

## Industry News

### North America

#### Mexico Announces a Soybean Meal TRQ

The Mexico Secretariat of Economy (SE) published on November 22, 2004, in the *Diario Oficial* (Federal Register), a decree that creates a tariff rate quota (TRQ) for soybean meal from all countries (including the United States) with a zero import duty. According to the announcement, there may be a need to import additional soybean meal (SBM) from other countries and the Government of Mexico (GOM) would like to maximize SBM buying opportunities for its livestock industry by giving them alternative sourcing options. The announcement also states that Mexico's Commission of Foreign Trade, whose mission is to discuss trade measures and whose membership is comprised of several Mexican ministries as well as the private sector, has ruled favorably on this decision.

This announcement does not include the details on the volume, time period in which the TRQ is effective, nor the administrative procedures on allocation. According to SE officials, they have not yet made a decision about publishing these details and procedures in 2004, as U.S. soybean prices have moderated in recent months. This announcement is consid-

ered the first step in the TRQ announcement. The second step, establishing the mechanism for the importation of SBM from third countries is pending at SE.

#### USDA/FAS Analysis:

Mexico is opening its market in response to past tight U.S. supplies and high prices.

During the first half of 2004, U.S. SBM and soybean prices increased considerably—a situation of great concern to the Mexican livestock industry, which subsequently petitioned the GOM to create a TRQ for SBM from all countries so as to maintain its competitiveness. In particular, this TRQ would allow SBM from Brazil and Argentina to enter with a zero duty, rather than the respective 18 percent and 14.4 percent duty the two countries currently have.

The GOM's creation of such a TRQ is not a violation of NAFTA. Over the last few years, Mexico has also created TRQs to non-NAFTA countries for dry beans and poultry products. SE officials have consistently maintained that the reason for this TRQ is to provide the best SBM prices to its livestock industry so that it may remain competitive. Although the GOM realizes that 2003–04 was an anomaly in terms of U.S. soybean production, it is implementing the first stage of this TRQ so that it may have a mechanism in place in the event that there are tight U.S. supplies and high prices in the future. It should be re-emphasized that a second announcement outlining the details on TRQ volume, time period, and administrative allocation procedures, is necessary before SBM can be imported from other, non-NAFTA, countries, under this TRQ.

*USDA Foreign Agricultural Service GAIN (Global Agriculture Information Network) Report of 11/24/2004. Approved by David Williams, U.S. Embassy, Mexico City, and prepared by Benjamin Juarez.*

#### USDA: No Rust Impact On U.S. Exports This Year

USDA officials and analysts think the initial soybean market reaction to the discovery of Asian rust on leaf samples taken from two plots associated with a Louisiana State University research farm was “over done” and they do not believe rust has been detected in Arkansas, despite rumors to that effect.

The production impact on this year's crop is nonexistent to negligible since the harvest is over. The risk is to next year's crop and to those that follow. How far rust may spread next year, if there is a production impact at all, it is expected to be controllable and its impact on production and yield moderate if a treatment program is implemented.

USDA does not expect any impact on U.S. exports “whatsoever” this year. USDA Chief Economist Keith Collins said, “We're the only major soybean producer in the world that doesn't have soybean rust (until recently), so our soybean competitors around the world have been exporting to all markets. Our major (soybean) market is China. Brazil exports to China, and they have soybean rust. So we do not expect an effect on our exports.”

Regarding potential economic impacts on some U.S. soybean producers, USDA's Collins said, the cost is “very much going to depend on the nature of the outbreak and how it

unfolds over time. We can look at Brazil and the experience Brazil has from data from the last couple of years.” USDA’s cost estimate for fungicide treatment (\$25/acre) assumes one to four fungicide treatments, estimated at around \$15 an acre for each treatment—depending on aerial or ground surface coverage. USDA doesn’t expect significant crop insurance indemnity payments on any Asian soybean rust issues in the U.S. because crop insurance policies assume farmers are following a “good farming practice” which in this case would include fungicide treatments. Thus, crop insurance rates should not go up appreciably to account for any exposure due to Asian soybean rust. USDA analysts say it is too early to define acreage and price implications regarding the fungus incident but they note that there could be some acreage shifts in marginal soybean areas of the South, where costs for soybeans are now at around \$90/acre. These producers could see their costs double if three to four fungicide treatments are necessary (\$15/acre per treatment).

Neal Bredehoeft, president of the American Soybean Association said in published reports that there currently are no rust-resistant or rust-tolerant soybean varieties. “Research is ongoing, but such varieties still are five to ten years away,” he says. USDA notes that soybean rust can be managed with the judicious use of fungicides. However, early detection is required for the most effective management of soybean rust. In addition, USDA recommends that farmers monitor soybean fields and adjacent areas throughout the growing season.

Bredehoeft agreed with USDA’s assessment that fungicide treatments currently are the only option for containing soybean rust by lessening the spread of spores. Fungicide use in other countries has been effective in keeping soybean rust below the economic threshold of yield loss. He told Reuters he is “fairly confident” that U.S. farmers would have an adequate supply of fungicides available to them before next year’s spring planting season gets underway. Bredehoeft also said ASA believes federal regulators may speed up the approval of additional pesticides that are effective against the new disease. *Reuters* reports that EPA previously approved four types of fungicides for use in 25 states, including Louisiana.

*The American Soybean Association Weekly Update.*

## Deluge of Soybeans Onto World Market Appears Imminent

The 2004 U.S. soybean crop estimate was raised again in November by 43 million bushels to 3,150 million bushels. It was already established that there would be a record-high national average yield this year, but the new forecast of 42.6 bushels per acre would be even bigger. The U.S. Department of Agriculture (USDA) scaled back the forecast of 2004–05 soybean exports this month by 15 million bushels to 1,010 million. This season’s projected soybean stock carryout is expected to swell to 460 million bushels. The increase in the prospective stocks-to-use ratio adds greater pressure to the 2004–05 price outlook, which was lowered this month by 15 cents to \$4.55–\$5.35 per bushel.

USDA trimmed its forecast of China’s season-ending soybean stocks from 4.2 million to 3.7 million tons (compared

with 2.1 million for 2003–04). Consequently, the 2004–05 forecast of China’s soybean imports was lowered 0.5 million tons this month to 22.0 million. Together with the U.S. surplus, South American supplies are expected to push the 2004–05 global stock carryout to a record 61.4 million tons, or 57 percent higher than the year before.

*By Mark Ash and Erik Dohlman, USDA, Economic Research Service, Oil Crops Outlook.*

## USDA May Outsource Oilseed And Grain Inspections

Dow Jones Newswires reports that USDA is looking into outsourcing the inspection work done by federal employees on millions of tons of U.S. grain and soybean exports. According to the news service, USDA’s Federal Grain Inspection Service (FGIS) was scheduled November 16 to submit a feasibility study regarding privatization of the export grain inspection to an advisory committee that requested it back in May.

It’s not the cost of domestic inspection that members of the advisory committee say concern them. It’s the cost of mandatory inspection of exports that can be performed only by government officials that’s cutting too deeply into profit margins. Domestic inspection services are now handled primarily by the 43 private agencies licensed by FGIS to grade and weigh grain only when requested.

### Around the World

## Ministry of Agriculture in Brazil Releases First Soybean Projections for 2004–05

The Brazilian government’s first official soybean production estimate for the 2004–05 crop year is 60.8 million tons, a 22 percent increase from last year’s crop. According to Agriculture Minister Roberto Rodrigues, this increase in production is expected despite less growth than anticipated in planted area. CONAB (USDA’s ERS and CCC equivalent in Brazil) is projecting a planted area of between 22.0 and 22.4 million hectares (54.36 and 55.35 million acres), an increase of approximately 1 million hectares (2.47 million acres) or a about a 5 percent increase over last year’s area.

The increase reflects producers’ anticipation of lower revenues in 2005. Increased costs of production, pressured by high prices for petroleum and steel, and a drop in international commodity prices are factors that will reduce planting intentions in Brazil.

Decreased fertilizer use also had an impact and made farmers more susceptible to climate variations. CONAB reports that farmers are faced with irregular rain patterns and in many areas, a lack of rain in general as farmers begin spring planting. Water reserves in the south are also below normal levels.

Commenting on Brazil’s storage and transportation problems, the Minister said that the Brazilian government will invest 62 million Reais (U.S. \$ 22.1 million) in infrastructure improvements. The government anticipates that this investment will generate \$1 billion of additional commodity exports.

## Current Factors

Soybean rust is continuing to catch Brazilian farmers by surprise, but the impact of rust on the current crop is unknown at this time. This year's crop faces a 20 percent increase in production costs over last year because of rising input costs, and price projections that are 30 percent lower than last year. Weather is the third main variable and potential aggravation and precipitation in most areas is lower than anticipated.

With tighter profit margins, farmers are especially careful in purchasing inputs. Some sources are reporting lower than average fertilizer and chemical sales, a sign that farmers may again skimp on one or the other, which will undoubtedly affect yields. Last year, farmers lost 4.6 million tons to rust, the equivalent of \$1.2 billion worth of soybeans and a total of \$2.2 billion including farmer costs. This year, the cost of fungicide is estimated at \$60–\$70 per hectare. It is possible that farmers will choose to gamble and not buy fungicide (or less than is recommended) rather than using less fertilizer.

One influencing factor is that chemicals, unlike fertilizer and other inputs, cannot be returned if unused. Nonetheless, in the center-west, where beans were planted less than a month before the release of this report, rust was already being identified in irrigated soybean areas, and farmers are reportedly ready to apply fungicide. The center-west was the hardest-hit area with the rust epidemic last year. In the state of São Paulo, rather than rotating with a different crop, many producers planted second-crop soybeans, which has reportedly allowed the rust to survive. On November 18, Embrapa, the Brazilian ag research service, announced that Asian rust was found in the state of Maranhão, in the southern municipality of Balsas. Maranhão is the fifth state where Asian rust has been officially detected this crop season. Other states include Mato Grosso, Paraná, Rio Grande do Sul, and Goias.

## Exports

Decreasing internal and external prices, lower crushing margins, and weak international demand caused Brazilian

## U.S. Cottonseed Statistics

**Table 1. Cottonseed: U.S. Supply and Disappearance**

Year beg. Aug. 1	Supply			Crush	Disappearance			Ending Stocks	
	Beginning Stocks	Production	Imports		Exports	Other	Total		
	<i>1,000 short tons</i>								
2002–03	400	6,184	104	6,687	2,495	370	3,476	6,341	347
2003–04 <sup>1</sup>	347	6,665	2	7,013	2,639	355	3,598	6,592	421
2004–05 <sup>2</sup>	421	8,245	75	8,741	3,000	379	4,801	8,180	561

<sup>1</sup> Estimated. <sup>2</sup> Forecast.

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture; and Census Bureau, U.S. Dept. of Commerce.

**Table 2. Cottonseed Meal: U.S. Supply and Disappearance**

Year beg. Oct. 1	Supply				Domestic	Disappearance		Ending Stocks
	Beginning Stocks	Imports	Production	Total		Exports	Total	
	<i>1,000 short tons</i>							
2002–03	62	0	1,114	1,176	1,092	51	1,143	33
2003–04 <sup>1</sup>	33	0	1,244	1,277	1,131	70	1,201	77
2004–05 <sup>2</sup>	77	0	1,350	1,427	1,292	75	1,367	60

<sup>1</sup> Estimated. <sup>2</sup> Forecast.

Source: Census Bureau, U.S. Dept. of Commerce.

**Table 3. Cottonseed Oil: U.S. Supply and Disappearance**

Year beg. Oct. 1	Supply				Domestic	Disappearance		Ending Stocks
	Beginning Stocks	Imports	Production	Total		Exports	Total	
	<i>Million pounds</i>							
2002–03	40	21	725	786	639	111	750	36
2003–04 <sup>1</sup>	36	0	874	910	690	110	801	109
2004–05 <sup>2</sup>	109	0	945	1,055	850	125	975	80

<sup>1</sup> Estimated. <sup>2</sup> Forecast.

Source: Census Bureau, U.S. Dept. of Commerce.

exports to fall in October. Total Brazilian exports of the soy complex totaled \$570 million, down 36% from October of 2003. Export growth began to slow in April, when numerous shipments of soybeans were rejected by China due to fungicide contamination, which Brazilian producers argued was an attempt to get out of the contracts. At that point, farmers began to lose confidence that they would be paid for their commodity sent to China, and soon after, prices that were at \$10 a bushel dropped to \$5. Exports to China, Brazil's largest market, have dropped 21% to \$5.9 billion in the past 12 months. The fall in exports to China is an about-face from previous years, where over the period from 1999–2003 the value of Brazil's exports to China jumped from 620 thousand tons to 6.1 million tons.

Shipping problems in Brazil continue to escalate. According to industry sources, there are fewer and fewer ships available, trucking is more expensive, and there are new regulations in the port of Paranaguá. Charges for demurrage have increased from \$10,000 to \$40,000 a day. Overtime has been temporarily suspended for port workers and port premiums are in jeopardy for 2005.

Appreciation of the Brazilian currency (currently at R\$2.80 to the dollar) is another concern for 2004–05 exports. Some industry sources question if Brazilian soy producers can maintain profit margins with the combination of current international soy prices and the current exchange rate. Producers claim they need at last R\$3.0 to the U.S. dollar to remain competitive at current prices.

### Crushing

Although crushing levels are at below-average levels, the recent temporary closings of crushing facilities, including those owned by Cargill, ADM, and some producer-

owned cooperatives, are considered normal at this time of year because of maintenance schedules. Also, crushing margins are down as a result of low prices. The majority of farmers stopped selling beans as prices dropped, and at least 15 percent of the harvest, equaling about 7 million tons, is now left in the hands of the producers. With a saturated international market due to the large U.S. and Argentine harvests, and another record harvest expected in Brazil, producers must also shoulder storage expenses for their unsold product. With planting in full swing, they also must sell to generate cash for planting expenses and inputs. Due to the sheer volume on the market, the crush in Brazil for crop year 2004–05 is expected to be up 5–10 percent.

*USDA Foreign Agricultural Service GAIN (Global Agriculture Information Network) Report of 11/17/2004. Approved by William W. Westman, U.S. Embassy, and prepared by Elizabeth Mello.*

### China Investing in South America

In excellent news for the struggling Argentina economy, China has agreed to investments in the South American country that could amount to as much as \$20 billion. The announcement of the trade and investment deals came on the first day of a November visit to Argentina by China's President Hu Jintao. The visit was part of Hu's two-week Latin America tour to expand China's economic presence in the region and comes after his state visit to Brazil. Hu had said that China planned to invest \$100 billion in Latin America over the next decade.

The announcement of the multi-billion dollar agreement with Argentina came after Hu was received by Argentina's President Nestor Kirchner in the presidential palace in Buenos Aires on the first day of his two-day visit.

#### Membership Application

### International Oil Mill Superintendents Association

Date: \_\_\_\_\_ Dues: \_\_\_\_\_ \$70 (U.S.) \_\_\_\_\_ \$75 (Outside the U.S.)

I hereby make application for membership to the International Oil Mill Superintendents Association. If accepted I will abide by the Constitution and Bylaws and will promote the interests of the Association. My annual dues are enclosed or will be mailed shortly. I understand that membership includes a subscription to the *Oil Mill Gazetteer*.

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Company \_\_\_\_\_ Postion \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Postal Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_ Postal Code \_\_\_\_\_

Mail this form and payment to: Linda Paukert, IOMSA, 1835 Edinburgh St., Prattville, AL 36066

After a private meeting that lasted about an hour, the two presidents emerged to sign a number of accords that covered investment in Argentine railways, and also agreements on education, tourism, and trade.

China also agreed on creating a working group with Argentina and Brazil aimed at avoiding the suspension of the \$5 billion soybean trade and at avoiding the subject to become a dispute at the World Trade Organization (WTO). The farmers from Brazil and Argentina may request the WTO to investigate the Chinese rules that impede the entrance of imported crude soybean oil. China has reduced by half the maximum quantity of solvent residues allowed in the imported edible oil demanding a purity level that the South American producers are not able to meet. The imports of soybean by China, almost all coming from Brazil and Argentina, fell by 16% in September, to 242,984 metric tons.

## Germany Oilseeds and Products: First Projection of Winter Rapeseed Area for Harvest in 2005

The German association for the promotion of protein plants and oilseeds (UFOP) has released a first projection of the area planted with winter rapeseed for harvest in 2005. According to their figures, total winter rapeseed area has only marginally increased by 0.41 percent and amounts to 1.27 million hectares (3.14 million acres).

Given the high demand for rapeseed oil from the biodiesel and food industry, a larger increase had been expected. This did not materialize due to a late wheat harvest in 2004. Rapeseed is often planted after wheat in the crop rotation. If the wheat is harvested late, the cropland cannot be prepared in time for timely rapeseed plantings on the same land or labor capacity is too small to cope with the wheat harvest and rapeseed plantings on other fields at the same time.

Winter rapeseed planted on set-aside land (or colloquially called "non-food area") increased by 49 percent, while rapeseed planted on other land (colloquially called "food area") decreased by 9.3 percent. This change is due to increased obligatory set-aside rates. For 2004 the set-aside rate was fixed at 5 percent. With the implementation of the CAP reform in Germany set-aside rules were modified and set-aside rates are now fixed on a regional basis. The average set-aside rate for 2005 amounts to 8.4 percent.

The colloquial distinction between "food" and "non-food" area is somewhat misleading. While all crops on non-food areas can only be used for non-food purposes, the production from "food" area is used for both, food and non-food purposes.

*USDA Foreign Agricultural Service GAIN (Global Agriculture Information Network) Report of 11/18/2004. Approved by Karina Ramos, U.S. Embassy, Berlin, and prepared by Sabine M. Lieberz.*

## Malaysia Palm Oil Production on the Increase

### Production

The Malaysian Palm Oil Board (MPOB) reported that total crude palm oil (CPO) production rose by 12.6 per-

cent to 1.5 million metric tons (MMT) in September 2004. Output in the Peninsula increased by 9.3 percent while East Malaysia's production rose 16.7 percent. Compared to September 2003, output during September 2004 was 14.7 percent higher. CPO production is expected to enter the seasonal downtrend period until the month of February. Post forecast output to slip to 3.5 MMT during the October–December quarter, bringing the total output for 2004 to 13.6 MMT.

### Price

Higher-than-expected carry-in stocks resulted in a decline in the local palm oil prices during the month of October. The monthly average CPO price dropped from U.S. \$407/MT in September to U.S. \$386/MT in October 2004. For comparison, the average CPO price for October 2003 was U.S. \$438/MT. The refined/bleached/deodorized (RBD) Palm Oil FOB average price also declined from U.S. \$432/MT in September to U.S. \$411/MT in October.

### Stocks

A big increase in CPO output more than offset a modest expansion in palm oil exports, resulting in a sharp increase in carry-out stocks to 1.3 MMT at the end of September. In anticipation of a lower CPO production in the October–December quarter, Post expects the carry-over stocks to decrease to 1.2 MMT by the end of December.

### Trade

Preliminary official PO exports rose from 1.2 MMT in August to 1.3 MMT in September.

### Annual Situation

Changes in the production, supply, and distribution table for palm oil reflect the latest release of official data for 2003–04. With the better prospect of yield per matured hectare, Post now forecast CPO at 14.2 MMT in 2004–05. With higher CPO output and imports, PO exports could reach 13.2 MMT in 2004–05.

	Revised 2002–03	Prelim 2003–04	Forecast 2004–05
	(1,000 metric tons)		
Beginning Stocks	1,149	975	1,332
Production	13,181	13,416	14,200
Imports	341	745	800
Total Supply	14,671	15,136	16,332
Exports	12,077	12,200	13,200
Domestic Use	1,619	1,604	1,932
Ending Stock	975	1,332	1,200

*USDA Foreign Agricultural Service GAIN (Global Agriculture Information Network) Report of 10/29/2004. Approved by Jonathan Gressel, U.S. Embassy, Kuala Lumpur, and Prepared by Raymond Hoh. ■*

## Memoirs of Hunt Moore: Part II

# Solvent Extraction—A Piece of Cake

Hunt Moore with Frank Boling

### Piece of Cake

Referring back to Part I, when I was working for a cottonseed lab in Memphis, one of my duties was to go to the area hydraulic oil mills and sample slabs of cottonseed cake produced by hydraulic presses. Each slab was about 18 inches by 36 inches and about 2 inches thick. These are loaded into a boxcar with only about 3 feet of clearance between the cake and the roof of the boxcar. There was an exact procedure followed on how to sample the cake. A small square of material was taken from several slabs located in various parts of the boxcar. This was a very uncomfortable job crawling around in a cramped position and the cake was very hard on the knees as it was embossed with the rough surface from the course weave of the press cloth.

When I got back to the lab with the samples, the procedure was to break up these pieces of cake that had been laboriously obtained. These were ground, mixed, and the sample obtained was used to run a representative oil and protein analysis. I had to use a different solvent in the residual oil test and when I asked the chief chemist why we used this other solvent, he told me that the cake was going to Germany and that the oil would be extracted from the cake by a direct solvent extraction method. This would remove all of the oil except about 0.5%. It was about this time I started thinking of how to develop a solvent extraction system that would increase oil yields and also eliminate the need to crawl around in a boxcar full of press cake.

### The Senior Thesis

Several years later, when it came time in my last year at the University of Tennessee to select a subject for my senior thesis, I chose as a title, “The effect of pressure cooking on the solvent hold-up in oleaginous material.” The only source of information on this subject I could find was a piece of literature from a German company written in German. Fortunately, one of my professors was fluent in that language and with his help, I learned how oil was being extracted from the cottonseed cake on a commercial basis in Germany.

The literature had some technical information that I could use and as part of the exercise, I put together some equipment to conduct tests in the lab. John Leahy, the director of the oilseed project at Berry Hall (mentioned in part one), was given a copy of my paper because the test work had been conducted in the lab using their equipment. For some reason, Mr. Leahy passed along a copy of my paper to the *Oil Mill Gazetteer* magazine, which was subsequently printed in the next issue.

Some time later, without any warning, I received a call from a Mr. C.W. Bilbe of Allis-Chalmers in Milwaukee, Wisconsin. Mr. Bilbe said that he had read this *Gazetteer* article and wanted to come to Knoxville to discuss the tests with me. This was arranged and we had a very interesting meeting.

Allis-Chalmers had hired an Italian engineer to design a solvent plant for spent distillers grain two years before and this

plant did not perform as expected. Mr. Bilbe wanted me to come to Milwaukee for a job interview with his boss, Mr. Stanley Bimpson. I agreed to come up as soon as I finished my finals.

### Going to Milwaukee

I took a train to Milwaukee and went to Allis-Chalmers for my interview and was hired more or less “on-the-spot.” I was asked to report to work as soon as possible.

I went back to Knoxville to collect my belongings and get my affairs in order. Returning to Milwaukee, I went to the YMCA and got a room. Phoning Mr. Bilbe, I asked how to get to Allis-Chalmers and he told me to wait until Monday to report for work. This was like getting a vacation, as I had nothing to do Friday, Saturday, and Sunday. As luck would have it, there was a fair going on at the Lakeshore Park. I remember that at the fair there were exhibits of the wildlife and the Indian tribes that lived in Wisconsin and a lot of other things about the state. Lake Michigan was a beautiful area and I fell in love with Milwaukee that weekend. I went to a German restaurant and had my first pig shanks and sauerkraut. I developed an instant liking for German food.

### My First Big Job

Monday was a big day for me as I was going to work as an engineer at a salary of \$175.00 a month for a 40-hour week with overtime pay and a one-week paid vacation. After my long school experience, I felt like it had all been worthwhile.

I got up early and took a streetcar to West Allis and found the engine and condenser department. I was given my orientation and learned the rules for working for a large corporation. Our department was one big room with double desks arranged in rows without any partitions. The chief engineer had a glassed-in office so that he could see everything going on in the office. I was assigned a desk, which I shared with a mechanical engineer named Bob Brewer, a recent graduate of the University of Wisconsin. An engineer named Jim Touton who worked under Charlie Bilbe headed my work group.

Our project goal was to design a pilot plant for direct extraction of high oil content oilseed, such as cottonseed and flaxseed, using some of the data I had developed at UT.

One of the first obstacles came when I was told that, as an engineer, I could not use any instrument for drawing because union draftsmen did all drawings. I had to do my graphics free-handed on cross-section paper. After the supervising engineer had approved sketches, they were then turned over to the chief of the drafting department. The draftsman then drew the plans with ink on linen cloth. It was the policy to make an individual drawing of every part including every bolt and nut in detail. That was my first experience with labor unions but not my last one.

## December 7, 1941

I set up a place in the paint area that was safe to conduct tests using flammable solvents and began working on the design of a pilot plant. The events of December 7, 1941 at Pearl Harbor changed a great number of things in this country including the interruption of my research.

As the whole country quickly converted over to a wartime economy, I was first assigned the task of installation of condensers in the Victory Ships being built in the shipyards in Wilmington, North Carolina. I spent several months in the shipyards; I also worked on the condensers for the synthetic-rubber industry. My last defense job was with large fans for the Manhattan Project. We did not know what the Manhattan Project was producing until the first atomic bomb was dropped. This was the best-kept secret ever maintained in the States.



Hunt Moore took on a “partner” in 1944, and the former Patricia Gerrie has been his wife and partner ever since.

## Taking on a Partner

Not all my time in Milwaukee was spent working, and after dating for some time, Patricia Gerrie and I were married on May 27, 1944, in Ripon, Wisconsin, by my father, Reverend Yates Moore. After our honeymoon in Minnesota, Patricia moved into my apartment in the Abbot Crest Hotel.

One day Patricia called me at Allis-Chalmers to tell me that I had better come home as some very important news was about to be announced. That was VJ day and the end of WWII.

The shortage of vegetable oil had become chronic and as a result, Allis-Chalmers was asked to build two solvent extraction plants for soybeans. I was assigned to the design and installation group for these two plants. One was in Des Moines and the other in Belmond, Iowa.

When the plants were ready to start up I went to Des Moines and worked 12-hour shifts along with Fritz Bloomberg, who later was employed by Riceland Foods. Many problems were experienced and overcome one by one. One night a storage tank overflowed 3,000 gallons of hexane into the Des Moines River. Early the next morning a father and son were fishing and when the father sat back and lit his pipe and threw his match in the water, the whole river caught on fire! Obviously, we had to make changes so this would not happen again. After the plant was running smoothly, I was called back to Milwaukee.

There, we were able complete the cottonseed pilot plant and ship it to Delta Products Co. in Wilson, Arkansas, for further testing. As a result of these tests, this oil mill installed the first pressure cooker in the cottonseed industry based on the work that was first done at the University of Tennessee. Allis-Chalmers later installed the first solvent extraction plant for direct extraction of cottonseed at this plant.

*Next month, Memoirs of Hunt Moore: Part III, “How I Started My Own Company.”* ■