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## Abstract

Production in France is highly diversified, although wheat is the dominant crop. The total cost of producing wheat is higher per acre but lower per bushel than in South Central North Dakota. Efficiencies are achieved through alliances, and in some cases through associations. They also have a process for consolidating land into efficient operating units. Expansion is tempered by land and subsidy policies. They generally sell crops for the elevator seasonal average price. An international farm show is featured at field days. Their production practices and policies need to be assessed by U.S. producers seeking to compete in a global economy.

## What French Farmers are Doing That May be of Interest to U.S. Farmers

by George Flaskerud and Jean-Paul Nicoletti

### Introduction

French and U.S. producers share similar challenges. Agricultural populations in both France and the U.S. declined between 1980 and 2000 (Food and Agricultural Organization). The French agricultural population fell by 2.46 million, a decrease of 55 percent, while in the U.S. the agricultural population fell by 2.23 million or 26 percent. To survive, producers in both areas are seeking relief through government programs, larger farms, diversification, alliances, and niche market development. Both may benefit from a sharing of agricultural information.

The purpose of this paper is to highlight features of French agriculture that may be of interest to U.S. producers. The highlights are based on a study-visit in France at a Technical Institute for Cereals and Forages (ITCF) during May-June, 2001.

The ITCF is in charge of applied research and development for cereal, maize, pulses, potatoes, and forages (Cereals of France). It was formed in 1959 as a collective effort by French farmer organizations and is controlled by a Board of Directors comprised of farmers. They work closely with public and private research sectors to meet the technical and economic concerns of producers. They also work closely with local advisors to extend information to producers. Local advisors include Chambers of Agriculture (located in departments), cooperatives, and merchants. Departments are comparable to U.S. counties. A number of farms were visited in France with the assistance of ITCF faculty.



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Metric measurements and French currency have been converted to U.S. equivalents. The U.S. dollar in January 2001 was approximately equal to 7.05 French Francs (1.07 Euro). A quintal is equal to 100 kilograms or a tenth of a metric ton. A metric ton is 2204.6 pounds. A hectare equals 2.471 acres. A kilometer equals .621 miles.

## Production

Many of the same crops are produced in the U.S. and France. However, French agriculture is more land intense. Wheat, barley, and field peas are produced primarily in the Paris Basin. Sugarbeets and potatoes are produced largely in the northern

Table 1: Characteristics of select French farms.

	Farm Feature			
	Typical	Non-farm Enterprise	Specialty Crops	Off-farm Employment
Location	60 miles northeast of Paris. One of four farms in a village.	Near the typical farm, 60 miles northeast of Paris.	75 miles east of Paris.	135 miles south of Paris.
Operator	Less than 35 years old with two years of technical school.	Less than 35 years old with specialized education in Ag. Also boarded horses and dogs.	Less than 35 years old with education in Ag. at ITCF. Partnership with parents and sister.	Less than 40 years old. Worked 40 percent of the time as economic advisor for farm group.
Land	Farmed 371 acres which was rented. Only the farm site was owned. Fields averaged 15 acres. Land valued at \$1,722/acre.	Farmed 1,136 acres of which 212 was owned, 430 was rented and 494 was custom farmed. Fields averaged 49 acres. Land valued at \$3,444/acre.	Farmed 1,186 acres of which 1,038 were owned and 148 were custom farmed for a cash payment and share of the crop. Fields averaged 62 acres.	Farmed 914 acres which was rented from his father and two uncles. Land valued at \$1,435/acre.
Employees	None	One for farming and two for the boarding operation.	Three	Family.
Equipment	Sugarbeets, linseed and corn were custom harvested.	Crops were custom harvested. Trucking was hired.	Jointly owned potato equipment, sprayer and sugarbeet harvester.	Owned two large combines jointly with three other farmers.
Production	Wheat 161 ac Barley (malt) 37 ac Corn (grain) 37 ac Field pea 37 ac Sugarbeets 54 ac Linseed (fiber) 15 ac Setaside 30 ac	Wheat 519 ac Barley (malt) 99 ac Oats 12 ac Corn (grain) 99 ac Field pea 99 ac Sugarbeets 148 ac Rapeseed 99 ac Linseed (seed) 25 ac Setaside 37 ac	Wheat 247 ac Barley (wtr) 198 ac Barley (spg) 124 ac Field pea 62 ac Sugarbeets 173 ac Potatoes 173 ac Alfalfa 124 ac Asparagus 10 ac Setaside 77 ac	Wheat Rapeseed Sunflowers
Marketing	No storage, crops were hauled directly to a nearby co-op elevator and sold for the prevailing day price.	30 percent of the wheat was stored on-farm. Contracted for harvest delivery and premium quality and sold some for best price and some for average co-op price.	Stored cereals, field pea and potatoes (control'd environ't). Sugarbeets, potatoes and seed wheat were contracted. Cereals and field pea were sold to a co-op.	Many bins to segregate for quality. Sold 20-50 percent directly to a mill for the best day price. Rape was sold on the futures market (Matif).

part of the Basin. Corn is produced in the Southwest region of France. Vegetables and fruits are produced throughout France. Livestock production thrives in areas less suitable for crops which are generally in the Northwest, Center, and Southeast regions of France.

Features of four farms visited are highlighted in Table 1.

Operators of these farms were younger and better educated than most in France. According to ITCF, about 53 percent of the farmers in 2000 were under age 50 and about 14 percent of all farmers had specialized education. Farm sites were often part of a village as indicated in Table 1 for the typical farm. Farms and fields were generally small, but many were of substantial size.

Production was highly diversified. It was common to see six or more crops produced on a farm, although wheat was the dominant crop. The production of wheat was managed intensely. Fields were sprayed ten to eleven times: four times with nitrogen, two with herbicides, two-three with fungicides (one of those included an insecticide), and two with a growth inhibitor. Such intense management was economically viable due to a favorable climate.

Management practices were influenced by government programs as in the U.S. For example, rape could be planted on setaside although it had to be sold for industrial use which received a lower price than rape for food and feed. For one of

*Table 2: Total cost of wheat production in 2001 for example farms in south central North Dakota and France<sup>a</sup>*

	South Central North Dakota <sup>b</sup>	France <sup>c</sup>
Yield in Bushels per Acre <sup>d</sup>	35.71	126.39
Total Cost Per Bushel	4.24	3.46
Total Cost Per Acre	151.49	437.23

<sup>a</sup> Total cost includes direct and indirect costs including family labor and return to equity.

<sup>b</sup> Source: North Dakota Farm Business Management Program.

<sup>c</sup> Source: Nicoletti.

<sup>d</sup> Based on average yields during 2000 and 2001.

the farms visited, the yield on the setaside had to be at least 90 percent of the average yield on the balance of the field, according to department policy, to prevent the rape from being sold for the higher valued edible use. The percentage varied by department. The setaside could also be planted to a cover crop rather than rape.

The total cost per acre of producing wheat was considerably higher in France than in South Central North Dakota (Table 2). Per bushel, however, their cost was sharply lower because of much higher yields. They produced 3.5 times as much per acre as in South Central North Dakota. Thus, their total cost per acre of \$437.23 was \$3.46 per bushel versus a total cost per acre of \$151.49 in South Central North Dakota or \$4.24 per bushel.

In the future, producers generally expected to see more emphasis on quality, identity preservation, and diversification. Farmers were very concerned about the future of subsidies. They appeared to be sufficient for most farms to survive but not great enough to entice young people to stay on the farm unless they were already highly motivated to farm for other reasons. They generally expected that the subsidies would continue but at reduced levels.

### Alliances

Joint ownership of a late-model, large combine, as well as other seldom used but expensive machinery was very common. Ownership by two to three farmers was typical. Only one farmer was observed to own a combine independently. According to ITCF, the attitude about machinery ownership has changed considerably in the last ten years.

One of the farmers visited owned two large combines in partnership with three other farmers. Each machine handled the annual equivalent of 128,602-146,973 bushels of wheat. This would be very efficient use of the combines by North Dakota standards.

Some farmers own machinery as a cooperative. A co-op that owns machinery which is shared by its members is called a CUMA (Cooperative for Shared Use of Machinery). A CUMA is able to get favorable terms on machinery loans. There are

approximately 13,500 CUMA in France according to ITCF. Some are small and share only one or two pieces of equipment between three or four farmers while others are very large.

An association that purchases resources and sells production for its members is called a GIE (Group Interested in Economics). There are many GIE in France according to ITCF.

CUMA and GIE associations were started by a group of farmers near Marbeville in 1982. They currently consist of five local family members plus two others from the next village. Two additional members belonged at one time. Members made decisions jointly. The farm was managed by one of the original members. Marbeville is about 155 miles east of Paris.

Members owned 198 acres out of the 2,348 acres operated by the farm. The GIE rented the land from the members and others, purchased inputs and sold the production. The machinery was owned by the CUMA. When farmers leave the CUMA, they are reimbursed for their share of machinery investment. Members generally tilled their own land, and then worked together performing tasks for which they were best suited. They received their own subsidies. As a result of their joint efforts, their machinery expenses were about 30 percent below the average for the department.

### Consolidation and Expansion

Fields on many farms were larger than normal because they had been recently resized. The resizing of fields was made possible by "remembrement," which is a process where land is exchanged periodically but not for money. The purpose of the exchange is to give farmers the opportunity to consolidate their owned and rented land into one contiguous unit. It occurs as needed.

The process is initiated by a meeting of concerned farm owners in an area. If a majority at the meeting adopt remembrement, then every farmer in the area must comply with the process. A committee classifies the land and rates of exchange are established to accommodate quality differences. Subsequently, a second committee, which includes government representatives, is established to resolve differences and control the process.

Remembrement can cost \$29-\$86/acre to establish new boundaries and build new roads. Some of that cost is subsidized by the government.

Land acquisition (purchase or rent) is subject to local control. An agreement between two parties is not sufficient; the transaction must also be approved by local authorities. In one department, the maximum area that could be owned was 247 acres per man and 124 acres per woman. Leases were generally for nine or eighteen years.

Land value was determined by the market, while rent was a function of productivity. Land on the farms in Table 1 varied in value from \$1,435 to \$3,444 per acre. On one of the farms visited, rent in the area was \$20/unit of land productivity. So for an average land productivity on this farm of 3.2 units/acre, the rent was  $20 \times 3.2 = \$64/\text{acre}$ . Productivity on the farm varied from three to 3.4 units. The productivity units and value/unit were determined by farmers as a group within the area. The owners and renters decided by majority vote and the results were binding in the area.

Managers of the two largest farms in Table 1 indicated that they were not interested in expanding because of the lower subsidy paid to larger farms. They would be interested in buying land only if the price was favorable from an investment perspective.

Subsidy payments are limited by "modulation," which is a function of such factors as the department, crops, income, and number of employees, according to ITCF. First, an income is derived for a farmer according to acres produced of different crops and average yields for the area. If the derived income exceeds a limit, a reduction rate is calculated and applied to the farmer's subsidy payment. The greater the number of employees, the lower the reduction rate. Payment reductions are used to fund environmental projects. Modulation is a policy of France, but not of the European Union, so its future is uncertain, according to ITCF.

### Marketing

An elevator is located within twelve miles of a farm, on average, according to ITCF. Many elevators are still locally

owned but feel economic pressure to merge with a larger elevator. Branches of a large elevator appeared to be essentially collection points with few if any services. Cooperatives handle 60-70 percent of production and merchants handle the balance.

Grain is hauled to the local elevator primarily by wagons. Many of the wagons observed were about equal in capacity to that of the dual-tandem trucks common in North Dakota. The location of a nearby delivery point facilitated the use of tractors and wagons.

Selling for the elevator seasonal average price is the most common way for farmers to sell their crops according to ITCF. Producers usually collect 90 percent of the price at harvest and the balance in March or June.

Selling for the day price at harvest is the second most common sales method. Farmers collect the whole price at delivery. About two-thirds of the wheat crop is delivered at harvest and the balance is stored from July until January. Rape is usually sold at harvest for the day price or average price.

Contracts are offered by elevators. They generally specify the price, quantity, variety, protein, premium, discounts and Hagberg (milling quality test) according to ITCF.

On-farm storage was generally limited on the farms visited, although farmers receive an incentive to store grain. According to ITCF, the government payment for storage of the 2001 wheat crop was twelve cents/bushel for eight months. The government storage rate is determined annually by the European Union.

Marketing received considerable attention by many of the producers visited. One producer's plan for selling wheat was as follows: He planned to contract 20 percent for harvest delivery, store 30 percent on-farm of the best quality for sale on a premium contract, store 30 percent at the elevator to be sold periodically on price strength, and sell 20 percent at the average co-op price. The plan was designed to minimize risk.

## International Farm Show

An international farm show is a highlight of ITCF field days which are held every other year. Each of several institutes in France formerly held their own every year. The number of field days has declined in accordance with the decline in farm numbers.

The 2001 international farm show consisted of tents in which each tent was occupied by several representatives from a country. The countries included the U.S., Canada, Argentina, Australia, and Russia, as well as one major importer of French grain, a miller from Morocco.

Poster displays in each tent were standardized in French, and interpreters were available. Farmers toured the tents asking questions about the posters and other issues. Handouts about the posters were available for visitors.

For the U.S., one poster provided general statistics about the U.S. and France. A second poster compared the U.S. and France in the production, yield, and exports of wheat, corn, and soybeans.

Several posters described a typical farm in North Dakota. One described acres farmed, labor requirements, crops produced, and yields. Another identified the machinery inventory, storage, and a schedule of field operations. The size of machinery and tillage time per acre were of particular interest to producers. Another explained the economics of wheat production.

A sixth poster illustrated the classes, protein, and grades of wheat. A diagram was presented in a seventh poster showing how the wheat moves from the farm to the local elevator, terminal elevator, and exporter. A final poster described the advantages and limitations of U.S. wheat at the producer and industry levels, and expected changes in the future.

A comparison of country information (Nicoletti) indicated that the cost of producing wheat per unit of production was the lowest in Russia for the farm presented. The next lowest was Australia followed by Argentina, France, Canada, and the U.S. A note of caution about the comparisons is that the production

costs and yields were from example farms for each country and may not be representative.

### Summary/Conclusions

French farmers are doing a number of things that may be useful to U.S. farmers, according to a study-visit of France during May-June 2001. To manage production risk, many farmers could diversify production as in France. However, the intense management of wheat production which is economically viable in France due to a favorable climate is probably not practical in the U.S.

U.S. producers could emulate the alliances French farmers have formed to acquire machinery, purchase resources, and sell production. Joint ownership of seldom used but expensive machinery is very common in France. Some also own machinery as a cooperative and some purchase resources and sell production as a group. Such alliances could improve U.S. producer competitiveness. The total cost of producing wheat is higher per acre but lower per bushel in France than in South Central North Dakota.

Land and subsidy policies have tempered expansion in France and may have enhanced profitability. U.S. farmers might consider the implications of striving for similar policies. In France, land acquisition (purchase or rent) is subject to local control, fields can be consolidated and resized through farmer-to-farmer exchanges (remembrement), land value is determined by the market while rent is a function of productivity, and subsidy payments are limited by modulation.

French producers have limited access to futures markets but manage their marketing risks through other means which could be incorporated into U.S. producer marketing plans. They commonly sell for the elevator seasonal average price and they use limited on-farm storage for their best quality.

An international farm show is a highlight of ITCF field days which U.S. producers could request for an Experiment Station event. Major export competitors and importers are invited to host a tent. They share production methods and costs, qualities produced, and marketing channels. The international farm show

would help producers better understand the global situation in which they operate.

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