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# Meetings

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## IASC President's Review

# A poor year for crushers

*The following text is an abridgement of the talk presented by A. Mergell, president of the International Association of Seed Crushers, to the IASC's 58th Congress held during May in Munich, Germany. Mergell, of Haburger Oelwerke Brinckman Merg., West Germany, was completing his first year as IASC president. While the oilseed industry was troubled by economic problems common throughout the free world, Mergell said there were some encouraging signs—more balance between seed supply and crushing capacity and a decline in worldwide oil stocks. Mergell described his outlook for the coming year as one of "guarded optimism." Approximately 800 persons participated in the IASC meeting held May 24-28, 1982, in Munich, Germany.*

The theme which has been chosen as the focal point of our congress this year is that of the Common Agricultural Policy (CAP) of the European Community (EEC). It is a topic appropriate to our meeting here in Munich and appropriate to the 25th anniversary this year of the signing of the Treaties of Rome. It is also a controversial topic, but one of considerable importance for our industry.

The Common Agricultural Policy influences the development of European crushers' markets and profitability. But its impact is far wider as any U.S. crusher will confirm as he contemplates possible future EEC levies on oils and fats or past skimmed milk powder schemes.

The CAP embraces the principle of liberalized trade at world market prices rather than a regime of fixed and high prices. It is a principle the IASC endorses at the world and the EEC levels to create the most favorable climate for maximizing the long-term growth of our markets. Whatever the year-to-year fluctuations, the stronger the long-run growth in oil and meal markets, the stronger will be the base for the long-run profitability of the international seed crushing industry.

There are aspects of the CAP which are detrimental to our industry—high feed costs discourage long term growth in feed demand and in the consumption of livestock products. The basic principle of liberalized trade for our raw materials and products remains at risk from levy proposals to finance the potentially sizable olive oil surpluses once the EEC is further enlarged in the late 1980s by the entry of Spain and Portugal. For the time being it appears that danger has receded until nearer the time of the enlargement of the Community, when the EEC will re-assess the olive oil situation. Those proposals remain actively under consideration and will undoubtedly come to the surface again. It is important that we, as an industry association, are not filled with a false sense of complacency and allow the momentum of hostility to such proposals to recede.

## Economic environment

Looking beyond the EEC, there is little doubt that the international seed crushing industry over the last twelve months has had to operate in a difficult world economic environment. We are an industry characterized by a small added value in our operations and profitability and therefore particularly vulnerable to unfavorable international circumstances. The world recession over the past twelve months—with a deepening one in the U.S.—has been a particularly unfavorable aspect. In 1981, consumers' expenditure on food, in volume terms, failed to rise in West Germany and Italy after rising by 3% in 1980 and food expenditures actually fell in the UK and in the Netherlands. Moreover, export revenues of many developing countries have been badly hit as recessionary influences weakened commodity prices and the demand for their exports. The ability of such nations to finance the rapid growth in oil and meal imports which has been a feature of recent years is put increasingly in jeopardy.

One major growth area in the past for oil and meal—and indeed, for many other imports—has been the mineral oil producing countries—not merely in the Middle East producers but countries such as Mexico, Venezuela and Nigeria. Oil producers' export revenues have been particularly hard hit as the decline in world economic activity, compounded by the cumulative effect of past high oil prices, has reduced energy demand. Most oil producing nations have now moved into balance of payment deficits less because of the recent pressure on world prices of oil but because of the large decrease in export tonnages. To maintain prices, OPEC countries in the early months of 1982 cut oil production to no more than 17.5 million barrels per day. This is 25% less than in 1981 and compares with as much as 32 million barrels a day in 1979. For the first time, OPEC oil production is less than in the rest of the free world.

Many oil producers, but not all, have large foreign exchange reserves. As these countries generally represent major markets for seed crushers, the climate set by sharply falling export revenues must be viewed as adverse for the international seed crushing industry.

The problem of financing imports clearly has been escalating in the Russian/Eastern European area. These have become major markets for seed crushers. Russia last year imported over a million tons of soya bean meal compared with negligible quantities two years earlier. Imports of 4.5 million tons into Eastern Europe were up by nearly 40%. In Russia, half of that nation's hard currency earnings are derived from gold and mineral oil and there were few financing problems through the 1970s as the gold price rose

twentyfold and mineral oil prices rose tenfold. But Russia has been faced now with (1) a slump in the gold price from a peak of \$850 per ounce two years ago toward \$300 per ounce and, (2) more recently, the downward movement in world mineral oil prices. Heavy gold sales by Russia and the international debt problems of Poland and Rumania are the outward signs of the import financing problems of the region as a whole.

Overall, the world economic environment has been and still is a difficult one with risks of future trade embargoes inherent in the political situation in Poland. High rates of inflation persist—despite hopeful signs of such pressure easing. With the prices of our products determined not by crushers but by world market forces of supply and demand, there is no easy mechanism for passing rising costs on to consumers. Ultimately they will be, but, in the shorter term it is our margins which get squeezed. Working capital costs continue at high levels although interest rates have shown signs of easing. After what has appeared to be an inexorable upward trend, there has been some downward drift in energy costs. While much attention has been focused on the declining price of mineral oil expressed in U.S. dollars, the benefit is lost or partly lost for many consuming countries if prices in local currencies are being pushed upward by a strengthening dollar on foreign exchange markets. Overall, one may perhaps be mildly optimistic that the pattern toward some easing in inflation rates, in interest rates and in energy costs offers the prospect of easing in our cost pressures over the coming year.

### **Crushing margins**

The gross crushing margins out of which must come costs and our profits are set not by the industry but by developments in the world oilseed, oil and meal markets. Particular regions, countries and crushers will have their own situations. But the different margin experiences will be merely deviations around a general level set by world market conditions. They will be deviations around low margins if world capacities are chasing inadequate seed supplies and/or world capacities are chasing inadequate market demands for oils and meals. Different margin experiences, on the other hand, will be deviations around high margins if the world situation is one of ample seed supplies to fill world crushing capacities and strong product demands so that markets are able to readily absorb the capacity output of crushing plants.

The overall development of gross crushing margins is thus first influenced by the level of seed supplies and whether that level leaves excess crushing capacity in the world. For soya beans there has been an improvement in supply since our last congress as the U.S. crop in 1981 recovered from the previous year's drought-depressed level with a crop increase of 6.5+ million tons. Nevertheless, if we compare the crop with that available in the season of good crushing margins in 1979/80 it is still 10% lower and since 1979/80 there have been increases in crushing capacities. Moreover, compared with that season and with last year the Brazilian crop is down by two million tons or so. From the point of view of the relationship of world seed supplies to world capacities, a lower Brazilian crop is as much an influence as a lower U.S. crop. It would not be so

if Brazil, faced with a lower crop, were content to leave capacity idle but this is not the situation. Brazil annually imports more than a million tons of soya beans to fill capacities and to meet export commitments. Normally, Brazil is a net supplier of soya beans to the world but in the early months of this season soya bean imports were higher than exports and this year's lower crop probably presages a higher level of imports than last year.

The move from good soya bean margins in 1979/80 to poor margins in 1980/81 was partly the result of an adverse movement in the world's seed supply/capacity relationship of minus 15%. This season, there has been a favorable movement of plus 5%. This is enough to help in some areas of the world toward better soya bean margins this year but quite inadequate—given also the effect of the lower oil content of beans this year—to produce really satisfactory margins and certainly not enough to restore margins to 1979/80 levels.

Any tendency toward optimism in the soya bean sector over the past 12 months has had to be much tempted by disastrous margin experiences for sunflowerseed—the result of inadequate seed supplies to fill available capacities. Much new sunflower processing capacity has been coming on stream in response to the rapid expansion in the U.S. crop to 3.5 million tons three years ago, yet seed supplies since then have dropped. In 1980, this was because of the severe impact of the drought on the crop. In 1981, the recovery was far too small to compensate for the lower level of stocks. For U.S. and EEC crushers, the impact on margins of a level of a seed supply over one million tons less than two years ago was aggravated by a substantial diversion of supplies to countries where crushing operations are more regulated, or at least protected from world market forces. Spain—to compensate for its own crop failure—has become a sizable importer of sunflowerseed. Portugal has sustained its normal and substantial level of imports. Mexico has been heading toward an import this year of 600,000 tons compared with 230,000 tons in the 1980/81 season.

Overall seed supplies have hardly been at levels necessary to generate gross margins which we could describe as satisfactory. Moreover, products markets also have been relatively weak.

The world market for soya meal already was in a state of decline at the time of our last Congress and, for the 1980/81 season as a whole, there were significant cuts in meal consumption in major regions of the world. In the U.S., consumption dropped by 1.5 million tons, in the EEC, by a million tons; it was 6% lower in Japan and there was a slowing of or a halt to growth in many other countries. Only in Russia could meal demand have been described as dynamic as a result of attempts to sustain animal numbers and feeding rates in the face of a poor grain harvest.

This year, the underlying weakness of the meal market has persisted. The demand base has been kept weak, particularly in the U.S. with hog numbers down 10%, with less cattle on feed and a lack of buoyancy in the poultry and broiler sectors. Perhaps even more important has been the competitive pressure on meal markets from feed grains. The surplus in the U.S. with prospects of stocks doubling this season have left feed grain prices highly competitive with

those of soya bean meal.

The price competitiveness of cereals has also had a marked impact on the underlying strength of EEC meal demand. This is not related to the world surplus of feed grains since EEC cereal prices are fixed under the Common Agricultural Policy regulations. Instead it is the consequence of the strength of the U.S. dollar in forcing up and sustaining meal prices expressed in EEC currencies at less competitive levels compared with cereals. This price relationship between EEC cereals and EEC soya bean meal prices moved adversely in 1980/81 and was a major factor causing the drop in EEC consumption as the use of meal as an energy source became uneconomic. The strength of the dollar this year has prevented a return to the ratio necessary to stimulate meal demand. Some pick of EEC demand was quite noticeable in late 1981 as a weakening of the dollar restored meals' competitive position. Equally noticeable, however, was the drop in that stronger demand as the dollar appreciated again.

In the U.S., all the various indicators for livestock profitability had passed the levels of the previous year by the beginning of 1982 and have since moved further ahead. Feed costs have been held down by the feed grains surplus while livestock prices have risen as an inevitable consequence of reduced livestock numbers. A contribution to improved livestock profitability in the EEC has come from lower meal prices but it is a limited one given the various regulated prices of the livestock sectors and of less importance for meal demand than the relationship of meal and cereal prices. But, improving profitability has been enough to initiate a new upward trend in EEC livestock numbers.

Despite dollar prices averaging 14% below last year, all indications are that the meal consumption growth this year will be no more than modest.

### Oil markets

A downward competitive pressure on gross crushing margins also has characterized the oil market over the past twelve months. For soya bean crushers, oil market developments can be as important, and often a more important influence on margins, than the meal market since soya oil faces a larger volume of competing oils. However, the pressure of oil supplies on margins over the past year has come less from the production of competing oils than from the existing high stocks of oil. Oil, unlike meal, can be stored in large quantities and such stocks always represent particularly intense competition as an alternative supply to current output. EEC soya crushers have fared rather better than have U.S. crushers.

Last season (1980/81) began with sizable oil stocks in the world and it is almost self-evident that those stocks were drawn down during the season. World consumption of edible oils rose by about 1.75 million tons but world production of edible oils hardly rose at all, largely as a consequence of the poor U.S. oilseed crops. The reduction in stock pressures occurred not in the U.S. but in the rest of the world.

Of particular significance for EEC crushers were the stock reductions in the EEC and in Malaysian stocks of

palm oil which, being a reflection of a slow down in the rate of growth in production, also eased competitive pressures in the world market. By contrast, U.S. soya oil stocks increased by 200,000 tons in 1979/80 and continued to increase to record levels by a further 240,000 tons in 1980/81. High interest rates in both regions have been a disincentive to hold stocks, but outside of the U.S. there was a strong incentive to reduce stocks as the strengthening dollar drove up prices expressed in European currencies. By the end of the 1980/81 season, edible oil prices in European countries had risen by 20% even though prices in U.S. dollars had declined by 5%.

Over the past twelve months, the world's surplus oil stocks have tended to become concentrated in the U.S., with a particular impact on U.S. soya bean margins. A more balanced oil stock situation in the EEC has imposed less stress on EEC soya bean margins. The sustained high level of rapeseed supplies, permitting flexibility in capacity utilization, has been of further benefit to soya bean margins and overall margin experience. Nevertheless, while the EEC crushers in some respects have been better off than U.S. crushers, the position is more aptly described as "less unsatisfactory." The overall margin experience becomes decidedly unsatisfactory once allowance is made for the disastrous level of sunflowerseed margins.

### Outlook

I do feel there are pointers that suggest the current season will finally turn out to have been one of transition from last year's low margins to more satisfactory margins next year. Unless the weather gods intervene, we may expect larger soya bean crops, a significantly larger U.S. sunflowerseed crop and a sharp rise in the EEC rapeseed crop. With recent capacity increases more limited, seed supplies relative to capacities should be favorable for better margins. At the same time, improving profitability in livestock sectors offers prospects for more dynamic meal markets while all the indications are that oil stocks—even in the U.S.—will be lower by the end of the season and become a less serious dampening influence on margins. Finally, it can be hoped that the world will move, if only slowly, out of recession and that a period of slower inflation and lower interest rates is before us.

Efforts within the industry to improve productivity—successful and vital though they are—are often of secondary importance to overall profitability. The international seed crushing industry is one which requires above all the smooth, efficient and least cost operation of the mechanisms of international trade. It is this which, despite our industry being a highly competitive one, also generates a whole range of matters of common interest.

I would like to elaborate on two particular areas of common interest. Our industry is and should be proud that in the trading of raw materials from all parts of the world, many of its old traditions have been maintained. Still today trades of tremendous value are handled over the telephone in the knowledge that a contract has been made and with the assurance that the contract will be fulfilled. Our world is still our bond. All these traditions, however, are based on

official contracts and I would like to emphasize that these documents are, and should remain, the essential basis of our transactions. The conditions laid down must be as simple as possible and should not open opportunities for a few "pseudo-lawyers" to search for loop holes.

Arbitration clauses are a further necessity. However, sometimes, the time needed to arrive at a ruling seems far too long. I have known cases where even after 12 months a disputed issue had not been solved and I do not wish that technicalities allow an issue to be kept open that long.

At a quite different level is the regard that the industry, as a whole, must pay to international policy development. I have in mind the proposed UNCIAD code for Liner Conferences formulated back in 1974. To come into operation, the code requires ratification by countries accounting for 25% of the world's shipping. This procedure is now almost completed, yet is one of those areas in which one can foresee that the effect of the code would be to increase freight rates. These increases would result from Conferences secur-

ing a privileged position with the competitive services at present available from non-conference lines. In our industry, it is important that conditions are not created that raise freight costs and that restrict flexibility and the use of skills in getting raw materials and products to us and to our customers at the lowest possible cost. In the UK, the question of ratification is still before the government. The British Federation of Commodity Associations—representing 27 individual commodity associations—have made a strong submission to the UK Government against ratification. FOSFA has contributed to the submission and stressed that the adoption of the code would seriously affect the free flow of international trade in oilseeds, oils and fats—the very life-blood of the international seed crushing industry.

It is my hope that the guarded optimism I have expressed about our operating environment will give us all a good year between now and when we meet again at our Congress next year in Manila.

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*Jaap J.L. van  
Waalwijk van Doorn  
delivered this keynote*

## **to rise**

*address to the 10th International  
Sunflower Conference held  
March 14-18, 1982, in Surfers Paradise,  
Queensland, Australia. At that meeting  
he announced his retirement as secretary  
of the International Sunflower Association  
after many years' service in that capacity.*

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# **U.S. sun oil exports**

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## **expected**

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**China, Hungary, France**  
**rapidly increasing**  
**production**

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World production of sunflower seed will reach about 14.3 million tons this season. With a production of more than 1 million tons, the People's Republic of China has become the fourth ranking sunflower seed producing country in the world. Significant increases in sunflower seed production also have been recorded in France, Hungary and Brazil. Weather conditions and world market prices were the major reasons for fluctuating seed yields in the United States and Argentina. Disappointing yields were obtained in Yugoslavia and Australia; diseases and drought were the main causes.

Worldwide pest and disease infestations are becoming more severe. Natural prevention measures are recommended

for better crop protection. Excessive use of agricultural chemicals is discouraged as they can constitute a threat to the consumer.

Trade in sunflower commodities has shown some dramatic changes in recent years with the United States becoming the principal supplier of seed and oil in international trade and the U.S.S.R. a net importer. The U.S.S.R. is by far the largest consumer of sunflower oil and meal annually, using 1.5 and 2.0 million tons, respectively.

New opportunities for future use of sunflower and derived commodities are discussed below.

### Production

Present indications are that world production of the five major oilseeds will increase by 11.5 million tons or about 8% this season, thus reaching 154 million tons in total and coming close to the record level of almost 157 million tons in 1979/80. It is expected that all five oilseeds will contribute to this increase, although more than 50% will come from soybeans.

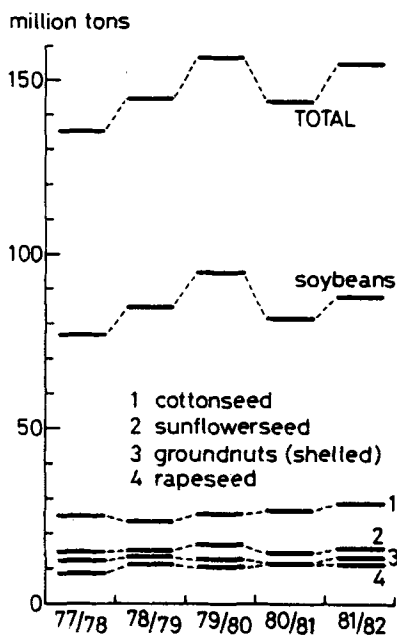


Figure 1. World production of major oilseeds.

As for sunflower seed, world production is primarily governed by the results in the Soviet Union, the United States and Argentina. These three countries account for about 60% of the total world production. Evaluation of production data covering the past five seasons allows several observations.

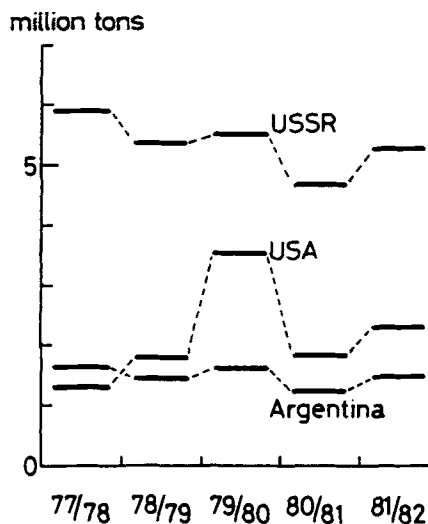


Figure 2. Sunflower seed production.

In all three countries, sunflower seed production fluctuated sizably from year to year. In the U.S.S.R. and Argentina the weather seems to play an important role. In Argentina, for example, soybean and corn acreage used to increase every year and has more than doubled during the 1976/81 period. Part of this increase took place at the expense of sunflower acreage. This season, however, delayed rainfall during the planting period led many farmers to decide to plant more sunflowers resulting in a total acreage of about 1.7 million ha against 1.4 million the year before.

In the United States, the effect of two of these factors is demonstrated in Figure 3. One clearly can see that a high world market price and a low seed stock at the beginning of the planting season encourage farmers to grow more sunflowers which, if nothing goes wrong, results in a higher production level. The figure also shows the opposite. An extremely high seed stock on April 1, 1980, which was to a large extent still stored on farms, and a very low seed price,

In the Soviet Union, planting conditions were unfavorable for sunflower in 1981 resulting in a 4-5%, or 200,000 ha, reduction compared to the previous year. Between August and October, however, excellent weather conditions stimulated early maturation, boosting the average seed yield to almost 1,300 kg/ha, or 18% above the level of 1980, and accelerated the harvest. Consequently approximately 95%, or 3.8 million ha, was harvested by November last year as compared to between 80-85% during the preceding four years.

Other factors defining the annual domestic production of sunflower seed are:

- the national and/or international demand for seed, oil and meal,
- the development of world market prices,
- the national and international prices and protection policies and
- the interchangeability with respect to less risky and more profitable crops.

both at the farm gate and on the world market, induced many U.S. farmers to plant all or part of their sunflower area into wheat and soybeans, as these crops showed a proportionately better return per acre.

Looking at production data for the nine major sunflower seed producing countries (Table 1) one's attention is immediately attracted by the changes in ranking in two years' time. At the Ninth International Sunflower Conference in

Spain in 1980, I brought to your attention that the People's Republic of China had become a significant, although still minor, producer of sunflower seed. Now, China already has reached fourth position on the list of producers. Noteworthy also are the rise of Hungary, the appearance of South Africa and France, and the disappearance of Yugoslavia, Bulgaria and Spain from the list of major countries. Turning to the so-called minor sunflower seed producing countries (Table 2) it should be noticed that, apart from exchanges with the group of major countries, no new countries have entered the ranks of the nine largest minor producers. This leads to the conclusion that it really requires an extra effort from a government to raise production to a level from which it starts generating itself.

In this respect, it is interesting to study the striking development in a few countries a little closer. In Figures 4 and 5, the annual production data are given for eight countries during the last five years. Four countries show a remarkable increase, whereas the other four demonstrate a downward trend.

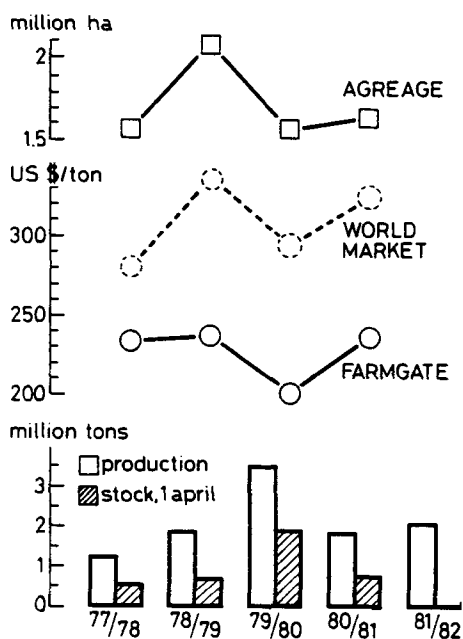


Figure 3. U.S. production vs stocks and average prices of sunflower seed.

Table 1. Major sunflower seed producing countries.

1979/80			1981/82		
Rank	Country	Tonnage	Rank	Country	Tonnage
1	USSR	5 414	1	USSR	5 150
2	USA	3 484	2	USA	2 120
3	Argentina	1 650	3	Argentina	1 450
4	Romania	889	4	PR.China	1 050
5	Turkey	590	5	Romania	740
6	Yugoslavia	525	6	Turkey	575
7	Spain	504	7	Hungary	520
8	Bulgaria	426	8	S. Africa	495
9	Hungary	406	9	France	380
10	Minor ctrs	1 822	10	Minor ctrs	1 820
TOTAL		15 710	TOTAL		14 300

Table 2. Minor sunflower seed producing countries.

1979/80			1981/82		
Rank	Country	Tonnage	Rank	Country	Tonnage
1	PR.China	375	1	Bulgaria	320
2	S.Africa	320	2	Spain	300
3	Canada	218	3	Yugoslavia	295
4	France	159	4	Canada	180
5	Australia	142	5	India	175
6	India	130	6	Australia	120
7	Italy	57	7	Brazil	90
8	Brazil	57	8	Italy	65
9	Uruguay	48	9	Uruguay	35
10	Other minor ctrs	316	10	Other minor ctrs	240
TOTAL		1 822	TOTAL		1 820

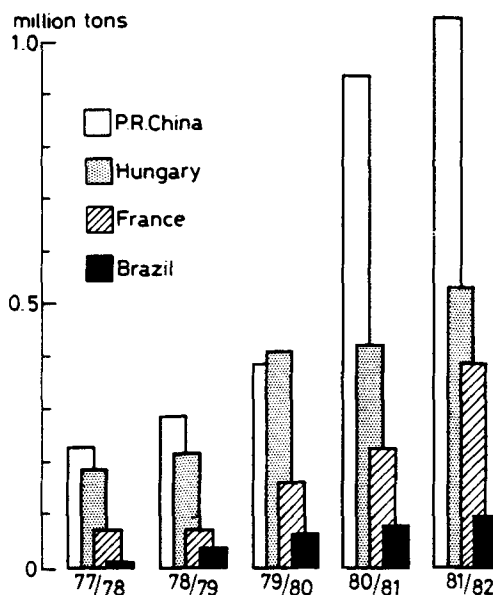


Figure 4. Sunflower seed production.

Most striking is, of course, the rapid increase in production in China. Sunseed has not been the only expanding oilseed in China during recent years. Cottonseed, rapeseed and groundnuts have shown similar developments. The total edible oil output has doubled from about 1.7 million tons in 1977 to about 3.4 million tons last year. The growth in edible oil output is a good indicator of an increasing need for domestic consumption as imports and exports remained rather small and stable during the past five years. To my knowledge, no other country has recorded such a sharp increase in domestic consumption of oils and fats in recent years.

Hungary had different reasons to expand its sunflower production. Its goal was to increase sunoil exports and at the same time to reduce soybean meal imports as a result of larger production and domestic usage of sunflower meal. By doing this, Hungary saved about US \$95 million in for-

eign exchange last year. Crucial to the whole operation is, of course, the existence of sufficient crushing capacity. To meet that criterion, a new oil mill with a processing capacity of 1,000 tons/day was commissioned at Marthfu in late 1980.

In France, increased production of sunseed has three major reasons:

- the success of improving the yield potential and disease resistance which made sunflower more competitive with other crops,
- the increased domestic demand for sunoil at the expense of groundnut oil in particular and
- the desire of the French government to reduce imports and to become more self-supporting.

Brazil is a very special case. The majority of sunflower grown in this country is planted as an after-season crop. Immediately after early maturing crops, such as soybeans and corn, have been harvested sunflowers are planted with minimum field preparation or fertilization. The crop then thrives on residual soil moisture. Though yields are low, due to limited production costs, the yields do give the farmer a reasonable net return. Besides, growing sunflowers contributes to the suppression of weeds in the off-season. The dual success of this operation has a synergistic effect on the production of sunflower seed.

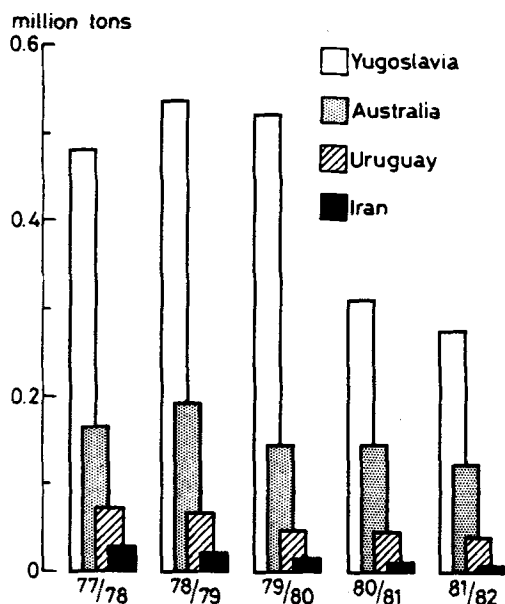


Figure 5. Sunflower seed production.

Turning to countries that showed a declining production during the past five years, I would like to start with Yugoslavia. The sunflower crop in this country has been hit very seriously by the fungal disease phomopsis for two consecutive years. The result, in many places, was an almost complete crop failure. As a consequence of low sunseed production, Yugoslavia again became a large importer of oils and fats, i.e. from 28,000 tons in 1979 to an estimated 220,000 tons in 1981.

As for Australia, high sorghum prices and/or unfavorable

rainfall conditions during the sunflower planting and growing seasons resulted in reduced plantings and lower yields in Queensland and New South Wales, which together produce about 85% of the crop. In areas with little rain, above normal infestations of heliothis, thrips, rutherglen bugs and other pests, causing damage to the seedlings, have been reported as another reason for the decrease in sunseed production during the past few years.

A change in government policy or political unrest can also be a reason for falling production results. Both Uruguay and Iran may fall under this category.

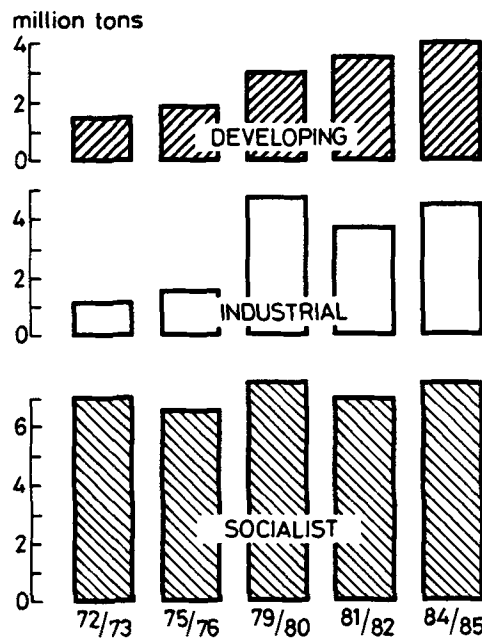


Figure 6. Sunflower seed production per category of countries.

Talking about countries with different political regimes and economic structures it is interesting to see what has happened in terms of production over the past ten years (Fig. 6). Whereas production for all socialist countries together remained more or less at a level of 7.0 million tons, production in industrialized as well as of the developing countries almost tripled, thus producing together about 7.3 million tons this season. The figure also shows that a further increase in seed production is anticipated in these two categories for the next three years.

Diseases and pests, including bird damage, always have been a problem in growing sunflowers. Despite intensive efforts to remedy this situation either via breeding resistant varieties or by using chemical means, it seems as if conditions deteriorate rather than improve.

I already mentioned the devastating effect of a fungal disease in Yugoslavia and the abnormally high pest damage in Australia. But, also, alarming reports about disease and pest problems are coming in from the United States. Last year, Prof. Sackston warned of the appearance of a new virulent strain of *Plasmopora helianthi* recorded locally in 1980 where it attacked all hybrids and lines known to have  $Pl_1$ ,  $Pl_2$  or  $Pl_4$  genes. Another threat to the U.S. sunflower

crop is *Alternaria helianthis*. Severe crop damage due to this disease recently has been recorded for the first time in Wisconsin and Florida. The leaf-, stem-, and headspotting pathogen is well known in Australia, Argentina and various East European countries, and is particularly destructive in Yugoslavia. Pests also are spreading fast in the United States. Increasing damage is caused by the midge larva that feeds on the developing flowerhead. The initial infestation appeared in 1971. Last year, however, some 10 to 15% and locally up to about 40% of the crop in the Red River Valley was destroyed by midge. The sunflower seed weevil has become an annoying pest in recent years. The larvae consume the seed meat, causing substantial economic damage.

To cope with disease and pest problems, farmers increasingly turn to fungicides, pesticides and the like, thereby often creating new problems. In Australia, for instance, the use of carbaryl against heliothis resulted in heavy bee losses, which, in its turn, has led to an increased interest in the degree of compatibility of the available sunflower varieties.

Although agricultural chemicals often are very effective and generally easy to apply, I like to break a lance for the use of more natural methods. For example, experiments have indicated that an effective means of decreasing midge damage is to postpone planting dates. On the other hand, seed weevil damage can be reduced significantly by an extended crop rotation pattern, whereby sunflowers are grown on the same field once every four years only. Another reason why I favor the use of natural means whenever possible is the growing concern about health hazards caused by excessive and improper use of agricultural chemicals.

In the United States, for example, the use of malathion for protection of stored sunflower seed against insects recently was questioned by the Food and Drug Administration. Since malathion residues are effectively eliminated during the refining process and since it is a chemical which degrades over time, FDA ultimately concluded that there

was no threat to consumers. Nevertheless, this example illustrates the need for a constant awareness of the danger of food contamination via agricultural chemicals.

**Trade**

Figure 7 shows the world trade in sunflower seed, oil and meal over a period of five years; only those countries are included that are net exporters. A marked growth can be observed in all three sunflower commodities over the past five years, especially for seed. Sunflower oil is at present the fourth largest edible oil commodity traded on the world market, following palm oil, soybean oil and coconut oil.

The backslide in trade in sunflower commodities in 1980/81 is due to a reduced world production of sunseed (13.2 million tons against 15.6 million tons the year before), a low market price for both seed and oil during the first half of the season, and a high premium or discount for, respectively, sunoil and meal as compared to the same commodities of other oil crops.

Table 3. Major exporting countries.

(in 1000 tons)			
SUN- FLOWER		1976/77	1980/81
SEED	USA	409	USA 1 550
	Hungary	34	France 107
	S.Africa	16	Canada 84
OIL	USSR	224	Argentina 230
	Romania	145	USA 220
	Argentina	141	F.R.Germany 140
MEAL	Argentina	412	Argentina 530
	Turkey	43	F.R.Germany 105
	Spain	12	USA 95

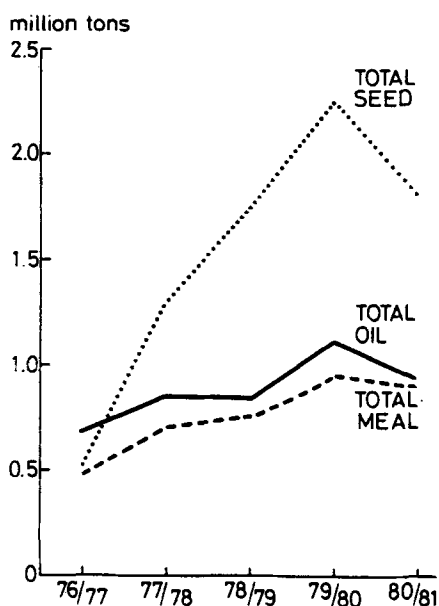


Figure 7. World trade sunflower seed, oil and meal.

Going through the list of major exporting countries, a dramatic change over the last five years is observed (Table 3). In sunseed, the United States has strengthened its position as the world's largest exporter. Also in sunoil exports, the U.S. is becoming a serious candidate for the No. 1 position. In 1980/81, about 800,000 tons of seed was processed domestically, yielding about 300,000 tons of oil of which some 220,000 tons were exported. By the end of 1982, two new processing plants will become operational. With these plants, the United States will be able to process 1.2 to 1.3 million tons of seed per year, more than 500,000 tons of oil.

On the other hand, the United States' domestic market for sunoil is not expected to increase that rapidly. This will mean that between 300-400,000 tons of oil will have to be fed into export channels. It will be a challenge to find a market for that much oil—more so as the E.E.C. countries will still opt for seed instead of oil imports.

An opposite development has occurred in the U.S.S.R. In 1973/74, the Soviet Union exported more than 400,000 tons of sunoil; by 1976/77 exports had already dropped to half that amount and in 1980/81 the country became a net importer of sunoil for the first time. Apart from weather conditions, this development is attributable to the present agricultural policy and infrastructure of the Soviet Union.



Another remarkable phenomenon in the list of major exporting countries is West Germany. Although this country hardly produces any sunflower seed, it has become an important exporter of sunoil and meal. The reason is that Germany imported increasing quantities of seed during the past five years, much more than needed for domestic consumption. Excess crushing capacity and competitive processing costs have made West Germany a major supplier of oil and meal within the Common Market.

### Consumption

Over five million tons of sunflower oil and six million tons of meal were consumed in 1980/81. By far the largest consumer of oil and meal is the U.S.S.R., which consumes about 30% of the world production. Other countries consuming significant quantities of sunflower oil are shown in Figure 8. It is surprising to see that among these major consumers, there are three countries that have to rely fully or almost completely on imports; these are West Germany, Mexico and Venezuela. Sunflower oil is primarily used as oil or for frying purposes. Less than 15% is sold as margarine, of which about 300,000 tons fall within the so-called high PUFA class, i.e., special margarines having an increased linoleic acid content.

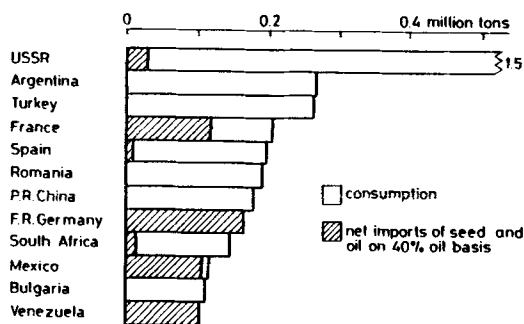


Figure 8. Major sunflower oil consuming countries.

Opportunities for the future use of sunflower and derived commodities are, for instance, in three potential areas:

- development of a sunbean,
- sunflower varieties with a high oleic acid content, and
- its use as fuel.

Dr. John Kemp and Timothy Hall from the University of Wisconsin have succeeded in transferring a gene that directs the production of a major protein, phaseolin, from its native location in the French bean into the foreign environment of a sunflower cell. Genetic engineering is still a relatively new science, but the above success may finally lead to the creation of a sunbean with an increased nutritive value.

Sunflowers yielding a high oleic acid oil are already grown on a commercial scale in the U.S.S.R. Interest in high oleic sunflowers recently also has been observed in the United States, where Sigco Research received a grant from Frito-Lay Inc. to assist in the development of a sunflower hybrid containing a high percentage of oleic acid. Sunflower oil with a high percentage of oleic acid is considered more suitable for deep-fat frying of food items such as fish and

potato chips.

Research on the use of sunflower oil as a renewable fuel has been initiated in recent years in South Africa, the United States and Australia. Positive results have already been reported by Dr. Bruwer of the Council for Scientific and Industrial Research in Pretoria, South Africa, Dr. George Pratt from North Dakota State University at Fargo, and also Bob Harmon of Placerville in California, who proved in the Future Fuels Challenge Rally from Los Angeles to New York City that degummed, unrefined sunflower oil outperforms methanol, wood, electricity and solar hydrogen in terms of running costs and conversion requirements of the engine.

These and other possibilities for future use will no doubt further stimulate the interest in sunflowers as a raw material for consumption and industrial applications.

### 1981 exports total 1.7 million tons

U.S. sunflowerseed exports during calendar year 1981 totaled 1.7 million metric tons with a value of more than \$510 million, according to the USDA's Foreign Agricultural Trade Statistical Report. Comparable figures for calendar 1980 were 1.5 million tons with a value of \$410 million, according to the report. Figures for 1982 will be lower because of a smaller 1981 harvest.

Top importer of U.S. sun seed both years was The Netherlands, which imported nearly 600,000 metric tons during 1981. Next largest importers were Mexico and Portugal with imports of 289,520 and 229,198 metric tons, respectively.

Exports of sunflower oil rose to 257,245 metric tons in 1981 compared to 158,109 in 1980. Major importers were Venezuela, 85,873 tons; Algeria, 60,193 tons and Egypt, 25,376 tons. Total value of 1981 sunflower oil exports was \$160 million, according to the report.

### South Africa sunflower crop fails

South Africa's sunflower seed crop for 1982 is estimated at 290,000 tons, down from 513,000 tons in 1981. The drastic decline, caused by drought, means South Africa will not be exporting sunflower seed products, according to reports from the USDA agricultural attache there. South Africa is seeking to import sunflower seed.

The 1981 crop, which was considered a good one, permitted South Africa to export 94,000 tons of sunflower seed and 73,000 tons of sunflower oil during the 1981 marketing year.

### Soviet crop planted late

The Soviet Union sunflower crop was being planted a bit later than considered optimum, the newsletter *Oil World Weekly* reported in mid-May. The Soviet crop needs to be planted by then to assure good stands and then maturation before frosts. By May 17, the newsletter said, plantings had totaled about 3.9 million hectares (1.6 million acres), about 90% of total expected plantings. Total acreage should be about the same as in 1981.



AOCS  
World  
Conference  
on

# Oilseed and Edible Oil Processing

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## Edible oil conference nears

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Approximately 1,100 persons are expected to gather in The Netherlands in slightly less than two months for the World Conference on Oilseed and Edible Oil Processing. The meeting will be held Oct. 3-8, 1982, in The Congress Centre at the Hague.

The purpose of this meeting is to discuss the latest technology in processing of raw materials containing edible fats and oils into finished products. The 57 invited speakers have been asked to discuss energy conservation and what changes can be expected in the edible oil industry through the end of the century.

The conference is, in essence, a successor to the 1976 World Conference on Oilseed and Vegetable Oil Processing Technology that drew more than 1,000 persons to Amsterdam for the first such international fats and oils conference. This meeting is expected to be the largest gathering of the international edible oil industry during 1982. The accompanying exposition will be the year's largest expositions of suppliers to the fats and oils industry and therefore a major opportunity to obtain information on the latest equipment, supplies and services available.

The technical program has been organized into eight general subject areas. On Monday, Oct. 4, oilseed processing will be discussed; on Tuesday, Oct. 5, oil processing; on Wednesday, Oct. 6, trading and quality considerations, and economic use of byproducts; on Thursday, Oct. 7, characteristics of individual oils; and on Friday, Oct. 8, energy, automation, and long-term directions. There will be discussion sessions each day at which registrants may comment upon what they have heard as well as ask questions of the plenary speakers.

The meeting is international in character with simulta-

neous translation into French of the plenary lectures, all of which will be presented in English. More than two dozen fats and oils organizations worldwide are participating in organizing and promoting the conference, under the primary sponsorship of the American Oil Chemists' Society. A proceedings of the conference is tentatively scheduled to be published as the February 1983 issue of *JAOCS*.

A registration form is printed in this issue of *JAOCS*. If it has been used, additional copies are available from the AOCS, 508 S. Sixth St., Champaign, IL 61820 USA, or from the Secretary, VERNOF, Raamweg 44, The Hague, The Netherlands. The registration fee includes three social events designed to provide opportunity for informal conversation. A fourth event, a Tropical Dutch Evening party, is optional. Tickets may be ordered using the registration form.

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### HOTEL ACCOMMODATIONS

Rooms have been reserved at a number of hotels in the Hague which are no more than a short bus ride away from the Congress Centre. Reservations may be made at the special group rates by use of the conference registration form. A list of hotels by general location and tariffs follows:

#### NEAR THE CONGRESS CENTRE:

Hotel Bel Air, Johan de Wittlaan 30, 2517 JR The Hague

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## Meetings

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Tel. 070-57 20 11, telex 31444

Single: Hfl 110

Double: Hfl 150

Promenade Hotel, Van Stolkweg 1, 2585 JL The Hague

Tel. 070-57 41 21, telex 31162

Single: Hfl 160

Double: Hfl 175

Breakfast: Hfl 15

### SCHEVENINGEN (ON THE COAST):

Kurhaus Hotel, Gevers Deynootplein 30, 2586 CK The Hague

Tel. 070-52 00 52, telex 33295

Single: Hfl 115

Double: Hfl 170

Europa Hotel, Zwolsestraat 2, 2587 VJ The Hague

Tel. 070-51 26 51, telex 33138

Single: Hfl 85

Double: Hfl 140

### CENTER OF THE CITY:

Hotel Babylon (next to railroad station), Koningin Juliana-plein 35, 2595 AA The Hague

Tel. 070-81 49 01, telex 34001

Single: Hfl 150

Double: Hfl 175

Hotel des Indes, Lange Voorhout 54-56, 2514 EG The Hague

Tel. 070-46 95 53, telex 31196

Single: Hfl 121

Double: Hfl 182

Most hotels have suites available. Tariffs include breakfast (except at Promenade Hotel), service and tax. A deposit of Hfl 200 is required with your reservation. The committee will confirm hotel reservations and will provide a voucher in the amount of the deposit. Transportation will be provided between the hotels and the Congress Centre and to social events when necessary.



## Spouses to tour historic Chicago

Registrants for the spouses' program for the 1983 AOCS Annual Meeting, May 8-12, in Chicago will have a chance to tour some of Chicago's historic sites and some scenic locations outside the city.

The spouses' program will begin with a welcoming tea on the opening day of the meeting, Sunday, May 8, in The

Sheraton Chicago, site of the meeting. The annual welcoming mixer for all technical and spouses' program registrants will be held that evening.

On Monday, May 9, there will be a bus tour of one of the older sections of Chicago. One stop will be the Glessner House, built in 1885 and designed by Boston architect Henry Hobson. Another stop will be the Clake House, the oldest house standing in Chicago. The Second Presbyterian Church was built in the late 19th century when the congregation included the most prominent Chicago families. During a visit to the church, registrants will have a chance to see eight Tiffany stained glass windows. Lunch will be at the Victorian House Restaurant.

After breakfast on Tuesday, May 10, the spouses' program registrants will travel by bus to Geneva, west of Chicago on the Fox River, for a tour of old homes and lunch at the Mill Race Inn, a former blacksmith shop with a view of a waterfall on the Fox River.

After breakfast on Wednesday morning, May 11, author Beverly Becker will demonstrate make-up application. The afternoon will be free time with the main social event for the meeting scheduled for Wednesday night.

Spouses' program registrants also will have the opportunity to participate in tours being organized to the Sara Lee Bakery and to the Chicago Board of Trade. These tours also will be available to technical program registrants.

## Buffalo Gourd topic

The first International Conference on the Buffalo Gourd will be held Jan. 16-19, 1983, in Sydney, Australia. The conference will be the first opportunity for buffalo gourd researchers to exchange ideas and objectives. It also will provide a forum for government and agribusiness representatives to outline their priorities for development and commercialization of this crop, a native of the arid and semi-arid regions of North America. Conference brochures and registration forms can be obtained from the Office of Conference Secretariat, GPO Box 2609, Sydney, NSW 2001 Australia, or Allen Gathman, chairman of the organizing committee, Department of Plant Sciences, University of Arizona, Tucson, Arizona 85721.

## Protein to be AACC topic

A symposium on "Protein Ingredients for the Cereal Foods Industry: Needs and Availability" will be among the technical sessions featured at the American Association of Cereal Chemists' annual meeting October 24-28, 1982, in San Antonio, Texas. For more information about the AACC 67th annual meeting, contact AACC, 3340 Pilot Knob Road, St. Paul, Minnesota 55121.

## NSA to meet Jan. 26-27

The National Sunflower Association will hold a sunflower research forum on Jan. 26, 1983, at the Ramada Inn in Minot, North Dakota, with the association's annual convention scheduled for the following day, Jan. 27, in the Minot State College Dome.