

Ukraine A Key In Soviet Agricultural System

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Editor's Note: Steve Renquist spent six months in the Ukraine in 1978 living and working on Soviet farms as part of a USDA exchange program.

The nuclear accident near Chernobyl in the Soviet Union in late April has raised many questions and caused much concern about its effect on Soviet agriculture.

The reactor site at Chernobyl is located about 60 miles north of Kiev, the capital of the Ukraine. The major area affected by the initial release of radiation was in a 70-mile circle around Chernobyl, encompassing a large portion of the Kievskaya oblast. (An oblast is an administrative subdivision usually a bit larger than a county in the United States.)

The entire Republic of Byelorussia and the second largest-hit area. This republic lies to the north of Chernobyl. At the time of the accident, winds were blowing northwest out of the Ukraine, across Byelorussia into the Baltics, east Poland and Scandinavia. The majority of the

Ukraine is not believed to have been seriously contaminated.

To understand what is at stake requires an understanding of the region's historic agricultural production, topography and weather patterns.

Soviet Breadbasket

The Ukraine, considered the breadbasket of the Soviet Union, makes up about 3 percent of the Soviet Union's land mass. The region supplies the populations of three major cities - Moscow, Leningrad and Kiev - with most of their food.

According to estimates from the U.S. Department of Agriculture (USDA), Ukrainian agricultural production accounts for nearly 25 percent of all Soviet farm production. Four smaller republics north of Chernobyl also contribute substantially to Soviet food production.

Together, the five republics account for nearly one-third of all Soviet dairy production. The largest sugarbeet production regions in the Soviet Union are located in the Ukraine, as are some of the largest winter-wheat and flax areas. Barley, corn and potatoes are among the Ukraine's

major crops. The region also is one of the Soviet Union's largest swine-production areas.

These affected areas in the northwest European Soviet Union have a temperate, cool, moist climate. Because of their relative proximity to the Baltic Sea, they have a reliable moisture source. Rainfall is regular during the summer growing season, averaging 20-30 inches per year. The heaviest rainfall months are August and September. During the winter, there are numerous light snows, but seldom does this area experience major snow depths.

Summer temperatures generally are in the 70s and 80s. It is unusual to have long periods with temperatures in the 90s. The frost-free growing season is 130-140 days. Winter temperatures usually are moderated by the Baltic Sea and rarely go past 10 degrees below zero. However, the occasional Arctic cold air outbreak does prevent this area from being a significant winter-wheat growing region.

Topography

The topography of the northern Ukraine and Byelorussia closely resembles Minnesota and

Manitoba. The land is flat to gently rolling, with numerous lakes and marshes dotted across the countryside. It was once largely covered with forests of birch and pine. Today, many of the forests have been cleared for farming and grazing, but the majority of the countryside is still checkered with trees.

The gray and brown podzolic soils are not nearly as fertile as the famous chernozem, or black soils, of the southern Ukraine and middle Volga. (Podzolic soils are formed in temperate to cold, moist climates, usually under mixed forests. They are marked by an organic surface layer above a gray leached layer.)

These forest soils are often poorly drained, acidic and vulnerable to overcropping. Despite these problems, the soils can be quite productive when drained and limed and crops rotated.

Because of the cool, moist, relatively long growing season and the podzolic soils, this region is suited best for cultivation of winter rye, oats, potatoes, flax, sugar beets, pasture and forage crops. With the abundance of pasture and forage crops, this area also is ideally suited for dairy and livestock production.

These areas of the north Ukraine, Byelorussia and the Baltics during czarist times had a long history of numerous small farming communities. Byelorussia and the Baltics are still the most densely populated farmland in the Soviet Union. Now under the Soviet system of agriculture, these lands and small communities have been organized into two basic types of farms - the sovkhoz, or state farm, and the kolhoz, or collective farm.

In general, the sovkhoz is owned and operated by government-appointed people with little community involvement. The kolhoz is more of a cooperative organization of farm families granted perpetual rights to rent free state land. Local Communist party members elect the leaders, with final approval from the farm-board members. Members have more to say about production decisions and income dispersal.

The state farm usually concentrates on growing a few main crops for delivery to state procurement centers and little else. While the collective produces a few major crops, it typically tries to be more versatile, producing a lot of food stuffs for the community. This western region of the Soviet Union has many more collective farms than state farms.

By Soviet Standards the farms of Byelorussia and the Baltics are not large, making up only about 3 percent of the agricultural land of the Soviet Union.

Despite the relatively small amount of farmland in these areas, approximately 10 percent of the Soviet rye, 5 percent of the oats, 3-4 percent of the winter wheat, 13 percent of the potatoes, 5 percent of the barley, 25 percent of the flax and 7-8 percent of the Soviet milk and meat are produced there.

Favorable weather patterns at the time of the accident helped prevent massive damage to agriculture in the Ukraine. Winds from the southeast carried much of the contamination into the less productive areas of Byelorussia. By the time the wind shifted, it appears that much of the problem had been contained.

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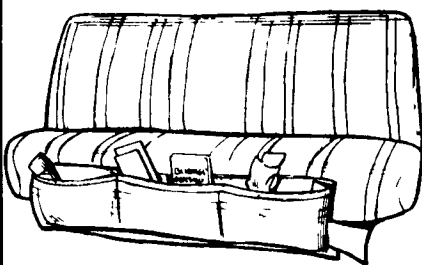
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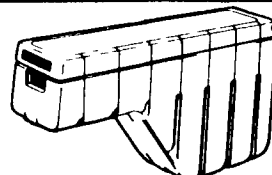
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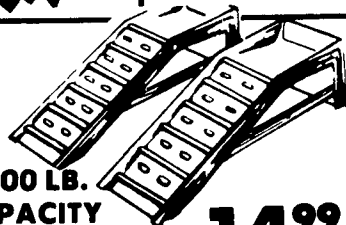
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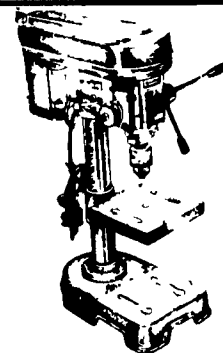
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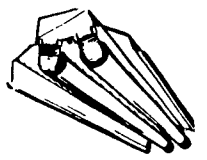
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