

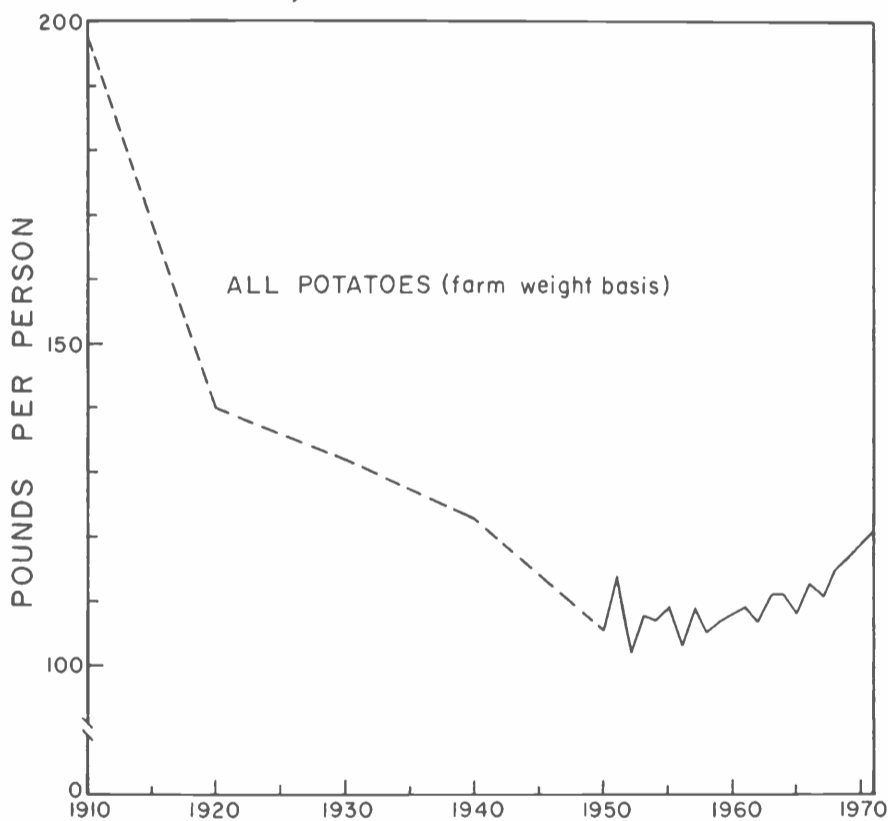
# Potatoes Are Coming Back!

by C. Curtis Cable, Jr.\*

Potatoes have been a staple food commodity in the U.S. for several decades. At the beginning of this century, annual consumption averaged approximately 200 pounds per person. However, by 1920 per capita consumption had declined to 140 pounds, and continued to decline to a low of 102 pounds by 1952 (Chart 1). Consumption remained near this level throughout most of the 1950s.

Then, in the early 1960s people started to eat more potatoes! The increase was relatively slow for a few years, but from 1967 to 1971 per capita consumption increased from 111 to 121 pounds. From the low in 1952, per capita use has increased an average of about 1 pound per year. One authority estimates that per capita use will continue to increase and reach 127 pounds by 1980.<sup>1</sup>

Chart 1. U. S. Per Capita Consumption of Potatoes, 1910-71.



Source: Stephen J. Hiemstra, *Food Consumption, Prices, and Expenditures*, Economic Research Service, U. S. Department of Agriculture, Agric. Econ. Rpt. 138, July, 1968, and Supplement for 1971, August, 1972.

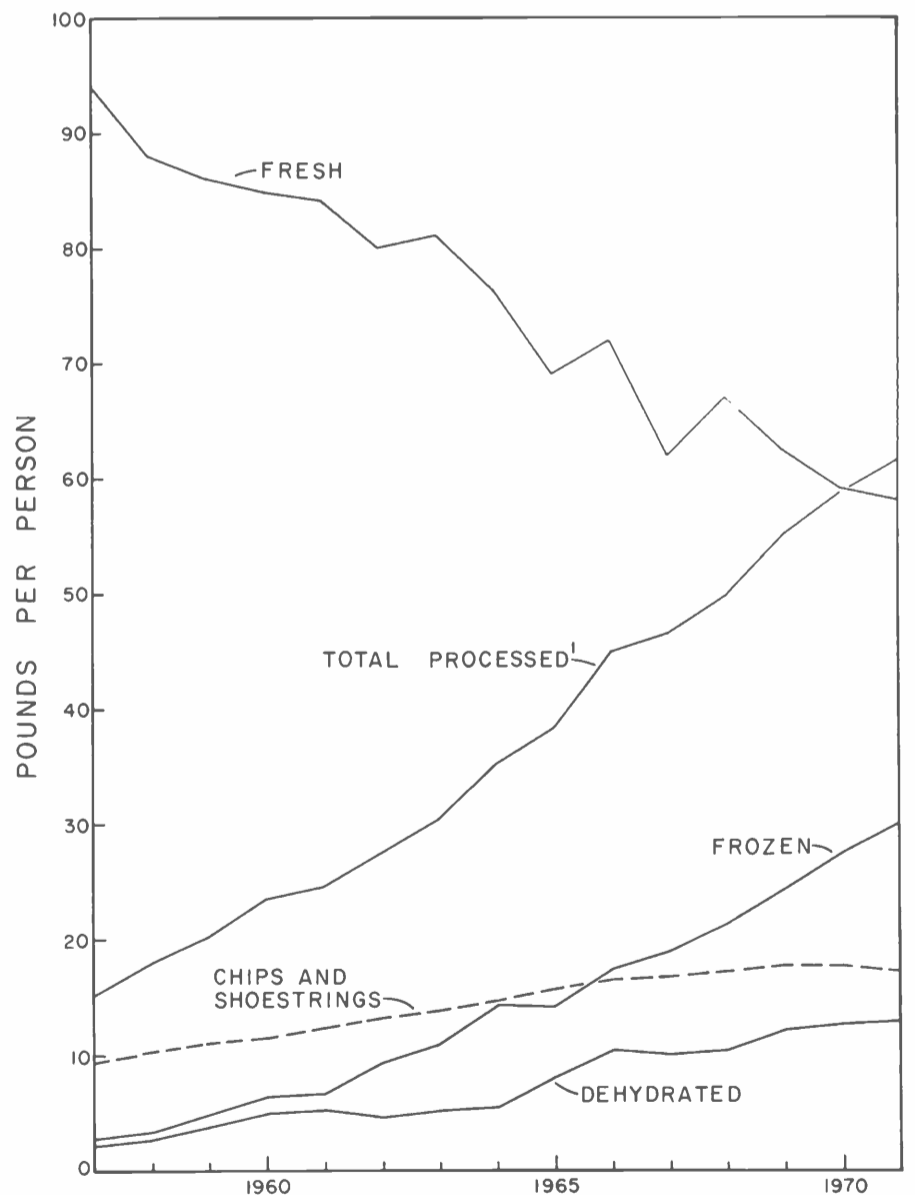
**Fresh Use is Declining** — The large drop in consumption that occurred up to the 1950s was caused by a decline in use of fresh, nonprocessed potatoes. And, this decline in fresh use has continued up to the present — dropping from approximately 90 pounds in the late 1950s to less than 60 pounds in the early 1970s (Chart 2). This decline is expected to continue, and by 1980 fresh use will approximate 35-40 pounds per person.<sup>2</sup>

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**Processed Potato Use Up Sharply** — As late as 1957 the per capita use of all processed potatoes was only 15 pounds (Chart 2). Since then, this use has steadily increased to more than 60 pounds in 1971. This is a 400 percent increase. Also in 1971 — for the first time in history — per capita consumption of processed potatoes exceeded the use of fresh potatoes.

Chips and shoestring potatoes have been a relatively popular potato product for several years, and per capita use has remained relatively stable at 16-18 pounds since the mid-1960s. In contrast, canned potatoes have not been a big seller, and per capita use has ranged from 0.4 to 0.7 pound since the late 1950s.

Chart 2. U. S. Per Capita Consumption of Fresh and Processed Potatoes, 1957-71.



Source: U.S. Department of Agriculture, *Handbook of Agricultural Charts*, appropriate annual issues.

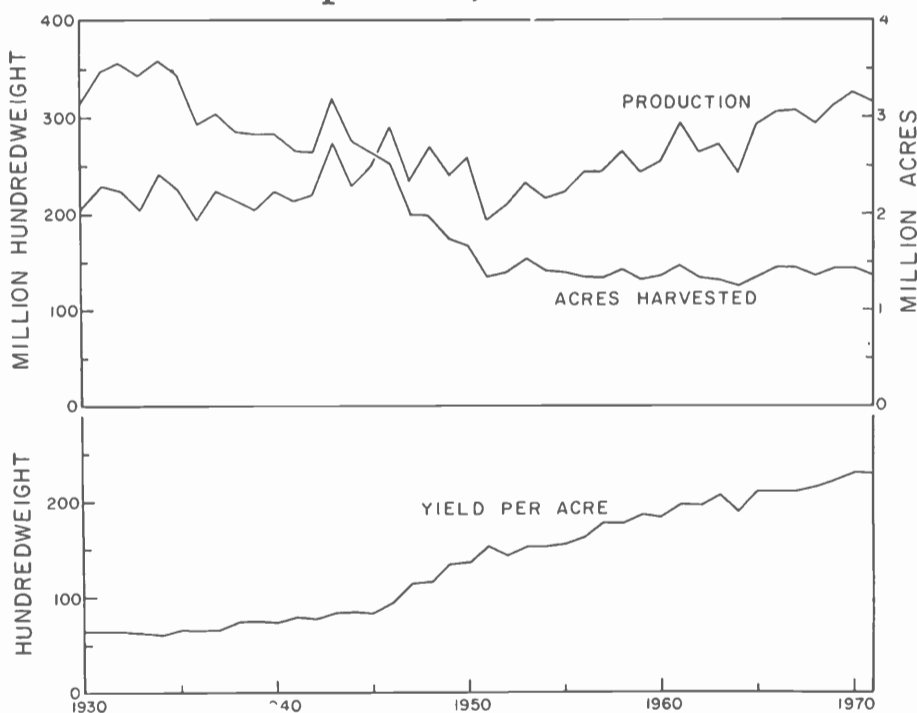
<sup>1</sup> Fresh Weight basis; includes consumption of canned potatoes has varied from 0.4 to 0.7 pounds for years covered.

There has been a very definite upward trend in the use of both dehydrated and frozen potato products during the past 15 years. Per capita use of dehydrated products has more than doubled since 1964 — from about 5.5 to 13 pounds. Per capita consumption of frozen potato products has also doubled since the mid-1960s — from 14 pounds in 1965 to 30 pounds in 1971.

Obviously, the upturn in per capita consumption of potato products has more than offset the decline in fresh use, resulting in the overall increase in potato consumption. The use of processed potatoes is expected to continue to increase, reaching 85-90 pounds by 1980.<sup>3</sup> From these comparisons, it is apparent that many consumers have substituted potato products for fresh potatoes, and possibly other foods, and are expected to continue to do so for at least the next 8-10 years.

*Causes for Substitution* — Various and numerous factors have contributed to the increased consumption of potato products. To list and discuss them all would be an enormous task. However, some of the more important factors would include (1) retail price trends, (2) convenience of “ready to cook” or “heat and serve” products, (3) the rapid increase in number of meals eaten outside of the home, (4) development of new products, and (5) merchandising efforts of the potato industry.

Chart 3. U. S. Potato acreage, Production and Yield per acre, 1930-71.



Source: *Agricultural Statistics, U.S. Department of Agriculture.*

Retail prices for fresh potatoes increased from 71.8 cents per 10 pound bag in 1960 to 89.7 cents in 1970. In contrast, prices for the 9 ounce package of frozen french fries declined from 19.7 cents in 1960 to 16.6 cents in 1970.<sup>4</sup> Although the frozen fries were still more expensive in 1970, the decline in their cost — relative to fresh potatoes — encouraged increased consumption.

Convenience in preparing meals in the home is an important consideration for many consumers. Numerous potato products available in retail stores require relatively little preparation time — and “no peeling at the kitchen sink.” This ease of preparation has undoubtedly contributed to the increase in potato consumption.

The U.S. institutional and food service markets (school lunches, hospital meals, restaurants and similar public eating places) have been growing rapidly in recent years, and currently account for roughly 25-30 percent of the total spent on food. Some food industry officials are predicting these markets will account for 40-50 percent of U.S. food expenditures by 1980. This growing market is an ideal outlet for processed potato products. Chips and shoe string potatoes are standard items in most “short order” eating places, and frozen, dehydrated and canned potatoes simplify meal preparation for larger restaurants and institutional food services where uniform quality and portion control are important.

It could be argued that because potatoes have long been a staple food in the U.S., and because they can be stored for longer periods than many fresh vegetables, it is not too surprising that consumption is increasing. But, this argument is refuted by Charts 1 and 2. The upturn in consumption did not begin until “new” products were developed, accepted and became available in both family and institutional-sized packages.

There is ample evidence that the industry has stimulated consumption as a result of the new and easy-to-prepare products. However, most new food products have to be merchandised; that is, consumers have to be convinced to “demand the product” because of convenience, nutritional value and similar attributes. To achieve this objective, the national Potato Promotion Board launched a nationwide promotion campaign in February 1973, “to increase potato consumption and to improve consumer attitudes about potatoes . . .”<sup>5</sup>

*Production Trends, U.S. and Arizona* — As a result of the upturn in per capita use, and the increase in population, total U.S. potato consumption and production have increased by more than 50 percent since the early 1950s. In 1951 the U.S. produced 196 million hundredweights of potatoes — 20 years later production had increased to 316 million hundredweights (Chart 3). Most of this increase is attributable to an almost continuous year-to-year increase in yield per acre, which has nearly tripled in the past 30 years. After declining throughout the 1930s and 1940s, U. S. potato acreage remained relatively stable at 1.3 to 1.5 million during the last 2 decades.

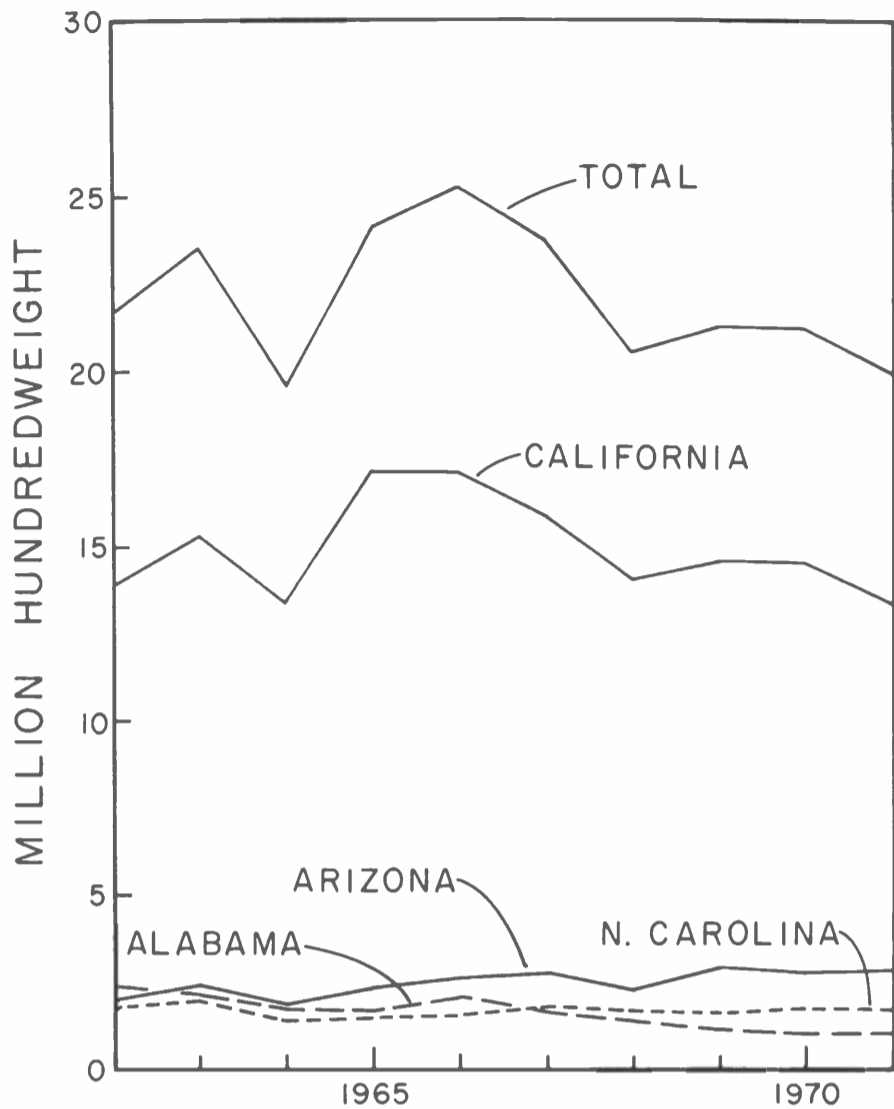
Approximately 80 percent of the nation’s potatoes are harvested in the fall. Idaho, Maine, Washington, North Dakota and Minnesota are the principal producers of fall potatoes. Another 8 percent of the annual crop matures in late summer — Washington, Colorado and Wisconsin account for about a third of the late summer crop.

About 6 percent of the total U.S. potato crop is harvested in the late spring, with California accounting for about two-thirds of the late spring crop (Chart 4). All of Arizona’s commercial potatoes are produced in the late spring, accounting for about 12-15 percent of the U.S. total late spring harvest.

Even though Arizona accounts for only about 1 percent of the total U.S. supply, potatoes make a substantial contribution to the state’s vegetable industry. Since the early 1960s, the value of the state’s potato crop has ranged from \$5 to \$10 million annually. Only lettuce and cantaloups make a larger dollar contribution to Arizona’s vegetable interest.

Both acreage and production of potatoes in Arizona have increased appreciably in the last 20 years. Production has risen from about 1 million hundredweights in the

Chart 4. U. S. Production of Late Spring Potatoes by Principal States, 1962-71.\*



\* Total production in all other late spring growing acres did not exceed 1.7 million hundredweight annually.  
Source: Agricultural Statistics, U. S. Department of Agriculture.

early 1950s to more than 2.5 million hundredweights in the early 1970s (Chart 5). During the same span of years, yield per acre remained fairly stable at about 250 hundredweights until the early 1970s, then jumped to 300 hundredweights in 1972.

**Markets for Arizona Potatoes** — Although some Arizona potatoes are sold for fresh use, the largest proportion is sold for processing — primarily to Arizona and out-of-state chippers. U.S. per capita consumption in this use has remained relatively stable at about 16-18 pounds since the mid-1960s. This stability along with the slowdown in population growth may tend to restrict the future expansion of sales to chippers.

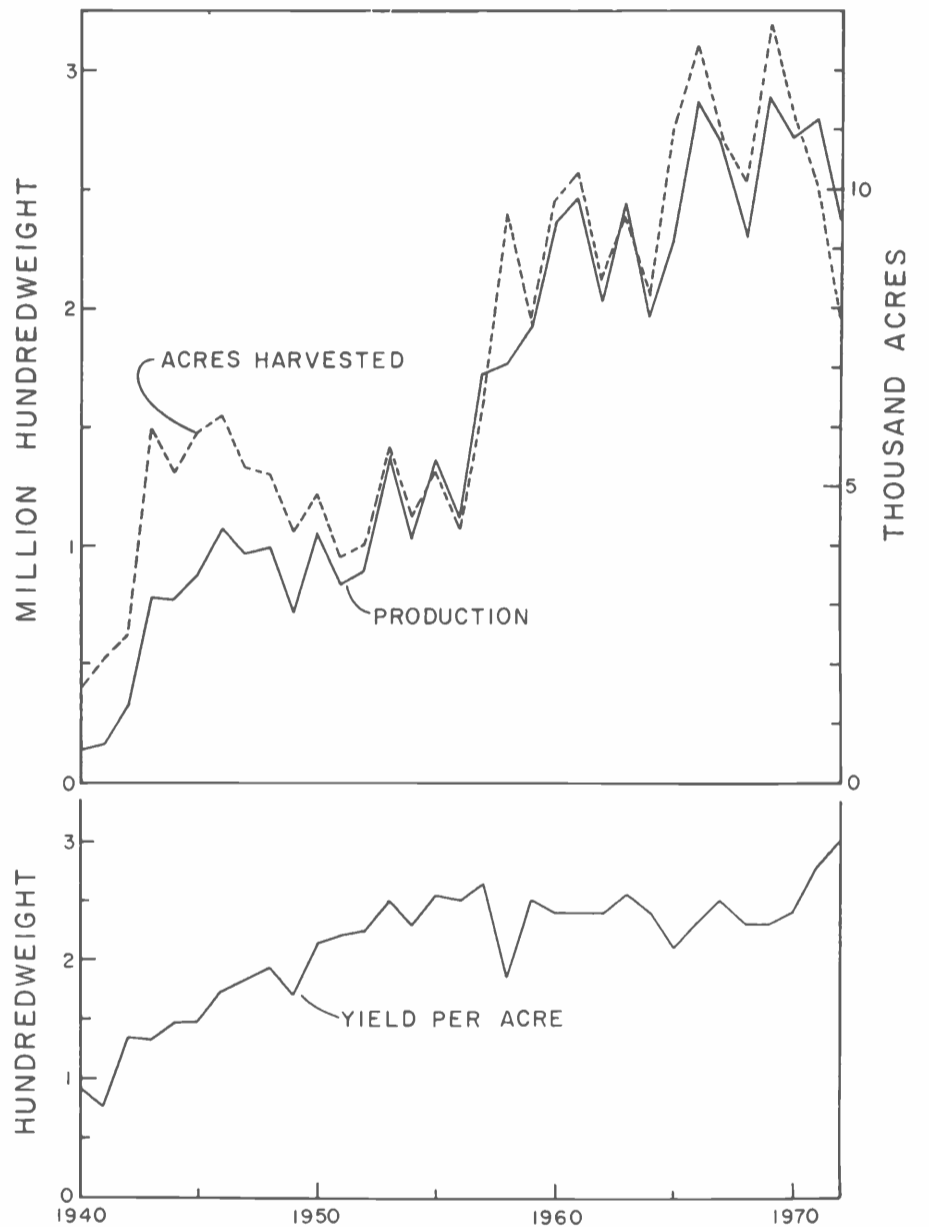
In some years Arizona growers have had a slight advantage in producing chipping potatoes, in that the crop matures a few weeks earlier than in competing areas. This makes it possible for chipping plants to begin operations earlier in the season. However, technologies for extending storage life may eventually be developed which will permit holding fall-crop potatoes into the following summer. This could provide strong competition to growers of spring potatoes.

In addition to the above long-run considerations, Arizona potato growers are currently faced with high production and marketing costs. Transportation rates and costs to out-of-state processors tend to restrict expansion,

as does the costs for water, pest control and other production inputs. Although Arizona has been "holding its own" in potato production the past several years, competition for profitable markets is keen.

Potatoes are grown in all regions of the United States. As fresh use declines and processed use increases — along with improvements in packaging and handling processed products — potatoes production will tend to shift to those areas with lowest production and marketing costs. Arizona potato growers should watch these developments and market trends, and reevaluate the situation periodically.

Chart 5. Arizona Potato Acreage, Production and Yield per Acre, 1940-72.



Source: Arizona Agricultural Statistics, 1965-72.

### Footnotes

- <sup>1</sup> Charles W. Porter, "Outlook for Vegetables and Potatoes," talk presented at 1973 National Agricultural Outlook Conference, Washington, D. C., February 22, 1973.
- <sup>2</sup> Ibid.
- <sup>3</sup> Ibid.
- <sup>4</sup> Ben W. Huang and Charles W. Porter, "Trends in Demand for Potatoes and Potato Products with Projections to 1980," The Vegetable Situation, TVS-186, October 1972.
- <sup>5</sup> "New Potato Story Goes Nationwide," Potato Promotion Spotlight, Vol. 1 No. 1, February/March 1973.