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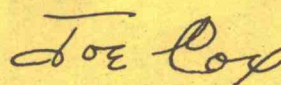
OREGON'S AGRICULTURAL SITUATION AND OUTLOOK



Extension Service, Oregon State University, Corvallis, Joseph R. Cox, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U. S. Department of Agriculture, and Oregon counties.

Foreword

People concerned with the immediate future of Oregon's agricultural industry continually need situation and outlook information on which to base decisions. The unexpected developments in the past two years emphasize the importance of having this information available and presented in proper perspective. These Situation and Outlook leaflets were prepared through the combined efforts of personnel in the various departments of the School of Agriculture at Oregon State University. They represent the latest factual information available and the interpretation of these facts as 1974 approaches.



*Director,
Oregon State University Extension Service*

Task Force Members

Responsibility for this effort was delegated to a task force in the University's School of Agriculture. Members included:

Roland H. Groder, Chairman
Extension Fruit and Vegetable
Marketing Specialist

A. Gene Nelson
Extension Farm Management
Specialist

Stephen C. Marks
Extension Agricultural Economist

Timothy M. Hammonds
Agricultural Economist

Grant E. Blanch
Agricultural Economist

H. P. "Hokie" Adams
Extension Dairy Specialist

Charles M. Fischer
Extension Poultry Specialist

Dean W. Frischknecht
Extension Animal Science Specialist

Hugh E. Gardner
Extension Soil Science Specialist

Ralph Garren
Extension Small Fruit Specialist

Norman Goetze
Extension Agronomist

John H. Landers
Extension Animal Science Specialist

N. S. "Bill" Mansour
Extension Vegetable Crops Specialist

Curtis D. Mumford
Agricultural Economist

Robert L. Stebbins
Extension Tree Fruit Specialist

Lester R. Vough
Extension Agronomist

Jean B. Wyckoff
Extension Agricultural Economist

Harold W. Youngberg
Extension Agronomist

Please see General Policy Statement inside back cover of this series.

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OREGON'S AGRICULTURAL
SITUATION AND OUTLOOK

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POTATOES

Potatoes, like so many other agricultural products, are experiencing the full impact of tight supplies, very good demand, and higher price levels when compared to trading of the past few years. A reduced supply situation in 1972 coupled with Phase IV price controls resulted in smaller inventories and an emptying of the pipe lines.

Fresh market prices are being maintained and pressured upward because of the very good demand for processing potatoes. Chippers and freezers, being allowed additional cost pass-throughs, are now busily engaged in purchasing raw product necessary to replenish their depleted stocks and to feed the pipelines.

From a national standpoint we continue to see major changes in potato production taking place within areas and between areas as growers shift from early potatoes to fall potatoes, and from fresh market potatoes to processing potatoes. Although these shifts are taking place, annual total production usually varies more from weather conditions than from actions of man. Although total acreage has been trending downward in recent years, the total yield per acre, except for weather interferences, has been trending upward. Thus, other things being equal, total production might have kept pace with an expanding population and supplies would be in reasonable balance with demand. Instead, total production has followed the downward trend of acreage. Yields have not increased rapidly enough to offset acreage declines. But, with the fall crop potatoes there has been a more pronounced decline in acreage, a greater increase in yield per acre, and an in-

crease in production each year except 1972 and 1973.

The 1973 total potato production has been estimated at 2 percent more than 1972, but 5 percent less than in 1971. This is due primarily to a reduced yield per acre in the fall crop states.

Production shifts seem to be taking place in the states where Russet types are produced. Russet production will be moderately above last year's crop which was not a large one.

In the East, production is down 2 percent, with Maine production sharply reduced. In the Central States a 3.5 percent gain was reported for 1973 and in the Western States production was up 2.8 percent. This was a disappointing production because acreage in the Central States and the West was up 5 percent and processors and fresh market shippers were banking on large supplies.

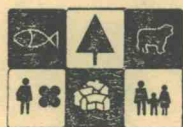
The 1973 production in Idaho was only slightly larger than in 1972, but in Washington the increase in the 1973 crop was slightly over 11 percent. In Oregon the 1973 production hit 15.9 million hundredweight as compared to 14.4 in 1972, or an increase of 10.5 percent. The interesting thing to watch in Oregon is not reflected in the total figures for the state, but instead in the county estimates. These figures show some counties are slipping badly while the Columbia Basin reflects offsetting gains. Yields in the Columbia Basin are much higher than in other areas of the state and this area has been expanding rapidly.

If current trends continue, potato production in the U.S. will settle in three or four major producing areas,

and certainly the Columbia Basin, Oregon and Washington sides of the Columbia River, will be one of the major producing regions of the country. This is due to a combination of factors, such as: 1) new land, 2) availability of water for irrigation, 3) one of the most profitable uses for the land, labor, and capital controlled by operators, 4) potato processing plants being built in the area that encompass the latest technology, 5) experienced growers from other areas moving to the Basin and operating large plantings, and 6) high quality and high yields.

Some of the adverse things to watch for in the future that could change the foregoing would be: higher land use pressures from industrial developments, the energy crisis, water supply, and overplanting potatoes on the same ground. Only a few years ago Jefferson County, Oregon, had the highest yield per acre of any county in the U.S. Today the acreage of potatoes is trending downward due to poor yields when compared to the Columbia Basin. As prices continue above previous years' levels, will the potato grower make sound business decisions and practice orderly marketing or will that gambling spirit break through and an over-expansion cause prices to fall below the cost of production so that we once again see supplies exceed demand? This question can be answered only by members of the potato industry and hopefully will be influenced by the persons controlling the purse strings.

Prepared by Roland H. Groder, Extension Fruit and Vegetable Marketing Specialist, Grant E. Blanch, Agricultural Economist, and Lester R. Vough, Extension Agronomist.



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FRUITS AND VEGETABLES

The fruit and vegetable industry, like so many other segments of agriculture, is experiencing a major market upheaval. There are many long-term and short-term factors that have caused a change from a surplus to a deficit-type of food marketing throughout the world.

Normally members of the U.S. fruit and vegetable industry do not concern themselves with short supply situation in foreign lands because over the years they have learned that when individual fruit and vegetable shortages occurred, an abundance of substitute items were readily available to fill the gap. However, in early 1973 it became apparent that world food markets were really in trouble. The abundant supply of substitute foods did not exist and surplus supplies around the world were used up. This has stimulated the demand for fruits and vegetables. However, the greatest demand has been shown for the cereal grains, soybeans, vegetable proteins and the feed grains. Prices for these crops have caused some fruit and vegetable growers to consider a change in farm production.

Except for those areas that are confined to one cash crop, the opportunity to grow wheat, feed grains and soybeans has suddenly become quite attractive. This has given growers considerable leverage in price and contract negotiations with buyers of fruits and vegetables. Many U.S. farmers, if given a choice, would probably grow a grain crop instead of the traditional fruit or vegetable. However, not all farmers will have this choice, and in the case of tree fruits, caneberries, and nursery items the decision is probably a foregone con-

clusion, as might also be the case with some contracted vegetables.

In the fruit and vegetable field, prices for the inputs required for production have been rising steadily in recent years, but to a degree they have been partially offset by increased efficiency, reduced labor requirements through mechanical harvesting, larger units, and increased production. However, in more recent months the cost inputs in vegetable and fruit production have increased far more than can be absorbed by ordinary efficiency changes. Thus, the market cannot expect farmers to produce at previous price levels. If the world demand for agricultural products continues as it has for the past year, and if the government doesn't place embargos on exports, or turn to the cries of consumers who unjustifiably complain of high food costs, we might experience, in the short-term at least, a period of agricultural prosperity. The dark clouds gathering on the horizon that may overshadow the above situation are such things as the energy crisis, shortages of petroleum, chemicals, fertilizer, packages, and packaging materials, and economic understanding on the part of some fruit and vegetable producers and processors.

Recent Developments and Outlook

Fresh Vegetables

Thus far, 1973 has been a very good year for the nation's fresh market vegetable producers. Production of fresh market vegetables has held up well and grower prices have been record high. Increasing seasonal supplies brought

rapid adjustment to farm prices, but the retail prices tended, as always, to show the usual lag in adjusting. Thus, some consumer resistance to high prices was noted during the summer months. Another factor that affected price levels during the past season was a labor dispute in California which choked off shipments of lettuce, carrots, and other vegetables. As a result, prices were substantially higher than might have been expected. However, before a settlement could be worked out, local supplies moved in to fill the void and prices were put under pressure until the true supply-demand relationship was determined.

Although prices have trended upward during the past year, so have production costs. Therefore, it is doubtful that consumers will see produce prices below current levels. The farmers who remain in this competitive business are mostly well-versed in the laws of economics and realize that they cannot stay in business unless they recoup their production costs plus a nominal amount of profit. Some crops have been plowed down in the past and more will be plowed down in the future unless supplies are balanced with demand and the farmers recapture their costs.

Processed Vegetables

Contrary to earlier expectations, the nation's processed vegetable production in 1973 turned out to be only moderately larger than in 1972. Thus, the resulting

Prepared by Roland H. Groder, Extension Fruit and Vegetable Marketing Specialist, N. S. Bill Mansour, Extension Vegetable Crops Specialist, Robert L. Stebbins, Extension Tree Fruits Specialist, and Ralph Garren, Small Fruits Specialist.



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PROTEIN FEEDS

Soybean Meal

Soybean meal has been and will continue to be an important source of protein in livestock and poultry rations fed by Oregon producers. For the year October 1972 through September 1973, soybean meal (44 percent Decatur) averaged about \$240 per ton, the highest ever. The average, however, is somewhat misleading as meal prices soared from \$109 per ton in October 1972 to \$412 in June 1973.

Looking ahead, soybean meal production will expand, and increases in export demand are anticipated. It appears likely the production increase will more than offset the export increase, resulting in a greater availability of soybean meal for domestic use. Consequently, prices of soybean meal should moderate from the peaks of this past summer. However, they will likely continue at high levels and remain sensitive to market factors.

One of the key factors to watch will be the supply of fish meal, much of which is imported from Peru. The decline in Peru's fish harvest had an important influence on soybean meal prices in 1973. The following is a review of the fish meal situation and outlook. Two rules of thumb are helpful in relating the soybean and fish meal markets: each five tons of fish harvested will produce approximately one ton of meal; and each ton of fish meal is approximately equivalent to the protein fraction of 67 bushels of soybeans.

Fish Meal

The major producer-exporter countries of fish meal are Peru, Norway, South Africa, Chile, Denmark, and Iceland. The U.S. also produces fish meal, but not enough to meet our domestic needs. In 1972, we produced 285.5 thousand tons and imported 391.9 thousand tons. Approximately 50 percent of the imports were from Peru. Worldwide, Peru is the largest single producer and exporter.

During 1972-73, the effects of three major events combined to drastically reduce the world supply of fish meal. First, the pattern of ocean upwelling shifted off the coast of Peru. A water upwelling has historically carried nutrients up from the ocean bottom and has produced a very rich cold water breeding ground in Peru's coastal area. Second, there have been two bad spawning years in the Peruvian waters. The impact would have been to decrease harvest even under good nutrient conditions. The physical reasons for these first two problems are uncertain, and, therefore, their remedy is unpredictable. Third, the fisheries of the world are rapidly approaching their maximum yield under current fishery technology. For many years, the potential harvest from the sea was overestimated. Unrealistically high production estimates resulted from neglecting the impact of harvesting food fish which, in turn, reduces the supply of other fish species higher in the food chain; and from overestimating

the fish population in deep-water areas. In fact, most of the ocean is a biological desert with fish life concentrated in the relatively shallow continental shelf areas. Woods Hole Oceanographic Institute estimates the maximum sustainable yield of fish from the sea to be in the vicinity of 100 million metric tons. Current world harvest runs in the vicinity of 70 million metric tons.

Current Situation

The Peruvian fish meal industry is currently very close to being bankrupt. The industry was able to operate last year only through a massive infusion of outside capital which it was unable to repay. On May 7, 1973, the entire industry was nationalized and shut down. This shutdown will last for at least twelve months. For a country that obtains over 20 percent of its Gross National Product from fish meal exports, and has an unemployment rate already in excess of 20 percent, this is serious indeed. The biomass of harvestable fish off the coast of Peru has fallen from a normal 15 to 20 million metric tons to only 2 to 4 million metric tons. Even under favorable conditions, over two years would be required to rebuild this biomass to former levels.

The decline in exports of fish meal from all countries in 1972-73 was approximately equivalent to the protein

Prepared by Timothy M. Hammonds, Agricultural Economist, and A. Gene Nelson, Extension Farm Management Specialist.



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fraction of 83 million bushels of soybeans. U.S. production of fish meal through 1973 is running approximately one-sixth below the 1972 level. Unfavorable weather conditions hampered fishing activity and heavy spring floods in the Gulf Coast area drove fish into deeper offshore waters. Under the pressure of a short supply, meal prices rose in June to over \$600 per metric ton, compared to approximately \$200 one year ago. This sharp price rise also reflects the short supply of other oilseed and meal products in the face of an increasing world demand for high protein feeds. Another contributing factor has been the upward currency re-evaluation of other major fish meal importing countries such as Japan and the E.E.C., coupled with devaluations by major protein exporters including the U.S., Peru, and Brazil.

Outlook for the Next Two Years

The production crisis in Peru will continue to dominate the fish meal supply situation. Domestic users cannot count on any significant quantity of meal from Peru during late 1973 and early 1974, perhaps even beyond. High European demand coupled with the corresponding high prices in that area are expected to absorb most of the export increases from other world producers. As a result, relatively small quantities will flow into the U.S. over the next twelve months.

Expansable stocks of fish suitable for good-quality meal are limited. Some additional harvest will come off the coast of West Africa, and some from the Indian Ocean. This is a mixed blessing, however. With a shortage of land-based processing facilities in these areas, much

of the increased harvest will come from factory ships. These ships feel no long-run commitment to an area and tend to decimate fisheries. Their action, therefore, may decrease the long-run supply of fish meal.

What is the net result of all this? It appears that the fish meal prices during June-July of 1973 were abnormally high. These levels reflected scrambling by the major exporters to cover forward sale commitments in the face of declining production. This was a short-run condition and has since subsided. However, it also appears that the price levels of the \$200 per ton will not be seen again for quite some time. If the Peruvian fishery begins to recover over the next 18 months, the fish meal price will probably stabilize at \$300 to \$350 per metric ton.

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CEREAL GRAINS

Wheat

Situation

Production of wheat in Oregon appears to be down about 5 percent in 1973 compared to the previous year. However, there have been some drastic shifts of production within the state. More acres and higher yields in the Willamette Valley compared to the Columbia Plateau doubled the Valley's contribution to the state total from 17 percent in 1972 to about 34 percent in 1973.

Nationally the 1973 wheat crop was indicated on August 1 at a record 1,717 million bushels, 11 percent above last year. But carryover into the new crop year was the lowest since 1967, and the total supply for the current season is estimated to be down 10 percent.

With total disappearance for the season likely to exceed production, current national farm prices of wheat are above \$4.00 per bushel. To indicate the tightness of the situation, 80 percent of the 1973 crop was sold by November 1, up from a normal of 50 to 55 percent.

Outlook Consideration

The three general factors affecting the future outlook for wheat are the U.S. domestic consumption of wheat, U.S. production, and the export demand for U.S. wheat. Domestic use is expected to be down slightly due to less wheat feeding. U.S. production levels are subject to weather uncertainty and the outcome of independent decisions made by thousands of producers. Of these three, the one with the most volatility and uncertainty is export demand.

Export Demand

The demand for U.S. exports of wheat results from the interaction of worldwide consumption and production.

It appears very likely that the U.S.S.R.'s role as an importer of wheat will be decreased. Total wheat production in the Soviet Union is up by 19 million tons. It appears that she has completed her purchases in the current crop year. She has even agreed to send two million tons of wheat to India. Whether she does or not will remain to be seen, but the international market has been affected by this offer.

China has made sizeable purchases in both Canada and Australia over periods of from the next three to five years. It appears that these purchases will reduce Canada's export supply for the immediate future and that China's anticipated needs have been met at least for the next year too.

Japan is still a big question. She has not done much forward buying, and it appears she is anticipating a price decrease as we go into the next marketing year. If Japan does make a purchase within the next month, this could have a drastic effect on the market.

The Mid-East is also an uncertain factor in the market. There are millions of people in this area that do not have enough wheat to survive until next harvest year. The very day that the war began, Egypt was offering tenders to buy 100,000 tons of wheat with the possibility of buying another 400,000 to 500,000 metric tons to tide her over until next harvest. This purchase was not made. People are hungry now, but

the Arabs have not publicly admitted that they need wheat.

The world wheat crop now is about in balance with demands through next summer. Looking ahead, world grain production has been and will continue to be greatly affected by weather conditions. The impact on wheat has been particularly significant due to the production disruption of unusual weather world-wide.

An important long-run issue that should not be overlooked is the fact the worldwide human consumption is increasing at a rate of 300 million bushels (2.4 to 3.0 percent) per year. Given present technology and prices, it may become difficult to continue to expand world wheat production at this rate.

U.S. export controls are always a real possibility. If the price of wheat should go above a certain level, there will be moves to put export controls on wheat almost instantaneously. There is a question as to what the critical price level is. However, if it goes much over \$5.00 per bushel the chance that export controls will be imposed becomes very high.

Production Response

The nation-wide fuel and fertilizer shortage is going to be a problem. Some farmers are buying ahead and stockpiling. This, of course, increases production costs. However, if the producer waits and gambles next spring it is quite likely that prices will be even higher,

Prepared by Norman Goetze, Extension Agronomist, and A. Gene Nelson, Extension Farm Management Specialist.



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and delivery will be uncertain. The potential shortages will very likely limit crop production during harvest year 1974. It is not clear that USDA production outlook estimates have taken this into consideration.

In the Pacific Northwest wheat is being substituted for barley. In fact, barley production has dropped so dramatically that it is not being considered as a feed grain. In the Willamette Valley of Oregon, the introduction of new high-yielding varieties and the favorable price outlook make wheat a more attractive crop to growers. The extent to which wheat will be substituted for row crops and other intensive crops in the Valley will depend on the price outlook for these commodities.

The Outlook for the Next Two Years

Wheat farmers are not going all out in planting wheat. The estimate is that wheat acreage will increase. However, many growers are hesitant because of the uncertainty of the future and the fear of a price turn-around. Another factor limiting acreage expansion is fuel and fertilizer shortages.

Prices are expected to remain strong through early 1974 with the possibility of major fluctuations as the market begins to anticipate 1974 crop production. With increased national production and the prospects for a decrease in exports, the price received by growers for the crop harvested in 1974 will most likely decrease but still be well above the Wheat Program target price of \$2.05 per bushel.

The cost of producing wheat will be increased. Machinery, when delivery

can be obtained, will be priced higher. Fuel and fertilizer costs will be up. Increases in land values and rental rates will also be likely.

The Outlook for Three to Five Years from Now

The trends established in the next two years will likely extend for another three years. Increases in production will continue, but at a slower rate resulting primarily from higher yields, rather than acreage expansion. Weather, however, will continue to be the determining factor.

With no drastic disturbances in world wheat production and international trade relations, the world grain market should adjust and stabilize. The result will be U.S. farm wheat prices close to the \$2.05 target price and well above the \$1.37 loan level.

Costs will continue to push upward forcing growers to be aggressive and innovative in increasing their efficiency to maintain an adequate return to their resources.

Feed Grains

Barley production in Oregon has dropped dramatically. The current estimated production is off 30 to 35 percent compared to four years ago. Supplies have been so reduced that barley is not consistently available for feeding. The present price is being maintained at a relatively high level due to the demand for malting.

Over the past two years barley has made up about 70 percent of the total feed grain production in Oregon. Oats amounted to another 25 percent of this

production. There has been no discernable trend in Oregon's oat output; it has been relatively constant over the past four years.

Nationally, extraordinary foreign and domestic demand has drawn record feed grain supplies down to the lowest carry-over levels in many years. As a result, feed grain prices have soared to new highs. These high prices have had a detrimental impact on Oregon's livestock industry.

Much of the grain fed in Oregon is not produced in the state; Oregon feeders must rely on grain imported from other states. Corn and grain sorghum are currently being shipped into Oregon for feeding. Thus, the high prices for these grains nationally has reduced the profitability of livestock, dairy, and poultry enterprises that require large inputs of grain.

The key to feed grain outlook nationally will be the future production of feed grains and world-wide feed grain demand. Although the government has taken action to encourage increased production, it appears likely that the production goals will not be met. The possibility of fuel and fertilizer shortages will play an important role in affecting the final outcome. While export sales of feed grains will continue at high levels, it appears that foreign sales will be off slightly in the coming year. Transportation bottlenecks could effect a greater reduction in exports.

Further increases in feed grain prices appear unlikely except for seasonal fluctuations. This is based on the prospects for increased feed supplies and some reduction in export demand.



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LIVESTOCK

Situation

Production Trends

At present the U.S. beef cattle population is greater than ever. But hog numbers are at a cyclical low point and the sheep flock is the smallest since the beginning of this century.

While beef cattle numbers have been increasing steadily every year since 1958, the dairy herd has been getting smaller. In terms of the numbers cycle, the U.S. cattle herd is approaching the seventh year of expansion. It probably is at or near the cyclical peak. In previous cycles the buildup peaked in the seventh year. Most of the increase in the present cattle population has occurred since 1971, after cattle prices improved enough to encourage herd expansion. The current government survey of U.S. cattle numbers probably will show a big increase to 128 million head as of January 1. Oregon's cattle herd may not show an increase due to the severe drought and poor range conditions the past year.

Rangelands are the backbone of the western cattle industry. They provide the forage resources that support the beef herds which in turn are a source of weaner calves and feeder and stocker cattle. Most beef animals and sheep produced in the western states spend a significant part of their life on rangelands. Nearly half the salable slaughter weight of these meat animals comes from range forage.

While production of beef cattle has been going up, hog farmers generally cut production each of the past three

years, including 1973. The main reason is low hog profits due to the sharp increase in feed costs.

Sheep, lamb, and wool production probably fell to new record lows this year. Predator problems, difficulty in getting adequate labor at reasonable cost, and alternative opportunities combined to thin not only sheep flocks but also the number of sheep producers.

As a consequence of these changes in meat animal production, the U.S. market supply of pork and lamb diminished, while the beef supply increased steadily through 1972.

In 1973, U.S. commercial slaughter of cattle, hogs, and lambs fell significantly below 1972. Production of red meat during the first nine months this year lagged the same period last year by about 10 pounds per capita. The lion's share of the decrease is in beef, followed by pork, lamb, and veal.

Price and Cost Trends

Several unusual developments led to the decline in red meat output. The main influence was the ceiling imposed on retail meat prices in March 1973. At the same time animal feed prices were free to move in accord with changes in supply and demand. They did, moving sharply upward. Prices of feeder livestock were free to go up also.

The freeze on retail meat prices limited prices of slaughter meat animals at the farm and at the packing plant. With production costs exceeding returns in the market place, feedlot managers placed significantly fewer cattle on feed this year and they have been deliv-

ering fewer slaughter cattle to packing plants. Meantime, the cost-price squeeze forced hog farmers to cancel their earlier plans to increase production; so the pork supply is smaller now than it might have been.

With concern for declining meat production, the Cost of Living Council lifted retail price ceilings on pork, lamb, and poultry on July 18. Hog and poultry prices surged to all-time highs, but with sharply rising feed costs and consumer resistance to higher retail meat prices, farm prices of hogs and broilers fell dramatically.

The retail beef price ceiling was kept on until September 10. By this time, heavy cattle had accumulated in feedlots and prices on them are still being discounted. Consumers, having made adjustments in their beef buying and eating habits, were slow to take up the increased beef output. This is partly because beef prices did not come down as much at retail as farm and wholesale prices did.

The 38 to 40 cent per pound price range on Choice slaughter steers at major Corn Belt markets this fall and 42 to 44 cents at Northwest feedlots has been well below the cost of production. Prices of feed grains came down a little from the summer peaks and soybean meal and feeder cattle prices fell sharply. This has eased the squeeze on cattle feeding profits but not enough to wipe out the red ink.

Prepared by Stephen C. Marks, Extension Agricultural Economist, Dean W. Frischnecht, Extension Animal Science Specialist, and John H. Landers, Jr., Extension Animal Science Specialist.



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Recent Developments

Price Controls

Retail price ceilings on beef, pork, lamb, and poultry have been lifted because government planners were convinced that such action aggravated rather than relieved the short meat supply situation.

Feed Supply

Despite the bumper 1973 crops of corn and sorghum grain, the U.S. supply of feedgrains is somewhat smaller than it was a year ago. With a large increase in soybean production, soybean meal is more plentiful. Fish meal remains scarce.

World grain production is considerably improved when compared to 1972, so export demand for U.S. grain should begin to level off.

Quality Controls

The ban on DES implants and oral feeding to cattle and sheep is being continued.

Environmental quality impact regulations for livestock operations remain in force. Now environmentalists are questioning the appropriateness of grazing BLM lands in light of their concerns for the effects on environment.

Imports and Exports

Beef and veal import quotas have been suspended by Presidential proclamation. Mexico has imposed a stricter quota on feeder cattle exports to the United States, and Canada has imposed higher import tariffs on slaughter cattle from the U.S.

Things to Watch for in Planning Ahead

Government Actions

While government planning has a useful place, some actions may not bring expected results. Some may be modified or rescinded, or they may lead to counteractions as in the case of price controls and farm programs.

Foreign trade and policy developments will continue to be important to the livestock industry because of the effect they may have on livestock production and marketing decisions.

Feed Supplies

Lifting of the acreage set-aside requirements from 1974 grain programs may be a temporary respite from restricted grain production. Should grain supplies exceed effective market demand, it is probable that production restrictions would be imposed again. Such changes have a direct effect on meat animal producers in terms of feed prices, production plans, livestock prices, farm income, and living standard.

Oregon cattlemen will want to watch closely for any important changes in BLM and U.S. Forest Service grazing regulations and fees, DEQ regulations, transportation rates, crop production forecasts, and grain and hay stocks reports.

Price Trends

Last but not least, Oregon livestock producers will want to keep tuned to market reports so they may know what is happening to livestock and meat supply and demand and prices.

The Livestock Outlook to 1978

It seems reasonable, at this time, to expect meat animal prices to average higher the next two years than they did the last half of the 1960's, but not as high as in 1973. World war, floods or drought in important world grain and forage-producing areas, or further devaluation of the dollar could alter this outlook, but barring these we probably will see prices nearer the 1972 levels. Energy shortages will exert an adverse influence.

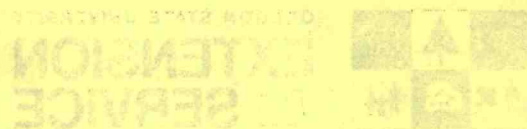
Wool prices are not likely to return to the 1973 late winter and early spring highs, unless unusual world demand should develop.

Beyond the next two years, barring some disaster, it is likely that the supply of feed grains will increase and feed prices will average lower than in 1973. Also, an expansion in the production of hogs, broilers, and turkeys is expected. Cattle numbers probably will start leveling off, however. This will occur when returns from the sale of feeder cattle become unprofitable.

Oregon producers' ability to compete with meat animal raisers closer to abundant feed resources will continue to be limited.

Environmental quality rules and regulations seem likely to add new costs both to established livestock enterprises and new ventures into the meat animal producing business.

Rangelands will likely become more important with increases in population and increasing demand for red meat. Management of rangelands will become more complex as conflicts of use develop. Problems of future development of the productive capacity of rangelands will be related more to environmental conflicts and economics than lack of technology.



1974

OREGON'S AGRICULTURAL SITUATION AND OUTLOOK

Extension Circular 840

January 1974

SEED CROPS

The seed crop industry is an important segment of the economy of the State of Oregon. It generates well in excess of \$30 million annually from production and processing. Though located primarily in the Willamette Valley, it is becoming more important in other areas of the state.

Like other agricultural products, the seed crops have been, and will continue to be, affected by some of the same factors that have caused recent upheavals in the market place. Behavioral responses to general inflation, export demand, uncertainty, speculation, and mass hysteria sent prices of almost all seed crops into orbit. The seed crops are bringing prices to growers four or more times those of recent years. The price of 30-cents-plus per pound for annual ryegrass, and near 60 cents for perennial, is indeed in sharp contrast to the immediate past.

A significant question to growers and the trade, as they make production and marketing decisions for the future, is whether current prices can be sustained. The seed trade is somewhat unique in that even though the ownership of the new crop passes relatively rapidly from producers to dealers, a significant part of the total usage does not take place until the spring and early summer months. Will user demand next spring, at current prices, clear this year's production within bounds of reasonably normal stocks to be carried into the 1974-75 year? Will acreage response and expected production, assuming availability of fertilizer, normal weather, and energy for field machines, be increased so that contemplated stocks in the fall of 1974 will be sufficient to

cause ultimate users to skimp on purchases as they await lower prices?

These, along with numerous others, are relevant questions, but definitive answers are not available at this time. However, it is known that the market at present is relatively flat; dealers are jittery in their efforts to protect their positions; prices of some seeds have receded from their highs; contracts for next year's crop are 20 to 30 percent below prices of the 1973 crop. There is evidence that some old stands are being plowed up, with the land to be used in the production of wheat. This tendency will keep expected supplies in bounds, and undergird the present market. There is also indication that lands that were sub-marginal for seed production at previous prices have been plowed out of unimproved pasture and planted to grass seed. This response, under normal conditions, will tend to undermine present prices.

Because situation conditions and outlook are not identical for each seed crop, it will be well to look at some of the major individual crops. They are grouped according to their primary use.

Forage Crop Seeds

Tall Fescue. The significant factor in the tall fescue situation is the dramatic increase in acreage in the southeastern U.S., which resulted in a 27 percent greater production in 1973 than in 1972. The total 1973 supply is up 23 percent from one year ago. Prices have been depressed, selling at 25 to 28 cents per pound. The slow market will likely continue in the face of this large supply. Oregon growers have responded by plowing out fields, but this will have

little effect on the overall 1974 production, as we produce only about 11 percent of the U.S. crop. Our per-acre yields, however, are over 2½ times those in the southern states.

Orchardgrass is a crop that has been assuming much greater importance in Oregon, with production increasing one to two million pounds each year, and exceeding 14,000,000 pounds production in 1972. The 1973 production figures are not available, but a slightly increased acreage, combined with adverse conditions for seed maturation, would suggest a 1973 supply about equal to 1972. Summer prices ranged 38 to 40 cents per pound. Export shipments to Europe and Latin America have been bolstering to the trade. The market prices should remain strong in the face of strong demand for seed for new pastures. Oregon orchardgrass seed growers have been hit hard by insect problems which have severely weakened their stands. Many orchardgrass seed fields have been plowed out. Orchardgrass is adapted to soils that are suitable for wheat production, thus presenting a favorable alternative. Oregon's production of orchardgrass in 1974 could easily fall short of the 1973 out-turn.

Perennial Ryegrass (Linn). Ryegrasses in 1973 recorded the largest price gains of any seed commodity in recent years. Strong domestic and export demand, combined with decreased supplies resulting from the low prices

Prepared by Grant E. Blanch, Agricultural Economist, and Harold Youngberg, Extension Agronomist.



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of recent years, stimulated a steady climb in price offerings since early in the year. Prices of perennial ryegrass reached 55 to 58 cents per pound; much of the seed was out of growers' hands by late in the season. The 1974 prices should remain fairly strong, particularly if foreign crops are short. Some old perennial ryegrass fields have been plowed out. Some fields projected for perennial ryegrass may have been seeded to annual ryegrass because of its promise of favorable returns.

Annual Ryegrass. This crop represents the largest acreage of any seed crop in Oregon. Strong demand in 1973 reduced the estimated 29,000,000 pound carryover, and the 1973 crop moved readily into dealers' hands at prices that reached in excess of 30 cents per pound. The trade has not been able to sustain these prices. A degree of speculation with this crop by the trade is in evidence. Decisions and actions of these people will be important to the final outcome, but many do not feel that usage at present prices will clear the market. Contract offers for the 1974 crop were reported in the 18- to 20-cent range during the planting season. Annual ryegrass acreage and seed production can respond quickly to favorable prices. Ryegrass land cannot be readily converted to alternative crops because of the drainage problems. Ryegrass lands that have not been under the plow for several years, because of low prices, have been seeded this fall. With favorable conditions, a burdensome total supply could become a reality. Prices will not hold under these circumstances.

Turfgrasses

Bluegrass. Strong demand, a moderate carryover, and low 1973 production caused Merion Kentucky bluegrass prices to climb to \$1.20-\$1.45 per

pound, according to reports. Domestic demand in 1974 may be limited by reductions in housing construction starts. Northwest acreage may be reduced as some older and dryland acreages are taken out of production. Invasion of bluegrass by billbugs (the insect that has severely damaged orchardgrass production in western Oregon) is a threat over the next five years. Prices should remain strong and, therefore, encouraging for those who do a good job of producing this crop.

Bentgrass. Highland bentgrass, which depends heavily on European markets, has been favored by strong demand. Prices of 52 to 55 cents in 1973 were reported. This is in spite of the largest carryover in several years. European customers report preference for varieties of European origin, but until they are successful in obtaining adequate production, they are still buying our Highland bentgrass seed. Some fields that would have been planted to bentgrass are being seeded to cereals. Short-term outlook appears good.

Fine-leaved Fescue. Oregon produces 90 to 95 percent of this crop grown in the U.S. Prices have been determined largely by the success of the Canadian fescue crop. Good moisture supplies and a dry harvest season provided strong competition. Oregon dealer stocks of red fescue were 40 percent below recent years. Prices were up in the 58 to 60 cents per pound range. Some of the fine fescue acreage will be shifted to cereal production; thus, prices should remain strong and perhaps strengthen, based on disappearance of the 1973 production.

Fine-leaved Perennial Ryegrass Varieties. These varieties represent an increasing volume of Oregon ryegrass

production. They represent greater management inputs and have offered greater returns. Since most are grown under contract, prices of other varieties surpassed some contract prices this year. Demand for these varieties will increase for both domestic and export use. Currently, producers should be in a stronger position in negotiating future contracts.

Darker Side of Picture

Because of the much-improved price situation for grass seed crops, there seems to be a strong temptation on the part of some to plow up fields under life-of-stand contracts as a means of terminating the contract. The Oregon seed industry has worked long and hard to develop some of these markets for the long-run benefit of all segments of the industry. Breaking contracts and failing to meet contractual obligations could seriously injure the reputation of the state's grass seed industry.

Of concern to all associated with Oregon's grass seed industry is the open-field burning ban, to become effective in 1975. Without changes in current legislation, this important industry is headed for serious problems. There are, fortunately, some bright spots to the solution of these problems, i.e., increased grower income provides some necessary capital to make needed adjustments; there appears to be a demand in Japan for the straw; progress is being made in developing a functional field sanitizer; but these will not be adequate to answer all problems by 1975. Possibly some legislation will be introduced in the 1975 state legislative assembly to permit some phasing out of burning, rather than an abrupt and absolute cut-off. Without some latitude, the grass seed industry in Oregon may not survive as we know it today.



1974

OREGON'S AGRICULTURAL SITUATION AND OUTLOOK

Extension Circular 841

January 1974

DAIRY

Situation

Production Trends

U.S. milk production in 1973 will decrease for the first time in three years. This downtrend in total milk output is primarily the result of reduced milk cow numbers. However, a related factor is the relatively high feed prices which have caused dairymen to cut back on concentrate feeding and thus reduced milk production per cow. Nationally the annual output per cow in 1973 will actually decrease. This is a reversal in a long-term trend.

In addition to the squeeze between feed costs and milk prices, high slaughter cow prices have contributed to the heavy culling of dairy herds. Also some dairymen are switching to other enterprises. As a result, the number of milk cows nationwide is decreasing at a faster rate than a year ago.

It would be expected that the same basic trends hold true for Oregon. However, the data available at present do not allow conclusive analysis. Total milk output in Oregon has been relatively constant with no clear indication of a trend.

Milk Prices and Costs

An important factor affecting the present economic situation of the dairy producer is the fantastically high level of feed prices. Compared to a year ago, baled hay prices have doubled. Concentrates are 50 to 60 percent higher. Presently dairy feed costs are higher than they have ever been.

Other costs are also up. For example, farm wages have increased 10 to 15 percent over a year ago. Considering all

the costs associated with milk production, it appears that the total cost has increased around 40 percent over the past 12 months.

The returns for milk production have not kept pace with this increase in costs. The price received by Oregon Grade A dairymen for 3.5 percent milk was up only 23 percent in September 1973 compared to a year ago.

Wholesale and retail prices of most dairy products have increased due to the tightened supply-demand situation. But the rise in dairy product prices was still less than the increase in prices consumers paid for all food products in 1973.

Recent Developments

The Oregon milk producer is in a somewhat unique position with regard to his marketing situation. He operates under two milk marketing orders. The first is the Oregon-Washington Federal Order; the second is Oregon's State Order. Since 1970 the Federal Order procedures have been the basis for determining the prices received by Oregon dairymen. As a result of a federal hearing at Clayton, Missouri, in August, a temporary change in procedure allowed almost a 60-cent increase in the milk price for September 9-30. This brightened the outlook but still fell short of the increase needed to cover the higher production costs. Following a subsequent meeting in September, the decision was made not to extend the emergency action taken and to make no other adjustments in the present federal order system.

Also in September, based on the results of an August hearing in Salem, an

administrative order by the Oregon Department of Agriculture established a minimum price for 3.5-percent Class I milk beginning October 1, 1973, at nine dollars per hundredweight. This is a temporary order which will expire in 120 days. The Class I price according to the Federal formula was \$8.33 in October and \$8.86 in November. However, the effective \$9.00 Oregon price resulted in a benefit to the Oregon producer of 67 and 14 cents in the Class I milk price in October and November, respectively.

Factors Affecting Outlook

Future Action by the Oregon Department of Agriculture

Under the Federal milk marketing order, the Class I price is based on the average price paid during the second preceding month for manufacturing milk in Minnesota and Wisconsin. The average Minnesota-Wisconsin prices have been released for October and November. Given these figures, the Oregon Class I price, according to the federal formula, can be projected for December and January. The results are as follows: December, \$9.44; and January, \$9.59. For both months the Federal price will exceed the \$9.00 minimum established by the administrative order of the Oregon Department of Agriculture.

Plans are being made for a state hearing to be held sometime prior to February 1, 1974. Following that hearing a

Prepared by A. Gene Nelson, Extension Farm Management Specialist, H. P. Adams, Extension Dairy Specialist, and Curtis D. Mumford, Professor Emeritus of Agricultural Economics.



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decision will be made whether to continue the State's present price-setting order, and if it is to be continued, what price floor will be established.

Dairy Import Policy

Should Oregon's temporary milk pricing order be discontinued, minimum price determination for Oregon producers would revert back to the formula of the federal marketing order. As mentioned above, the basis for this formula is the average price paid during the second preceding month for manufacturing milk in Minnesota and Wisconsin. U.S. policy regarding dairy product imports may have an important impact on the future movements of this price series.

In former years, U.S. import quotas have restricted entry of dairy product imports to very low levels. However, 1973 administrative actions have temporarily opened some quotas. It also appears there may be moves to further liberalize this policy.

The downtrend in milk production during the past year and non-fat dry milk shortages due to increased cheese manufacture were the factors that prompted the administration to open up the import quotas in 1973.

Presently the administration is studying the possibilities of further trade liberalization. The advantages of such a policy would be improved balance of payments, reduced government expenditures, and increased U.S. farm income. A more liberal policy would be expected to boost U.S. exports of feed grains, soybeans, wheat, beef, and poultry. The milk industry, however, would undoubtedly suffer as a result of this policy.

For the Oregon producer this means that the Class I price would be subjected to downward pressure as the manufacturing milk price upon which it is based declines in response to increased dairy product imports.

Feed Costs

Another important factor to watch will be hay, grain, and protein prices. Normally feed costs represent about 40 to 50 percent of the cost of producing milk, and for many dairymen a substantial portion of their feed represents a purchased input. Thus, feed prices are a major consideration in dairymen's decisions regarding milk production.

A further sharp increase in feed prices appears unlikely, which leaves the possibilities of no change or price decreases. The latter development would brighten the outlook for Oregon milk producers bringing costs downward and more in line with the price of milk.

Outlook for the Next Two Years

Over the next six months further herd reductions and lower total milk production can be expected. If present feed cost levels continue, either state or federal action will be required to increase milk prices if it is desired to make it economically feasible for Oregon producers to continue to supply local market requirements.

Considering the next two years, the outlook is more optimistic, with the prospects for some reduction in feed prices. Increased feed supplies and de-

creased export demand for feed grains could both operate to give this result. Milk output per cow should resume its upward trend, although the trend toward fewer milk cows will continue.

Outlook for Three to Five Years from Now

Regardless of the decision regarding the policy toward dairy product imports, it appears unlikely that foreign suppliers will have sufficient time to respond and affect domestic milk prices in the short run. In three to five years, however, this could represent an influential force. However, this may be an undue concern. First of all, it is not clear that the administration has in fact decided to liberalize its trade policy toward dairy imports, and secondly, even with such a policy the response of foreign producers will ultimately determine the amount of any increase in imports.

In Oregon if past long-term trends continue, total milk production will decline but probably at a slower rate. Increasing milk production per cow will not offset the decline in cow numbers. Within three to five years the feed economy will have adjusted to the recent disruptions and stabilized at a lower level of prices. Milk prices, subject as they are to administrative decisions and political pressure, are difficult to predict. However, the experience of the past months should demonstrate the need for flexible pricing procedures which allow quick response to increases in the costs of production.

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1974

OREGON'S AGRICULTURAL SITUATION AND OUTLOOK

Extension Circular 842

January 1974

HAY AND FORAGE

The need for harvested forage is closely allied to the number of roughage-consuming livestock in a given area. Being bulky in relation to value, hay is not normally transported long distances economically.

With forage-consuming livestock increasing in Oregon and the entire Pacific Northwest, the requirements for harvested hay in this area have reached almost unprecedented levels. This demand has been accentuated by the lack of pasture resulting from drought conditions throughout the area. The situation is further intensified by the fact that feed grains are scarce and high in cost.

It is entirely evident that the hay supply available to livestock producers in the area is insufficient to meet needs. Hay production increases have not kept pace with increasing livestock numbers. Furthermore, the severe winter of 1972-73 caused traditional carryover stocks to become almost totally depleted before the 1973 harvest began. The short water supply of 1973 adversely affected yields from acreages that were harvested; some meadow hay was not considered adequate for harvest. Dried-up grazing lands forced many operators to move their livestock to their hay lands for survival. This further decreased the amount of hay harvested during the past summer, and the total supply for feeding during the 1973-74 winter months.

With requirements for hay high, and the supply short, prices of hay reached, and have stayed at, exceedingly high levels. Good-quality alfalfa hay in various parts of Oregon and south-central Washington was trading, in early November, at prices from \$65 to \$75 per ton, with no signs of weakening. Baled straw from grass seed fields has been in good demand at \$30 or more per ton. Current conditions have been judged to be sufficiently critical that emergency lower freight rates on Midwest hay brought into the Northwest have been extended by the government to May 31, 1974. Previously, the emergency lower rates were to expire October 31. The emergency extension permits farmers in drought-stricken areas of Oregon, Washington, Idaho, and Montana to continue to take advantage of a 45 to 55 percent reduction in freight rates for hay from the Midwest. Obtaining hay supplies out of Nebraska would otherwise be prohibitive.

Barring an unforeseen significant reduction in livestock numbers, the hay price outlook for at least the next two years is highly encouraging. With requirements at near current levels, and with no reserves, it will take at least two crops of normal yields to return to typical relationships of hay and livestock numbers. The outlook is further enhanced by the fact that there does not appear to be much enthusiasm for increased plantings, even though prices are high. Prices of other crops that

compete for the use of much of the same land are also high.

Under circumstances as described, producers of hay can be confident of good prices if they have the product to sell. Producers who produce for their own needs can be assured of a forage supply that will have a relatively high opportunity cost, but with favorable returns to the resources utilized in its production. Many livestock men would do well to appraise their opportunities to supply a larger portion of their own forage needs. Corn silage, with hay at \$70 per ton, can be a very profitable enterprise under high-yield conditions. Summer pasture, using Sudan grass, might very well be highly competitive with alternative uses of that land when forage and feed grains are so high in price. The same is true with making hay of certain grass or grain crops that would otherwise produce seed. All stockmen can look at doing a better management job with the forage production base they now have. With prices of harvested forage high, better forage management, whether with fertilizer, water, weed control, controlled grazing, or a combination of these and any other appropriate practices, should pay good dividends during the next two to three years.

Prepared by Grant E. Blanch, Agricultural Economist, and Lester R. Vough, Extension Agronomist.



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1974

OREGON'S AGRICULTURAL
SITUATION AND OUTLOOK

Extension Circular 843

January 1974

POULTRY AND EGGS

Increased supplies of broilers, eggs, and turkeys in 1974 are being predicted by a number of outlook specialists. While this may be good news to consumers, such increases could result in poultry and egg prices at or below the cost of production to poultrymen. Feed prices have moderated somewhat from the sky-high levels of mid-1973 but other costs have sky-rocketed. Thus, poultrymen may find themselves in an economic squeeze—low prices for their products on one hand and high prices for all of the inputs on the other.

The poultry industry may also face greater competition from increasing red meat supplies in 1974. Pork supplies in the first half of 1974 are expected to be below January-June 1973, but during the last half of the year may be above the low July-December 1973 output. Prices for pork are expected to remain above 1973 levels in the first half of 1974 but slip below the high levels of 1973 during the summer and fall.

Beef output is expected to be above 1973's output by spring and then continue larger in the second half. Prices are expected to move downward during 1974.

Egg Supplies to Increase

Egg production will pick up sharply by mid-1974 as replacement pullets entering the flock will more than offset the number of old layers culled. The egg industry has responded to high prices and increased profitability for eggs in recent months by sharply increasing hatchery activity. During July-October 1973, 21.4 million more egg-type chicks were hatched than in the same period in 1972. In November, egg-type chicks

hatched were 25 percent above the number hatched in November 1972. In addition, eggs in incubators on December 1 were 10 percent greater than on the same date in 1972.

The increased hatchings of egg-type chicks prior to November 1 will mean about a 14 percent increase in the number of pullets available for flock replacements during the first four months of 1974. Thus, we can see the beginning of a rapid buildup in flocks by spring. The egg industry is concerned that producers may step up output too rapidly if the chick hatch continues as it has in recent months. In the past, such sharp rises in flock size have led to lower egg prices and in many instances prices have dropped below the cost of production.

The annual increase in the number of eggs laid per hen leveled off in 1973 after rising sharply since late 1970. Eggs per hen in 1973 will average about the same as the 228 in 1972. The rate of lay has increased since August and will continue to increase due to the larger numbers of replacement pullets entering the laying flock.

More Broilers in 1974

A moderate expansion in 1974 broiler production is likely—following a small decline in 1973. The increase may be about the same as the 1963-72 average when production expanded at a rate of about 100 million birds or a little less than 5 percent a year. The average live-weight of birds marketed may also continue to creep upward.

The 1973 broiler crop is expected to total about 2 percent below the record of 3.1 billion broilers produced in 1972 but

still well above other previous years. The number of broilers marketed through federally inspected slaughter plants during the first three quarters of this year was down about 2 percent. The average liveweight, at 3.7 pounds, was slightly lighter.

Broiler output has gained relative to 1972 this past fall but will temporarily drop below a year earlier in early 1974. Weekly broiler chick placements during December were about 2 percent more than during December 1972. Eggs in incubators December 1 were up 3 percent over a year ago.

Profitability of broiler production has declined in recent months because broiler prices have slipped faster than feed costs. However, prospects for lower pork supplies through at least the first half of 1974 and continued relatively high red meat prices will likely encourage producers to expand broiler output in 1974.

The availability of hatching eggs may limit expansion in broiler meat output during the first half of 1974. Based on the accumulation of chicks placed domestically 7 to 14 months earlier, the broiler hatchery supply flock at the beginning of 1974 will be about 4 percent below a year ago. But flock size is growing and likely will be above 1973 levels in early spring.

Broiler prices probably will gain in the winter and spring as pork production continues to lag a year earlier and red meat prices remain relatively high.

Prepared by Charles M. Fischer, Extension poultry specialist, based on an outlook statement developed by William E. Cathcart, Economic Research Service, U.S. Department of Agriculture, and other sources.



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Prices may average above a year ago in the winter but will not reach the high 1973 prices in the spring and summer. Prices in 1974 are not expected to repeat the sharp rise of January to August 1973. The nine-city wholesale broiler price increased from 32.7 cents a pound for the first week of January to a high of 73.7 cents a pound for the first week of August.

Turkey Output Will Likely Increase

Turkey production during the first half of 1974 likely will run well above January-June 1973. Turkey poult production in August-October, for marketing during early 1974, was 13 percent above a year ago. Poult production during November was 17 percent above a year ago. On December 1, there were 14 percent more eggs in incubators than on the same date a year ago.

If turkey breeder flock owners carry out their September 1 plans to keep 15 percent more breeder hens for next year's hatching season, turkey production will be substantially larger throughout 1974. However, declining turkey prices during the last quarter of 1973 and continued high feed costs in 1974 will alter producers' decisions and some of these breeder hens may be marketed before the heavy hatching period in 1974.

Price depressing effects of larger output may be offset in early 1974 by strong demand for turkeys for further processing, increased consumer incomes, and relatively high red meat prices. But, if producers expand output in 1974 as indicated by reported intentions to hold breeder hens, prices may dip below year-earlier levels before midyear.

The 1973 turkey crop is estimated to total 132 million birds, up 2 percent

from the 1972 crop. Nevertheless, turkey meat output likely will be about the same as in 1972 because of lighter marketing weights. Through October this year the weight of turkeys marketed averaged a little more than 3 percent lighter. During January-October this year, turkey meat output in federally inspected plants totaled 1.3 billion pounds (ready-to-cook weight), about 40 million pounds below the same months of 1972.

Consumer demand for turkey meat has been unusually strong this year as prices of red meats have gone up. Despite sharply higher turkey prices, disappearance of turkey meat through January-September this year was above a year earlier. Domestic consumption during this period totaled around 17 million pounds more than the 970 million pounds consumed in the same period of 1972.

But turkey consumption during November is believed to have been below November 1972 consumption, according to a national organization serving the nation's turkey industry. Cold storage stocks on January 1, 1974, are expected to be about 15 percent greater than on January 1, 1973.

Increased per capita supplies of turkey coupled with larger per capita red meat supplies during the last half of 1974 will likely result in lower than year-earlier turkey prices during the 1974 main marketing period.

The sharp increase in egg, broiler, and turkey prices this year was the result of many factors. Reduced supplies of foodstuffs, soaring foreign demand, a superheated domestic economy much of the year, international monetary adjustments, changing economic stabilization programs, and inflation all helped

to make 1973 unstable and uncertain for everyone from producer to consumer.

High-protein food supplies declined in 1973 as feed prices surged. Egg producers, who had faced periods of depressed prices during 1971-72, were in a relatively low phase of production and broiler and turkey producers cut back on earlier expansion plans as feed prices rose.

At the same time a buoyant economy provided increasing levels of employment and higher incomes for most families. Consumer spending was further augmented by large income tax refunds, increases in social security payments, and broadened welfare programs. In addition, export demand rose sharply as many other countries had poor harvests and devaluations of the dollar made U.S. farm products relatively less expensive in terms of many foreign currencies. This encouraged many foreign countries to substantially expand imports of U.S. foodstuffs.

In early 1973 few of these factors were foreseen. No one had any idea how strong foreign demand would be and few if any suspected that grain and soybean prices would skyrocket to the heights they reached by mid-1973.

More important we need to recognize that most of these forces will continue to operate in 1974. In addition, the energy crisis continues to worsen. This likely will result in some slowdown in the growth of the general economy and result in increased unemployment.

Both domestic and foreign demand for high-protein foods will continue strong. Despite large grain and soybean crops, feed prices are expected to stay well above recent years prior to 1973.



1974

OREGON'S AGRICULTURAL SITUATION AND OUTLOOK

Extension Circular 846

January 1974

FERTILIZER

Supply

The supply of fertilizers, particularly Nitrogen (N) and Phosphorus (P), was "tight" in 1973 and the outlook for 1974 is one of continued restricted supply. There are four major reasons for the "tight" fertilizer supply situation.

1. Increased foreign demand for U.S. fertilizer is due to the following developments:

- Prior to the removal of the Phase IV price ceiling on fertilizer materials in October, 1973, some fertilizers were selling for a higher price on the export market than on the domestic market.
- Overseas fertilizer sales have been encouraged due to devaluation of the dollar and the improved supply of dollars in foreign countries.
- A desire to increase food production in foreign countries had led to increased use of fertilizer.
- N and P exports were 20 to 30 percent higher in 1973 than 1972.

2. Fertilizer production problems in the U.S. result from the following:

- N fertilizer production requires substantial energy, which has become limiting. Ammonia is used in the manufacture of N fertilizer. The production of one ton of ammonia requires about 35,000 cubic feet of natural gas.

Ammonia production uses 2 to 3 percent of the natural gas consumed in the U.S.

- Over production of fertilizer in the late 1960's led to depressed fertilizer prices and restricted expansion of fertilizer manufacturing facilities.
 - Heavy freight demands have also created problems with transport of fertilizers in the U.S.
 - Stricter environmental regulations have reduced production at some fertilizer manufacturing facilities.
 - The production of N and P fertilizers is expected to increase about 5 percent in 1974, but much of this increase is already committed to foreign markets.
3. Increased demand for fertilizer in the U.S. is a result of:
- Increased crop prices.
 - The release of 62 million acres of "set aside" land for crop production; about 25 million acres of this land came into production in 1973.
 - The use of N in other materials such as animal feed, plywood, fibers, and plastics.
 - The consumption of N and P in fertilizers in the U.S., which totalled 4.6 million tons in 1960 and had increased to 10.2 million tons in 1972.

4. Decreased U.S. imports of fertilizers were affected by:

- Smaller Canadian shipments.
- International transportation problems.

The following initiatives have been taken by government and industry to improve fertilizer supply:

- Encouraging the operation of formerly economically marginal fertilizer plants.
- Exploring the possibility of re-opening plants which for economic reasons had been closed.
- Encouraging the construction of new fertilizer plants.
- Raising the priority for the use of natural gas in the manufacture of ammonia.
- Increasing transportation facilities.
- Educating producers on ways of evaluating fertilizer needs and on optimum fertilizer usage.

The fertilizer supply picture for the U.S. for 1974 is not particularly optimistic. A large increase in fertilizer production cannot be anticipated. It will take about three years to complete much of the needed fertilizer plant expansion. Future substantial increases in N production are likely to be diffi-

Prepared by Hugh Gardner, Extension Soil Science Specialist.



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cult due to energy needs. The production of P fertilizer will probably increase, but deficits of 12 percent for P fertilizer and 10 percent for N fertilizer are forecast for 1974.

Present Fertilizer Use

The U.S. used 42.5 million tons of fertilizer material in 1972-73. These fertilizer materials contained a total of 15.1 million tons of N, P, and K. Oregon used 495 thousand tons of fertilizer material containing a total of 144.5 thousand tons of N, P, and K in 1972-73. Ammonium sulfate, followed by urea, were the main N fertilizer materials used in Oregon in 1972-73. Most of the P and K were supplied by ammonium phosphate and muriate of potash, respectively.

Fertilizer Price

Sharp increases in the cost of fertilizers are anticipated for 1974 when N fertilizers could more than double in cost compared to the spring of 1973. Fertilizer prices increased 25 to 50 percent following the removal of the Phase IV controls on October 25, 1973.

In the past fertilizer has been comparatively inexpensive and plentiful and it has often paid to err on the side of applying too much fertilizer rather than too little. Current and predicted higher prices and restricted supplies demand that crop fertilizer needs be more carefully assessed.

Suggested Practices to Conserve Fertilizers

- Use *Soil Testing* to determine if fertilizer is needed. Many soils in Oregon contain adequate levels of P and/or K for the production of certain crops. County agents can provide soil sampling and soil test information.
 - Avoid losses, particularly of nitrate and sulfate, due to leaching resulting from over-irrigation or winter rain. Also avoid losses of N due to denitrification. Serious losses of gaseous N due to the reduction of nitrate can occur in wet soils. These losses can occur in wet soils which are saturated with water as a result of rainfall or irrigation.
 - Rates of fertilizer application can often be reduced by banding recommended rates of nutrients such as P and K about two to four inches from the seed. Larger amounts of these nutrients must be applied when using broadcast application methods. Also broadcasting fertilizers on soils where surface erosion due to wind or water occurs can result in the loss of plant nutrient.
 - Liming of acid soils can reduce the need for fertilizers such as P and increase the response to applied fertilizers. Soil tests should be used to determine liming needs. Utilize manure and crop residues as sources of plant nutrients. As manures are com-
- paratively high in N, heavy applications of manure should be used for non-leguminous crops. Also legumes return N to the soil when legume fields are plowed or legumes are used as a green manure crop.
- Optimum crops yields are dependent on an adequate supply of all essential plant nutrients. P fertilizer, for instance, will not give optimum yields if K is deficient. *Soil Testing* is necessary to make sure that a satisfactory balance of nutrients is available for plant growth.
 - Apply fertilizers to crops where the greatest returns can be realized. Potatoes, for instance, are more responsive to K than grass seed. One hundred pounds N per acre, for example, might increase net returns from peppermint more than from ryegrass seed. OSU Fertilizer Guides can provide useful information on the nutrient needs of crops.
 - Fertilizers often give greatest returns when used on fields having the best yield potential such as an irrigated field versus a non-irrigated field.
 - The best allocation of a restricted supply of fertilizer depends on the evaluation of crop production possibilities on the individual farm.
 - Growers should consult with dealers and plan fertilizer needs well in advance.

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AGRICULTURAL POLICY

The direction of agricultural policy changed dramatically in 1973. The disappearance of long-time surpluses led to a policy of encouraging maximum production. Strong export and domestic demand created market prices far above traditional price supports. Expansion of trade in food products became a major policy objective and its success was measured in a positive movement in the U.S. trade balance and renewed confidence in the U.S. dollar overseas.

Programs designed to reduce the amount of land in agricultural production were largely abandoned. Price supports based upon participation in restricting production were also mostly foregone. In their place is a new policy of letting the market place establish the price. If this fails, target prices will come into play to provide protection for producers.

There is a question as to whether the strong export demand for U.S. agricultural production this past year is a permanent situation. While shortfalls due to drought and other weather conditions had a considerable impact, still, some of the increased demand was based on more stable factors. Part of the increased export demand was due to rising populations throughout the world. Half again as much influence was estimated to be due to rising international affluence.

Another factor that was important this past year was the devaluation of the U.S. dollar and the revaluation of several foreign currencies. The impact was to make American exports attractive (relatively lower cost) in terms of the foreign currencies. This situation normally adjusts over time and thus American products may be less attractive this coming year than they have been this past year. In any case, narrowing of our balance of payments has certainly strengthened U.S. currency overseas.

This relationship of the value of currency has another impact which is important. For the first time in several decades, the U.S. has become attractive for investment of foreign currencies.

Thus, the opportunity for joint venturing with foreign firms is coming to the forefront. This is particularly true in agriculture in the Pacific Northwest. Instances of Japanese capital actually being invested in Oregon agriculture have been recorded. In addition, there have been numerous contacts that have not as yet resulted in any action. The question involved in most of these transactions is who will control the decision-making within the joint venture firms? Thus, the ultimate impact of the investment of foreign capital in Oregon agriculture is not yet known.

The international market is important to U.S. agriculture. The strong demand this past year has done much to put our trade balance in the black for some quarters this year. However, there is also no doubt that the strong export demand has had some influence on increasing domestic prices of food. There is some question as to how far domestic prices can be increased before the consumers insist upon action limiting exports in order to maintain domestic food supplies and low prices.

A new element entered the situation this year that had not been adequately foreseen, i.e., the energy shortage. Although the seriousness of this shortage has not yet been completely assessed, the Presidents' Council of Economic Advisors has predicted that the economy could very well slip considerably below prior expectations during this next year. They have indicated that if energy allocation plans do not work as well as intended, the economy could well slide to the brink of recession.

The predicted real growth rate of GNP for the coming year is an estimated 2 percent, down from over 6 percent this year. However, if the energy crisis intensifies, GNP growth might well be cut to about 1 percent during the coming year. This rate would imply that we may have very low growth or even negative growth during the first and perhaps the second quarter of 1974.

If this occurs, unemployment is expected to rise from the present 4½ per-

cent of the work force to perhaps 6 percent. Meanwhile, inflation is expected to continue to be a problem.

The energy crisis will affect agriculture in several ways. Although fuel for agricultural operations has a high priority nationally, there may be some actual shortage of fuel for planting, cultivating, and harvesting of crops. It is expected, however, that this shortage will be minimal. More serious may be the lack of energy to produce an output of fertilizer sufficient to satisfy domestic and foreign demand. If there is a shortage, the quantity of fertilizer applied in the production of crops is likely to decline and the cost of fertilizer to climb.

Another major impact may be the inability to transport agricultural products to the processing and retail markets, both within the United States and to our overseas markets. Further, the slowdown of economies internationally due to the energy crisis may lessen the demand on the international markets for agricultural products. If this occurs, fewer products will be sold in these markets and prices will likely be lower. With less going overseas, the supply left on domestic markets will be higher, causing generally lower prices for agricultural commodities in the United States. Even if the demand on international markets remains firm, the lack of fuel may cause a shortage of transportation to move the product from the U.S. to foreign buyers. This will likely have the same effect on domestic prices as lowered demand.

If farmers nationwide anticipate this problem, their response to the Secretary of Agriculture's push for increased production may go awry. If they realize or anticipate a shortage of fuel, they may plant less acres. If fertilizers are not available, yield per acre may decline. If a lack of foreign demand and

Prepared by Jean B. Wyckoff, Extension Agricultural Economist, and Timothy M. Hammonds, Agricultural Economist.

lower prices is anticipated, then again the farmer may not plow his existing retired land. Any of these circumstances could result in lower total food production in the United States than anticipated in previous estimates. Thus, prices would face upward pressures.

The structure of agriculture continues to change. In the last four decades the hours of labor going into agricultural production has declined over 72 percent. The marginal product per hour of labor, however, has increased from \$0.70 to over \$4 during the same period. Total capital inputs have increased 55 percent and farm energy expenditures are up 240 percent. The marginal product for capital has remained constant over the last four decades while that for energy expenditures has declined from \$2.40 to \$0.65 for 1972.

Total liabilities in agriculture have increased from \$10 billion in 1930 to \$73.6 billion in 1973. However, equities have increased from \$42.9 billion in 1940 to \$309.9 billion in 1973. Thus, the actual debt to asset ratio has remained almost constant. The assets per farm continue to climb as the number of farms continues to decline.

While farmers have been understandably preoccupied with the demand and price situation this year, they may be in for a rude awakening when the spring production season rolls around. Costs of almost all inputs have climbed alarmingly during the past few months. Energy costs, fertilizer costs, and labor costs have all risen significantly. Thus, the net which a farmer will take home next year may be considerably less

than what he has earned this year, even if prices remain at about the same level.

The consumer will continue to pay more for food products. In the 25 years between 1937 and 1972, expenditures on food have increased \$74 million. Of this, approximately \$54 million have gone to pay the increasing marketing bill, while \$20 million went to increased farmers' gross income. While this relationship may change in the short run for a given commodity, it is generally expected to continue for agricultural products.

The current regulations being designed by the Department of Environmental Quality and the Environmental Protection Agency are having and will continue to have impact upon agricultural production costs. To this date, the removal of DES as a hormone used in the production of beef cattle has lowered feed conversion efficiency. Thus, even with constant feed prices, the costs of gain would have increased. With feed prices rising rapidly, this result has been accentuated. Other regulations affecting the disposal of animal wastes in large animal concentrations such as feedlots and dairies are also having impact. Air pollution control standards that will prevent field burning of grass straw in the Willamette Valley are another important factor. Federal land management policies that reduce grazing allotments, shorten the grazing season, allow an increase in competitive grazing by wild horses, etc., also lead to increased costs in the production of agricultural products.

Summary

The major agricultural policies of 1973 will continue into 1974. We will continue to have a push for increased production of food and fiber in U.S. agriculture. The concept of target prices will be maintained for the major crops and might well be applied to minor crops if any of them get into price difficulties. Further, the continued concentration on increasing commercial international trade of food and food products will be present in 1974. It is anticipated that domestic food prices will remain high and may increase in some cases. Overall, 1974 is expected to be a better than average year for the farmers and ranchers in Oregon, but probably not as good as 1973.

Key factors to watch in the years beyond 1974 are:

- (1) Availability of fuel for agricultural operations and transportation (including export) of production.
- (2) Health of the economics of our major export customers for agricultural products (particularly Japan and the EEC countries).
- (3) Availability of fertilizer and other production inputs.
- (4) Government policies related to environmental and natural resources management.

Also, while the cost of almost all production inputs may be higher, the price of some inputs may have risen relatively more than others. Similarly, some product prices may be up relatively more than others. Thus, there may be the opportunity to adjust production and input combinations to achieve higher net incomes.