 |
| 1978 | 95,8 | 18,3 | 60,0 |
| 1979 | 109,1 | 13,8 | 73,8 |
| 1980 | 122,9 | 12,7 | 86,5 |
| 1981 | 131,3 | 6,8 | 93,3 |
| 1982 | 145,2 | 10,6 | 103,9 |
| 1983 | 167,0 | 15,0 | 118,9 |
| 1984 | 187,0 | 12,0 | 130,9 |

## INCREASE IN COST OF DOLLAR SINCE 1981

TABLE 5

| YEAR | DOLLAR / RAND RATE | PERCENTAGE INCREASE IN COST OF DOLLAR |
|---|---|---|
| 1981 | 1,036 | - |
| 1982 | 0,9295 | 11,5 |
| 1983 | 0,819 | 26,5 |
| 1984 | 0,5045 | 105,3 |

# FIG C : GROSS PRODUCER PRICE —



## ESTIMATED SOUTH AFRICAN VETERINARY CHEMICALS' MARKET : 1982 - 1985

TABLE 6

R'M

| YEAR | ECTOPARASITICIDES | ENDOPARASITICIDES | OTHER STOCK REMEDIES | ETHICAL MEDICINES | FEED ADDITIVES | TOTAL |
|---|---|---|---|---|---|---|
| 1982 | 17,0 | 17,5 | 37,5 | 9,5 | 7,0 | 88,5 |
| 1983 | 18,0 | 18,5 | 39,0 | 12,0 | 8,5 | 96,0 |
| 1984 | 19,0 | 19,5 | 41,0 | 14,0 | 8,5 | 102,0 |
| 1985 | 20,0 | 20,5 | 43,0 | 15,5 | 9,0 | 108,0 |

THESE FIGURES WERE DERIVED FROM PRELIMINARY MARKET SURVEYS AND REPRESENT SALES AT MANUFACTURERS' LEVEL.

## COMMODITY PRICE INCREASES

TABLE 7

| COMMODITY | AVERÁGE ANNUAL PRICE INCREASE : 1976 - 1984 | PREDICTED PRICE INCREASE : 1985 |
|---|---|---|
| | % | % |
| ATRAZINE | 3,22 | 20,0 |
| EPTAM | 4,7 | - 8,9 |
| THIODAN | 9,6 | 19,9 |
| NUVACRON | 0,28 | 19,9 |