

INSTITUTE OF CURRENT WORLD AFFAIRS

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Agrargazdasagi Kutato
Intezet
Budapest, Hungary

Mechanization of Agriculture
in Romania

May 3, 1984

Mr. Peter Martin
Institute of Current World Affairs
Wheelock House
4 West Wheelock Street
Hanover, New Hampshire

Dear Peter:

In 1979 Romania's leadership called for full mechanization of agriculture by 1990. Judging by what I saw this April in Romania, they're going to have to hurry to reach that goal. Much of the spring plowing and planting is being done by tractors, but horses are still a mainstay of Romanian agriculture, and compared with Hungary, Romania is in an earlier era of agriculture. Hungarian cooperatives still keep a few horses for their members to use on small household plots, but nowhere in Hungary do you see the preponderance of horse-drawn vehicles on the rural roads that you see in Romania. In a ten-day trip through Transylvania and across the Wallachian plain of Romania I found some variation in mechanization from one region to another, but horses and bullocks are being used everywhere to transport manure and hay, and they can often be seen working in the fields as well.

Another contrast between Hungary and Romania is that Romania is one of the only countries that still relies on Machine Tractor Stations to operate farm equipment, rather than allowing cooperative farms to own their own machinery. The Soviet Union created such stations in the early 1930's to centralize and control the use of all agricultural machinery, and they were adopted in eastern Europe after 1945. But the concept was abandoned in the Soviet Union and throughout eastern Europe, except in Romania, after 1958, as it didn't allow for the timely and efficient use of machinery on farms. In Romania these stations not only still take care of field operations but also of some transportation needs in the country side. Heavy tractors can be seen everywhere hauling wagons filled with workers

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long distances to the fields. Light trucks, which would be more energy-efficient and inexpensive to use for this purpose, are non-existent on rural roads.

Mechanization of agriculture is important because when a country industrializes its economy it absorbs labor from the farms into the factories. Machines make up for the decline in human and animal power on farms, make farm labor more productive, and thus help to keep rural standards of living closer to urban living standards. In Romania where little has been invested in agriculture until recently, rural living standards have remained low and rural-urban migration has been faster than the pace of mechanization

Even though Romania tried to slow the outflow of labor from agriculture by increasing agricultural wages and pensions during the 1970's, there are often labor shortages in some regions and at peak seasons. At these times the regime mounts "campaigns" in which industrial workers, soldiers, and students are used in crash programs to sow and harvest. This can produce confusion when the agricultural infrastructure becomes overloaded with too much manpower, and it produces bottlenecks in those sectors of the economy from which the labor has been borrowed. Adequate mechanization could solve these problems, increase yields, and reduce post-harvest losses as more timely and efficient operations become possible. Nicolae Ceausescu, General Secretary of the Communist Party of Romania, said in 1981 that delays in harvesting regularly caused losses of up to 20 percent of the wheat crop and 20-30 percent of other crops.

Mechanization is also important as a symbol of modernization and economic development. Two of the most prominent achievements claimed for agriculture in Romanian publicity are the total amount of grain produced in the country and the number of tractors in use. The image of a peasant dozing on the seat of an antique wooden-wheeled wagon pulled by a couple of bony horses is not the image of progress under socialism that Romania would like to project. But in practical terms, the number of tractors in use is not a very good indicator of progress either, except in the broadest terms. Tractor power, measured in horsepower, is a much more meaningful statistic. When a relative saturation point has been reached in tractor power, as is the case in much of eastern Europe now, it's also necessary to take into account the availability of other kinds of specialized machinery.

The statistics available on tractor horsepower per 100

hectares of farmland in eastern Europe present some rather surprising comparisons between Romania and the other East European countries. In 1978 East Germany, Czechoslovakia and Poland had the most mechanized agricultural economies, with 158, 150 and 123 tractor horsepower per 100 hectares, respectively. Bulgaria, Hungary and Romania, the more southerly and less industrialized East European countries had, as one would expect, substantially less tractor power. The surprising figure is that Romania, with 76 horsepower per 100 hectares, appears to have been more mechanized in 1978 than Hungary, which reports only 69 tractor horsepower per 100 hectares of farmland.

If these data are correct for 1978 (which is by no means certain given Romania's general pattern of statistical inaccuracy) they clearly don't reflect the situation prevailing today in Hungary and Romania. It's possible that the degree of mechanization may have fallen drastically in Romania since 1978. But even though it has been observed that Romania's farm machinery has a very high scrapping rate, it's difficult to see how tractor stocks could have fallen as low, relative to Hungary's, as they appeared to be this spring. Romania's available tractor power must be very much underutilized.

A similar anomaly exists in data on farmland area per combine grain harvester in these countries in 1978. These data seem to indicate that Romania has one of the most mechanized agricultural sectors in this region. Yet it has also been reported that as recently as 1977 only 50 percent of the corn crop in Romania was harvested by machine, while in 1978 more than 70 percent of corn in Hungary was machine harvested.

How does one explain these discrepancies between the amount of agricultural machinery Romania claims to have, and the amount it seems actually to be using? One obvious explanation is that the organization and management of Romanian agriculture, with its system of Machine Tractor Stations, is below the standard for other East European countries. This must lead to inefficient use of the existing machinery. Lack of spare parts has also been a traditional problem. Many of the existing tractors may be sitting idle, waiting for parts.

Probably the most critical problem leading to under-use of machinery, though, is the severe energy shortage Romania has had in the past few years. Gasoline is scarce and very expensive, the city streets are almost completely blacked out at night, and homes and offices are only heated to 59 degrees in the winter. Since there's no evidence that agriculture has had priority in the allocation of scarce fuel,

much of the available agricultural machinery may be sitting unused in the Machine Tractor Stations waiting for gasoline to become cheaper and more plentiful. Further impacts of the energy shortage are also evident in the widespread use of manure rather than chemical fertilizers in the fields. With chemical fertilizer use predicted to decline further this year, "organic" fertilizers are likely to become more, rather than less important in the near future. Since Romania is the only East European country reported to have increased its stock of horses significantly since 1980, one almost has the impression that they're turning back toward traditional agricultural practices. If so the countryside will have even more of the rustic appeal that brings in tourist dollars, but that's a poor basis for economic development.

Sincerely,

A handwritten signature in cursive script that reads "Bruce Hall".

Bruce F. Hall

Received in Hanover 5/18/84