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Volume 2, Number 5

May, 1984

BARNES Farm & Orchard NEWS

Marketing program looks promising

Countries importing Washington's agricultural commodities are rapidly changing.

And so are the marketing needs of the grain grower who is watching his elevator overflow during harvest, and the apple grower who nervously awaits the coming production of new plantings.

"It is time to apply the marketing concept to agriculture," said Dr. Desmond O'Rourke, interim director of the International Marketing Program for Agricultural Commodities and Trade (IMPACT) at Washington State University.

"We need to look at marketing needs and how they are changing," he said.

The state has allowed \$48,500 in monies for O'Rourke to set up a program and gather data and other information on IMPACT.

The information will then be presented to legislative committees this fall in hope of establishing a permanent IMPACT program. The program is estimated to cost about \$1.24 million to operate the first full year.

O'Rourke, an agricultural economist with more than 20 years of experience in research related to international marketing of agricultural commodities, said such a program is necessary with all the changes occurring in other countries, as well as the United States.

"Agriculture has become high technology," he said. "The way seeds are developed . . . the way trees are grown . . . the way a product is handled . . . the whole process has become high technology."

Many receivers are also using high technology, O'Rourke added. For

example, the milling industry is using sophisticated methods of blending wheat for various products.

Accompanying this move into high technology are fairly complex scientific issues, some of which are mixed with political issues, O'Rourke said.

O'Rourke said that the same sorts of problems occur with chemicals and additives to control insects on fruits and vegetables.

Japan, for example, has a fear of importing the codling moth with Washington apples.

But opening the Japanese market is a political problem, as well as an entomological problem, because Japan has a large apple industry of its own, O'Rourke said.

"IMPACT could play a role on the scientific side," he said, such as finding a way to fumigate the apples.

"One big, big potential" of IMPACT is help in the problem-solving of such disputes," O'Rourke said.

"But on the long-term . . . and more important . . . is that most of the countries we are dealing with are changing at an incredible pace," he said.

"For example, the Japanese, a traditional rice-consuming people, are changing to heavier users of wheat."

Another big change is the trend toward smaller families and work away from home, he said. Convenience foods, therefore, are playing a more important role.

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On the orchard

Omak orchardists run Californian fruit stand

Editor's Note: Each month we hope to feature a farmer or orchardist in our "From the Farm" or "On the Orchard" section. When Don Deppner of Northwest Farm Bureau Insurance in Wenatchee suggested the story for this month's issue, we had no idea it would lead to such an interesting interview about a unique family business--nor the bonus of a delicious slice of homemade apple pie and a jug of cider!

Dick and Virginia and Doug and Sandy Sheets of Omak do not run an ordinary fruit stand at the roadside of their orchard in the Okanogan.

Rather, their fruit stand is located more than a thousand miles away and serves people such as actress Susanne Sumers and ordinary families who

experience the pressing of cider for the first time.

Besides fresh fruit, the Sheets sell frozen jugs of apple cider, 37 varieties of jams and jellies, ciderycles and apple cake in a jar.

They also feature a small hand press on the two-acre Californian orchard for those wanting to take advantage of their unique "you pick, you press" offer.

The frozen cider, jams and jellies and apple cake are all made in Washington and shipped to the Californian fruit stand. The fruit, including 10 varieties of apples, is grown on the Sheets' small Washington orchard.

"When we bought the place (the Omak orchard), we made up our minds to not

continued on page 6



The High Country Orchards fruit stand is definitely a family operation. Three of the four generations participating in the business are, from left, Dick Sheets and his grandson, Chad, and son, Doug.

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Program Deadline

May 4 is the deadline for sign-up in the revised 1984 wheat program.

Farmers with wheat bases who previously had not signed up for the 1984 wheat program are eligible to participate in the revised program.

Farmers who previously signed up need take no action unless they want to change their level of participation in the program.

Those who signed up earlier may change their participation by contacting their local county office of the USDA's Agricultural Stabilization and Conservation Service.

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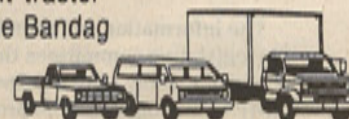
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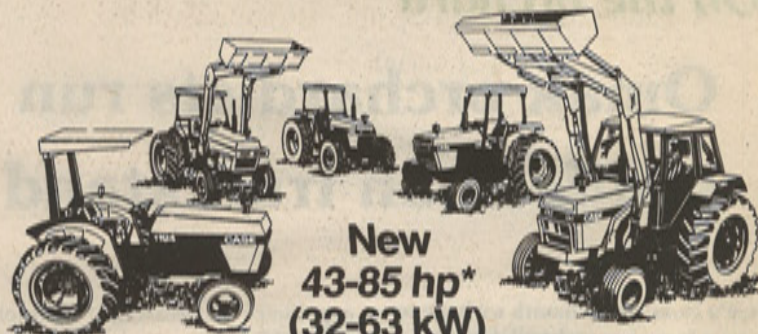
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ABOUT PRODUCTION PREDICTIONS

Recently, Don Monforton of Oakesdale shared this observation: "Why not work harder on reducing expenses rather than on increasing yields?"

Monforton, once a fruit grower and in farming, definitely has a point.

Predictions on wheat and apple production in the near future do not look promising for the grower who needs a certain price just to break even. Following the old supply and demand rule, too much supply means too little price.

During the 1983 wheat harvest, about 50 million bushels of Pacific Northwest white wheat were stored outside. And it is estimated that about 148 million bushels, or triple the amount of grain, will be stored outside during harvest this year.

The prediction was made by commodity operation members, producer groups and trade members at a special meeting in Spokane last January.

Although apples will not be piled on the ground like wheat, production in the next several years is expected to increase dramatically.

Ten years ago, approximately 95,000 acres of apples trees were growing in the state, according to Dr. Desmond O'Rourke of Washington State University. At the present time, he said, there are about 155,000 acres--an increase of well over 50 percent. Most of these new plantings, O'Rourke noted, are not yet in the heavy bearing age.

Monforton's point does not dispute the fact that high yields are great for the individual farmer, but that when everyone in the country has high yields, the price is likely to drop. Therefore, perhaps reducing the expense in raising the crop--whether through fewer tillage operations or finding ways to reduce the quantity of insecticide, perhaps through biological technology--certainly warrants more serious thought than it has ever been given before.

By the way, have you thought of how much 148 million bushels of wheat actually amounts to? Maybe the following figures will help put it into perspective.

148 million bushels of wheat could be baked into 14 BILLION one-pound loaves of whole wheat bread.

148 million bushels of white wheat sold at the government's 1984 target price of \$4.38 per bushel would amount to \$648,240,000.

148 million bushels of wheat, baked into loaves of bread nine inches long and lined up end-to-end, would reach the distance of the moon more than eight times or circle around the earth's equator 79 times!

by Kathleen Rivers

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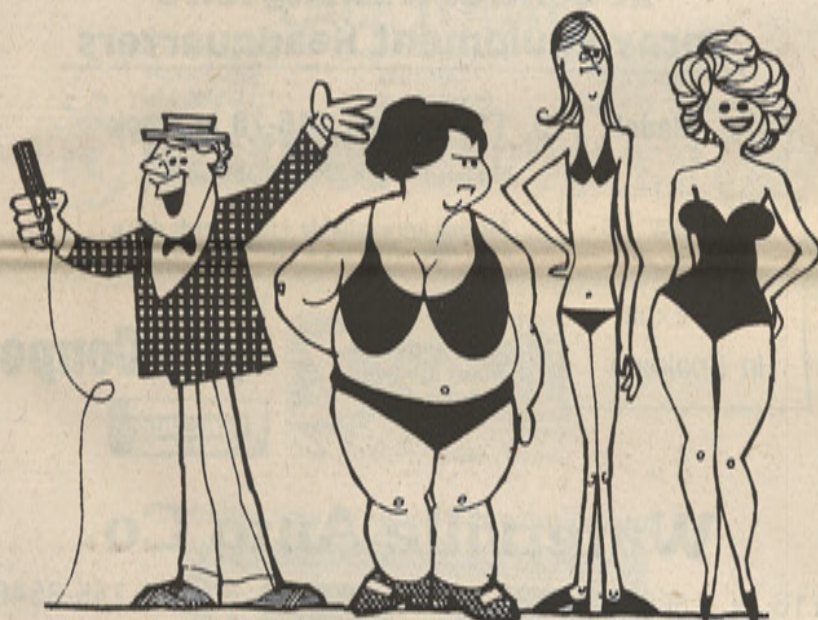
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Interviewed by Charles Herring

Before you explain the use of heat shrinking to remove bearings, could you talk about how to avoid damaging the axle bearing in the first place?

You can't always prevent damaging a bearing, but if you're going to prevent it, you have to check for oil splattering out on the inside of the wheel hub. Dirt can conceal the oil leak, so you have to look carefully. Sometimes a person will think he sees some oil and later, he

won't see any. This could mean that all the oil has leaked out, so you should refill the oil and check again.

Here are two wheel tractor housings. The first one had a bad bearing and was caught before any damage was done to the housing. The second one wasn't caught in time and the housing was damaged. What's the difference in the cost of repair and how often do you see these kinds of problems?



Weldon Barnes

How do you use heat shrinking to remove a bearing?

You use an acetylene torch. Heat the bearing and let it cool. Then you just take a punch and knock it out.

Do you heat the bearing red hot?

No. This is a bronze bearing and you'd melt it if it were red hot. You just slowly move the torch around the entire bearing--shouldn't take more than a minute or two.

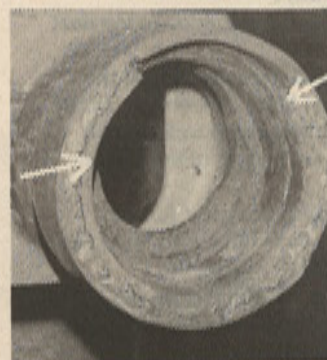
How cool does it have to get before the bearing shrinks enough so it can be removed?

The metal will shrink when the bearing is still warm to the touch. You don't have to wait for the bearing to get stone cold.

(Weldon demonstrates heat shrinking and the bearing pops out after 10 taps on a punch. The bearing was 2 1/2 inches long).

Wouldn't the bearing pop out without heating if you hit the punch harder?

Probably not. You'd be surprised how hard they are to knock out without heating. What happens when you hit the punch harder and harder is that you increase the chances of gouging the housing. On large bearings, you'll need a press instead of a punch, but you'll still need to use heat shrinking first.



Excessive housing damage inside arrows

We replace bearings every week, but we only see a damaged housing like this second one from five to ten times a year. If you watch for oil and replace the seals when they need it, you could farm your whole life and never see damage to a housing like this. To remove and replace the bearing, it usually costs from \$50 to \$100, but to rebuild the housing, it could easily cost from \$750 to \$850 and more.

What would you do if you spotted an oil leak, but didn't have time to take the wheel off and replace the seal?

Well, I'd fix the problem as soon as possible, but if you have to use the tractor and you just noticed the leak for the first time, I'd put more oil in and keep watching it. Of course, this assumes that you regularly check for leaking oil--if you don't do this regularly, you have no way of knowing if the leak is new and you increase your chances of creating a costly problem.

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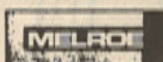
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Biological system a "Plus" for growers

For the orchardist, the codling moth means trouble.

For the wheat grower, jointed goatgrass leads to losses.

And for both, the cost of chemicals to eliminate such pests and weeds, as well as the cost of fertilizer to boost yields, is getting higher and higher.

It is getting so high that farmers and orchardists are seriously looking for other alternatives as a means of survival.

One of these alternatives is through biological products such as offered by Agro Marketing, Inc. (AMI), a national firm with a regional office in Eastern Washington.

Three falls ago, AMI's BioPlus system

was started in Washington State, according to Don Monforton, a technical service representative for AMI in Oakesdale. The system is currently used in approximately 30 states.

For Monforton and Dr. Allen Stout, director of research and technical services for AMI in Spokane, such a change is essential.

"What I feel strongly, Dr. Stout said, 'is that without widespread use of biological programs in the next 15 years, American agriculture will be in desperate trouble."

"Farming ought to be the world's most profitable occupation because agricultural resources are naturally renewable. Some farmers are going

broke because they are not using or maintaining their own resources.

"We are losing more soil to erosion than during the dust bowl."

The BioPlus system is designed to combat these problems.

Three of the products currently being marketed include BioPlus AP682 (formerly AgroPlus), a biological growth activator and soil conditioner; BioPlus HV682, a biological growth activator for heavy soils; and BioPlus

Micro 700, which is chelated micronutrients plus seaweed. A chelate is an element attached to or surrounded by organic molecules.

BioPlus AP682 is designed to help plants, from wheat seedlings to apple trees, to better utilize what nutrients are in the soil. This, in turn, can help the farmer get better efficiency out of the fertilizer he uses.

Continued on page 8



Don Monforton talks to Jerry Franklin about the BioPlus system at an orchard near Wenatchee.

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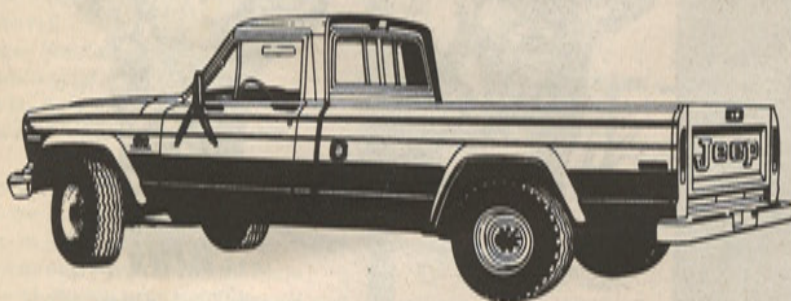
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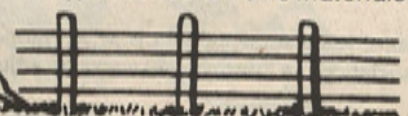


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Omak orchardists run

continued from page 1

go in the same direction as everybody else," said Dick.

"It is such a small orchard, we had to get more back per box than the cooperatives could generate for us."

Dick and his wife, Virginia, purchased the Omak orchard from her father, Earl Allen, in 1961. Allen, who now lives with his wife in Palm Springs, planted the original 12 acres in the early 1950s.

The Sheets now have about 60 acres of fruit trees and 30 acres of unimproved land. Their son, Doug, and his wife, Sandy, also joined the business.

The family bought Hi Country Orchards at Oak Glen in Southern California in 1975. It had taken them four years to find the property, which is at an elevation of 4,700 feet. Since 1975, the fruit stand has tripled in space.

Among the stars who are their customers are Susanne Sumers and Alan Hamil. The late Walter Knott of Knott's Berry Farm also bought apples there before the Sheets added the jams and cider.

Some of their customers drive 100 to 150 miles for the frozen cider. Because fresh cider without preservatives is easily perishable, the frozen feature is a selling point. "They can keep it all afternoon in a hot car while they visit other places," Doug said.

However, this selling point is not the reason the Sheets decided to freeze their cider, which is pressed and frozen in Omak.

"Most cider is cooked or has preservatives added to it," Virginia said. "But cooking changes the nutrition, as well as the taste."

"Then it is not natural," Dick added. "The definition of cider is 'unadulterated' -- nothing taken away from it; nothing added."

The process used by the Sheets is the same one used for hundreds of years, Dick said.

The thick, raw cider is frozen in plastic jugs. Most of the pressing is done in the fall when the apples are fresh and the cider retains this "real fresh flavor," Virginia said.

"It is more costly," she added, "but people are willing to pay the difference if they know what the difference is."

Blending is necessary for good cider, Dick said. The Sheets use Red and Golden Delicious apples for the base, and Winesaps, Jonathons and MacIntosh apples for blending.

The jams and jellies are also made in Omak. Last year, Virginia and Sandy and a small crew spent about two months filling 16,000 jars with jam and jelly.

The jams and jellies take a large amount of sweetener and so when Virginia saw an ad from a local supermarket on a special for sugar, she ordered a ton.

"The man at the store didn't believe me," she said. "He was sure I was pulling his leg." But she wasn't, and the store ordered the sugar.

This last season, the apple cake in a jar was added to the Hi Country Orchards fruit stand. The idea came from a friend who had cooked a pumpkin dessert in a jar.

The cake is baked in the jar and sealed immediately after it is removed from the

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unique fruit stand

oven. It took a number of experiments and "we had a few failures," Virginia said, but the cake was a success.

Cidercycles--five ounce cups of frozen cider with a stick--are also sold at the stand.

"It is still hot down there through October," Doug noted.

They also sell cider in 10-ounce plastic bottles and make their own caramel for apples.

The Sheets were also successful with their experiment of placing a small cider press in the middle of the two acres of Californian apple trees and allowing people to pick and press their own apples.

"We had no idea how it would go," Doug said. "But they picked all the fruit. They loved it."

"They don't mind paying the price because it is a family activity. They can buy the cider cheaper at the fruit stand, but it's the activity that makes the difference."

The Sheets also sell gift packs at their stand and ship their products throughout the country. Customers are not hard to find, since they are located in an area which holds 12 million people within 75 miles.

"Here (in the Okanogan Valley) we have more apple trees than people," Dick said.

The name of Hi Country Orchards is also being circulated through a brochure about Nissan trucks, which used the fruit stand as a background for one of its advertisements.

"The people creating the brochure said they 'couldn't build a better prop in a studio,'" Doug said. "After that, in February, a guy backed up his Nissan pickup in the same position as the one in the brochure and took a photo. He had just bought the pickup."

Doug and Sandy and their two children, eight-year-old Chad and six-year-old Angie, leave Omak for Oak Glen in late August just before harvest in the Okanogan. They open the stand usually the first of September as soon as the earliest fruit is ready.

They hire 12 employees for the bulk of the business, which is during a six-week period in the fall.

The younger Sheets then trade places around Thanksgiving with Dick and Virginia, who stay in California until the stand is closed, which is usually in late March.

The entire family pitches in, including Chad, who made \$30 to \$40 tearing down boxes to reuse next season, and Virginia's parents, who are 79 and 81 years old and help out occasionally, making it a four-generation operation.

Chad and Angie are taught under a home school program, which works well with the movement between

Washington and California.

The business has grown a lot during the last 10 years, and more changes are possible.

"We are a seat-of-the-pants operation," Doug said. "We might have a whim and go do it."

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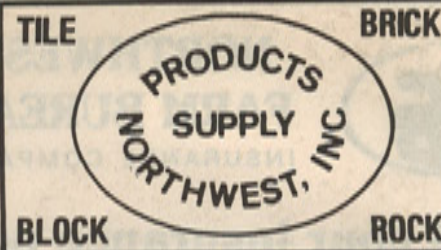
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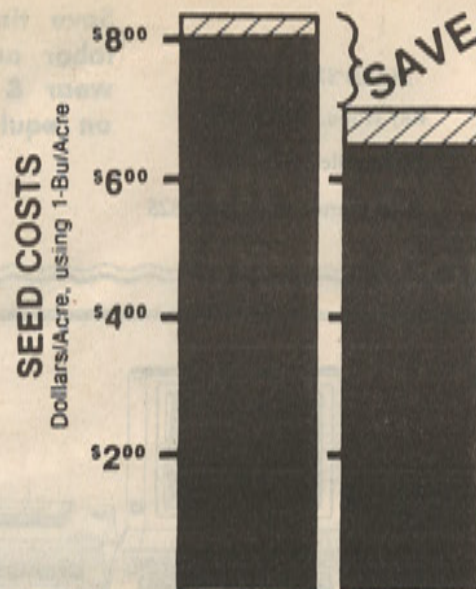
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Biological technology continued from page 5

This product, applied in liquid form, stimulates biological activity in the soil, increasing aeration and water uptake and helping prevent soil loss from erosion.

BioPlus HV682 is a strengthened formulation of BioPlus AP682 designed for heavy clay soils or soils with high magnesium.

BioPlus Micro 700, formerly known as BioPlus, is used in row or foliar applications on growing crops. The product provides growth stimulants to the plant, as well as micronutrient feeding.

Monforton, having been a fruit grower and in farming, became interested in biological technology as a result of problems he saw after plowing a field a few years ago. "I thought there had to be a reason that the soil was too hard," he said.

His following investigations brought

him to BioPlus and the seaweed research of Dr. T. L. Senn, now a retired research scientist from Clemson University in South Carolina. Dr. Senn has studied seaweed, which contains every trace element known to man, since 1958.

"Seaweed has been used in Europe for a long time," Dr. Senn said. "The Chinese and Japanese have also used the principle."

"We have the ability to convert the seaweed into a product like instant coffee," he said. The freeze-dried substance is then easily diluted with water.

The seaweed used in the BioPlus foliar feed is harvested off the coast of Norway. The particular seaweed does make a difference, Dr. Senn noted.

Acceptance over the years has been slow, however, the research scientist said.

"Nature reveals its secrets reluctantly," he said. "And people have a tendency to condemn what they don't understand."

"Anytime you mention a weed, it tends to turn people off. But seaweed is not a mysterious thing. It is found in toothpaste . . . beer . . . ice cream."

Dr. Senn stressed that the seaweed product is not a fertilizer. "It is not a replacement for NPK (nitrogen, potassium, phosphorous)," he said. "It is complementary to them."

However, by helping the plant utilize what nutrients the soil already has, growers can often cut down on the cost of fertilizers, especially nitrogen.

BioPlus can increase fertilizer efficiency, Dr. Stout noted. The efficiency of fertilizer nitrogen is only approximately 40 to 50 percent in this country, he said. Phosphate efficiency is about 10 to 15 percent.

Dr. Stout explained that soil contains multitudes of beneficial micro-organisms, and many of these micro-organisms remain dormant, or inactive, to a large degree until conditions are right. They stay there, he said, like seeds.

"Top soils are formed by biological activity; the decay of micro-organisms," he said. "But farming uses up a lot of top soil and a lot of management programs are ignoring biological technology."

"Now, some fertilizers are not very effective."

However, by stimulating the growth and activity of these micro-organisms through BioPlus growth activators, the fertilizer efficiency can be increased significantly.

"They are tools to help in management," Dr. Stout said. "They are not the total answer. We also have soil testing and other services available."

continued on page 10

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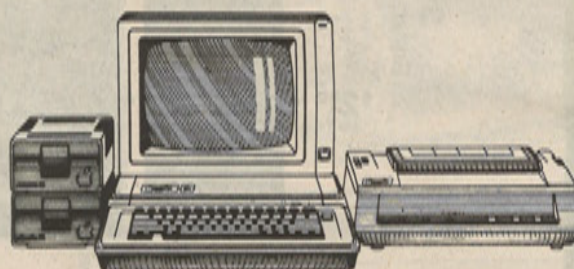
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Marketing

continued from page 1

"We ought to look at the growing, packaging and processing of the products they need," O'Rourke said.

"Exporting raw commodities is probably the least profitable for the state."

Processing these commodities would increase employment and "be a tremendous boost to the economy," he said.

"There is a tremendous number of major commodities in the state," he said. "Production is way ahead of marketing wheat, apples, peas and other crops."

Studying growth areas in marketing is essential, the economist said. For example, it has been determined that the heavy users of sweet cherries are 50 or older, he said.

"That is not very promising to the market."

Strengthening the agriculture industry will also benefit other industries, such as trucking, barge and processing, O'Rourke said.

"When agriculture is doing well, urban areas are also getting a lot of benefit," he added.

O'Rourke said that the proposed \$1.24 million budget for IMPACT "seems like a lot of money," but "there are so many different commodities in the state."

"Each one has a different marketing problem in a different country," he said.

WSU had requested \$1.3 million from the legislature during its last session to create the program. It only received \$48,500, however, because that was all the temporary session was able to fund.

O'Rourke said future funding looks

"very, very promising," although the "shape of the legislature and Governor will be undecided until after the November election."

"On the first round, no one voted

"And down the road, we need working relationships with scientists in Japan, etc., who know their market more intimately than we do."

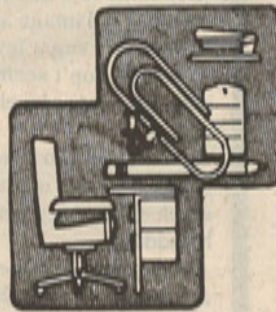
So far, the IMPACT program is off to a

promising start, O'Rourke indicated.

"Support from farmers has been tremendous," he said. "It is very encouraging."

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against the program in the Senate or House," he said.

"We've got to focus our efforts much more within the state as well as scientists in neighboring states to make a real impact on the problem," he said.

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Biological technology continued from page 8

The balance created by BioPlus and the accompanying reduction of nitrogen, therefore makes a healthier and more insect-resistant plant, he said.

This improvement in plant metabolism and nutrient resources increase pest resistance--therefore decreasing the need for insecticides. Part of the resistance is because of high sugar levels.

"Farmers are pretty dependent on chemicals," Dr. Stout said. "But in the Midwest, many growers using the BioPlus system are using less insecticide."

Dr. Stout said that tests show there is less insect damage and disease in plants with higher sugar levels.

"Insects don't seem to attack plants with high sugar levels as badly," he said.

Insects are also attracted to plants with a high nitrogen content, he said. Too much nitrogen cuts sugar production, he added.

Monforton explained that insects are attracted to the weakest, unhealthiest plants.

According to "Acres, U.S.A. Primer" by Charles Walters, Jr., and C. J. Senzau, the codling moth won't hatch if the right minerals are present, he said.

Several growers in the Columbia Basin have also reported that potatoes grown under the BioPlus system have a longer storage life.

Healthier plants are also more competitive with weeds, Monforton said.

"We are getting stronger sprays, but losing control," he said. "We are getting more and more weeds and they are getting harder to control."

Frank Calsbeck, an orchardist in the

Peshastin-Dryden area, hopes to reduce his insecticide costs in half by using the BioPlus system. Calsbeck said he spends approximately \$10,000 a year for insecticides on 30 acres of fruit trees.

"It's costly in this business any more," he said. "I don't care what farming operation it is."

The product is now reaching more into the tree fruit industry where orchardists like Calsbeck are trying to find ways to cut costs.

"The potential is there for good results in fruit," Dr. Stout said.

The growth stimulator product is produced by 28 selected micro-organisms. It is applied at various times to increase biological activity, depending on the crop and growth stage of the plant.

The liquid concentrate can be applied

continued on page 11

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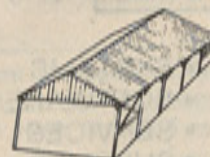
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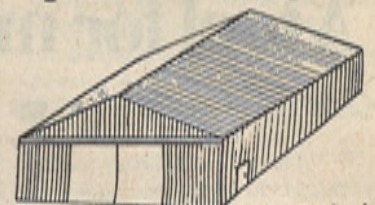
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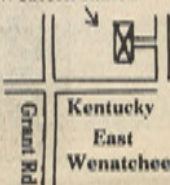
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Biological technology

continued from page 10

by air or ground and with fertilizer or herbicide.

Results depend on conditions, Dr. Stout said, although effects can often be observed within several weeks.

The biological system changes the structure of the soil, greatly improving water absorption. For the dryland farmer, Dr. Stout said, that means picking up rain better and reducing erosion problems.

"Pollution with chemicals and erosion are major concerns today," Dr. Stout said.

"If the industry or growers don't

control these problems, the government will impose more regulations for control.

"Farmers need to be less dependent on these things. Most soils contain high levels of reserve nutrients. The key is to

Barnes Farm & Orchard News, May, 1984, page 11

make them available.

"Farmers have a soil safe deposit box of mineral reserves and many have lost their key."

And the key, Stout is convinced, is biological technology.

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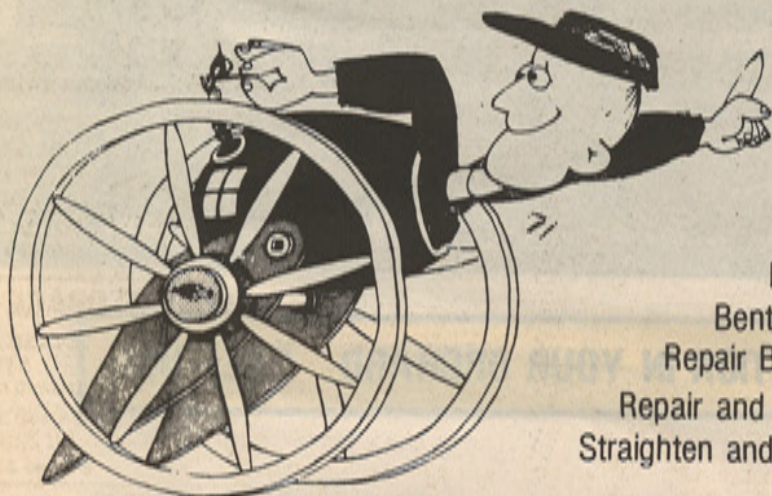
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June will be earliest for white wheat futures

June is the earliest that trading could begin for white wheat futures on the Minneapolis Grain Exchange, according to Steve DeBow of Marketing Services, Inc., a registered commodity advisory firm in Ritzville.

The status of the futures market contract for white wheat is waiting for final approval by the Commodity Futures Trading Commission (CFTC), which has asked the exchange to respond to some questions, DeBow said.

Once the exchange responds, the CFTC will put the contract request on the docket, he said. If it makes the May docket, trading would begin in June.

Tony Dirks, president of Marketing Services, Inc., and Northwest Hedging, spoke to traders at Minneapolis about the contract last March.

"He received a really good reception," DeBow said. "There is a lot of enthusiasm in Minneapolis."

Hedging in the futures market using the new white wheat futures contract will add another "very good marketing tool to the ones already available," he said.

White wheat producers now market their grain either by cash sale or forward contract. If the futures contract is approved, farmers can hedge on the futures market.

"Although futures market hedging is not the answer to all of the producer's marketing problems," DeBow said. "It will certainly be helpful in developing a market strategy."

One of the benefits of hedging, he said, is "price insurance."

"Until the white wheat contract begins trading, there is limited opportunity for a grain trader who buys and sells large amounts of grain to reduce the risk of a price drop between the time he buys the grain and the time he resells it," he said.

"As a result, he has to offer the producer less for his grain than he would if he was certain of what his resale price would be."

Specifications of the new contract include trading units of 1,000 to 5,000 bushels; a grade of No. 2 soft white wheat or better with no degree of dockage allowed; and the trading months of September, December, March, May and July.

The futures contract should also help with production credit loans, DeBow said.

The month for trading may be selected up to 12 months into the future and the producer will have the opportunity to hedge his wheat crop before he plants it in the ground, DeBow explained.

In order to use the futures market properly, the farmer must first determine the price at which he can sell his grain, he said.

He does this by adding all of the costs involved in raising that particular crop, plus a reasonable profit margin, and then dividing the total by the number of bushels he expects to raise, he said.

He then knows the price range at which to place his hedge in order to "lock in" the price he can realistically get, he added. He should also decide when he wants to sell his cash grain to cover his cash flow and tax needs.

Hedging can benefit more than the producers. Grain elevator companies, grain buyers and exporters can use it as well, DeBow said, as well as buyers from foreign countries who are now buying at cash prices.

"It can help move grain even if the market is depressed," DeBow said. "At a time of low prices, the grain companies can sell wheat at the lower prices and buy a futures contract. Therefore, they will be holding futures instead of wheat."

DeBow stressed that a responsible broker keeps a close eye on the market. "We watch the market," he said.

"We look at seasonal patterns. We make the decision here when to put the hedge on."

Fundamental and technical advice to the farmer is also offered to help him decide whether a forward contract or hedging is the best alternative for price protection, he said.



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