

Commodity Spotlight



U.S. Meat Export Federation

World Beef & Cattle Trade: Evolving & Expanding

Increases in global incomes in a number of key regions and the advent of a more liberalized trading environment have contributed to substantial growth in international beef trade over the past 15 years. Beef exports among the major traders are projected at 4.8 million tons in 1997, up 45 percent from 1980. But certain trade barriers—sanitary, quality, technological, and cultural—combined with changing production, marketing, and political conditions have also played an important role in the evolution of beef markets. These will likely continue to exert a strong influence as meat trade expands through the next decade.

Beef is produced and consumed worldwide, yet large-scale beef trade is limited to a relatively small number of countries and represents a small but growing proportion of total consumption. Among major producing and consuming countries, exports of beef represent about 11 percent of production, compared with 7 percent in 1980.

Health and sanitary regulations predicated on fear of spreading virulent cattle diseases such as brucellosis and foot-and-mouth disease (FMD) have limited the marketing opportunities of surplus beef producing regions. Such regulations have effectively segmented international trade in beef into two distinct markets. Many countries will not accept live animals or fresh, chilled, or frozen meat from regions where cattle diseases are endemic.

Trade in *live cattle* is significantly smaller than beef trade (both in terms of value and volume), at less than 1 percent of cattle inventories. Trade in cattle tends to be limited to countries that are geographically close, due to potential risks in shipping live animals. Examples include intra-NAFTA trade, intra-EU (European Union) trade, and Australia-Southeast Asia cattle trade. However, some breeding animals may be traded long distances when the animals' value outweighs the higher transport costs.

Cattle production worldwide is differentiated by animal genetics and feeding methods, resulting in differing quality types. Cattle are basically residual claimants to crop or land resources. Those countries with excess or low-value land tend to grass-feed their cattle herds, while those countries with excess feed grains, such as the U.S. and Canada, finish cattle with a grain ration. Grain-fed cattle have more internal fat (i.e., marbling) which results in a more tender meat than forage-fed cattle of a similar age. In Japan, although not a grain surplus country, tastes and preferences have encouraged feeding grain to cattle, but at a high cost since the grain must be imported.

In much of the world, cattle are producers of both milk and meat. Dairy cattle or dual-purpose animals tend to be less efficient at producing beef. Government policies (such as in the EU), however, may encourage beef production as an offshoot of support for dairy production.

Differences in the type or quality of beef produced can influence a country's trading patterns. For instance, the U.S. is a major *exporter of grain-fed beef* but a large *importer of grass-fed beef* for the processing industry, primarily for hamburger.

In addition to quality differences, changes in shipping technology and meat processing have influenced production and patterns in meat trade. Changes in technology such as modified-atmosphere packaging (i.e., vacuum packaging using inert gases), containerized shipping, and refrigerated containers have increased shelf life, permitting fresh product to be shipped a greater distance.

Cultural differences are also a factor in determining beef flows. Although there is only one major country where religious belief limits the consumption of beef, other factors such as cooking techniques (braising vs. stir frying vs. roasting), consumer perceptions of healthfulness, and preferences in color or size of cuts may determine sales in certain markets. The move to marketing meat cuts has allowed exporters to target specific markets with the products that match consumer preferences. Examples include high-value table cuts destined for Japan, low-value cuts for sausage to Russia, and a mixture of cuts for Mexican consumers. Those exporters who alter cutting characteristics, or otherwise address consumer needs, have a better chance of increasing sales.

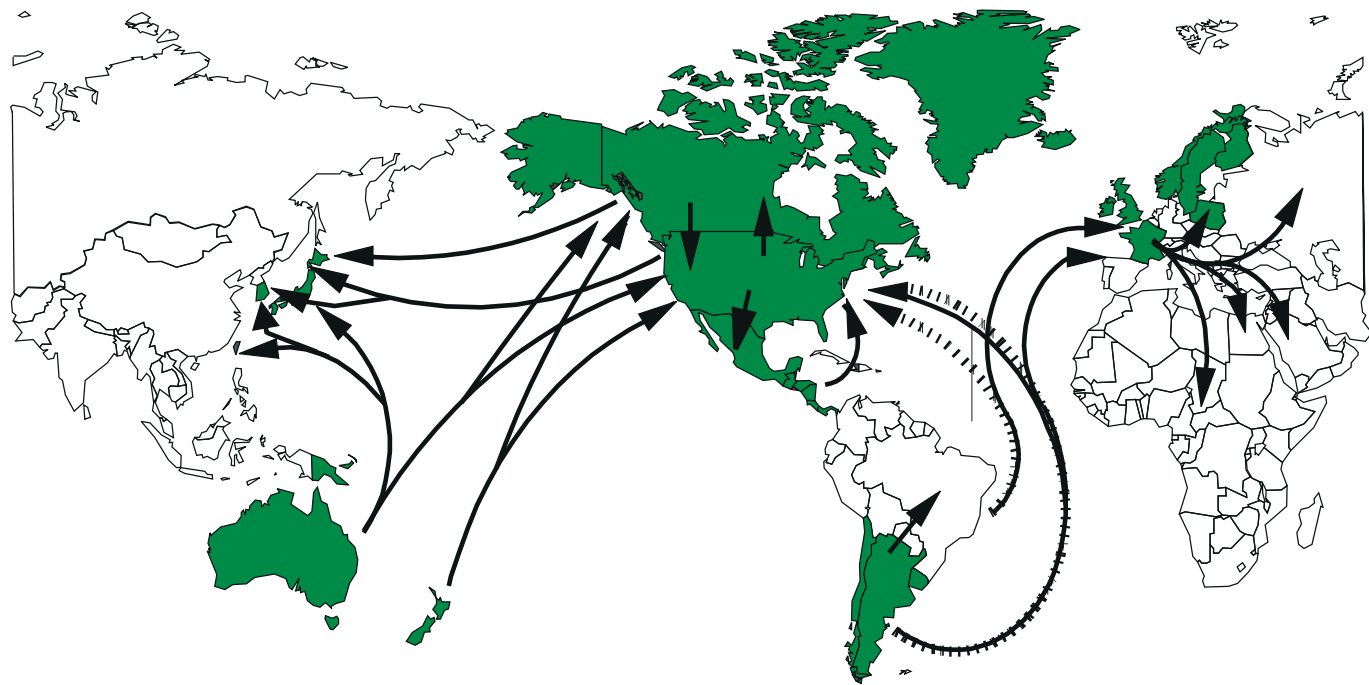
Beef Production Rising, Consumption Grows Steadily

Beef production in the major producing countries is projected to reach 48 million tons in 1998. Production has increased 20 percent from 1980 to 1996 and is expected to continue increasing at about 1.5 percent per year through 2005. (The Food and Agricultural Organization of the U.N. provides a more comprehensive set of production numbers than USDA's Foreign Agricultural Service. According to the FAO, world beef production increased 18 percent between 1980 and 1996 and is estimated at 55 million tons in 1997.)

Beef production tends to be concentrated, with the top six producers—the U.S., the EU, Brazil, China, Argentina, and Russia—accounting for about 60 percent of global production. Significant shifts among producers have occurred over time. Due to economic restructuring in *Russia*, production declined precipitously, falling 45 percent or nearly 2 million tons since 1990. Production in *China*, in contrast, has increased dramatically. Over the next

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Most Beef Trade Originates from Only a Few Countries



- Foot-and-mouth disease-endemic
- Foot-and-mouth disease-free
- All products
- Cooked and in airtight containers only

Disease status as determined by USDA's Animal and Plant Health Inspection Service.

Economic Research Service, USDA

10 years China is expected to have the world's fastest rate of production growth as booming internal demand for beef, driven by strong income growth and rapid urbanization, encourages expansion. Increased demand in Russia and *Brazil* is also expected to help stimulate their domestic production.

The *U.S.*—largest of the world's beef producers—is in the contractionary phase of its cattle cycle. Production peaked in 1996 at 25.5 billion pounds, and is expected to remain below that level through 2005 as cattle inventories contract over the next 2 years. U.S. beef production is expected to begin to increase after 2000. *Argentina* has suffered from declining production as government policies encouraged a shift in resources to the grain sector. However, the

recent declaration of *Argentina* as free of FMD could encourage increased production to service international markets.

The *EU* has suffered from periodic market imbalances, particularly oversupply, since the mid-1980's. Prior to 1992, dairy policies kept production relatively constant, and large stocks were depleted through increased export activity. However, reform of the Common Agricultural Policy (CAP) in the early 1990's began reducing dairy cattle and beef production. Additional pressure has resulted from the bovine spongiform encephalopathy (BSE) crisis (AO June 1996) and by GATT-mandated reductions in export subsidies. The BSE crisis, which came to a head in 1995-96, reduced domestic consumption and caused a sharp drop in exports. As

stocks continue to accumulate and consumption remains weak, it is likely that production in the *EU* will have to fall further over the next 10 years.

Global per capita consumption of beef is projected to increase through 2005 as meat demand in countries with rapidly industrializing or transition economies increases with income growth. Gains in per capita consumption are expected in most Asian countries. In *China*, *South Korea*, and *Japan*, the rise in consumption should outpace population growth, while consumption in other countries in the region should be about even with population growth.

Some growth is expected in *Latin America*, but gains in per capita

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consumption due to income increases in Mexico and Brazil will be largely offset by declines in Argentina's per capita beef consumption. While Argentina has one of the world's highest per capita beef consumption rates, consumption is highest among the lower classes, which have seen a decline in purchasing power in recent years.

Per capita beef consumption is expected to increase in a number of Central and Eastern European countries after years of decline, but countries that have delayed liberalizing their economies—e.g., Belarus and Uzbekistan—face a longer period of decline before income growth stimulates beef demand. In Russia, beef consumption has fallen since 1985, due to economic restructuring and loss of purchasing power. As the Russian economy recovers, beef demand is expected to increase gradually, but because of the availability of relatively cheaper pork and poultry, demand for those meats is expected to increase more rapidly.

Per capita beef consumption in the U.S. is expected to fall over the next 3 years as production declines, and as relative prices favor consumption of other meats. EU beef consumption has recovered slightly from the impact of the BSE crisis, but EU demand for beef will likely remain weak for at least the next 5 years. Any additional discoveries of BSE or any further incidences of beef-related human illness could further reduce demand and set back the recovery in consumption.

Market Liberalization Boosts Trade

The world's five largest importers—the U.S., Japan, Russia, the EU, and Canada—account for about 70-75 percent of global imports. Market liberalization has begun to increase demand for imported beef in a number of Pacific Rim countries. Although currently small importers, South Korea, Taiwan, and Mexico are expected to see substantial growth. These countries tend to demand grain-fed beef, which would benefit the beef industries in the U.S., Canada, and potentially Argentina.

The U.S. is the world's largest importer of beef, with projected imports of nearly 1.1

million tons (carcass weight) in 1997 and 1.2 million in 1998. In general, imported beef competes with U.S. cull dairy and beef cows in the production of hamburger. Imports have averaged 9-10 percent of U.S. consumption since the mid-1980's, but the actual level depends on the phase of the U.S. cattle cycle. During the liquidation phase of the cycle, U.S. slaughter of cows from breeding herds increases and imports of beef decline.

Most U.S. imported beef comes from Canada, Australia, and New Zealand—all FMD-free countries. The U.S. restricts imports from FMD-endemic regions to cooked product. The U.S. is likely to see increased levels of imports after 2000 as the U.S. enters a cattle rebuilding phase and retains female stock (heifers and cows) for breeding. The U.S. is expected to remain the largest importer of beef through the middle of the next decade.

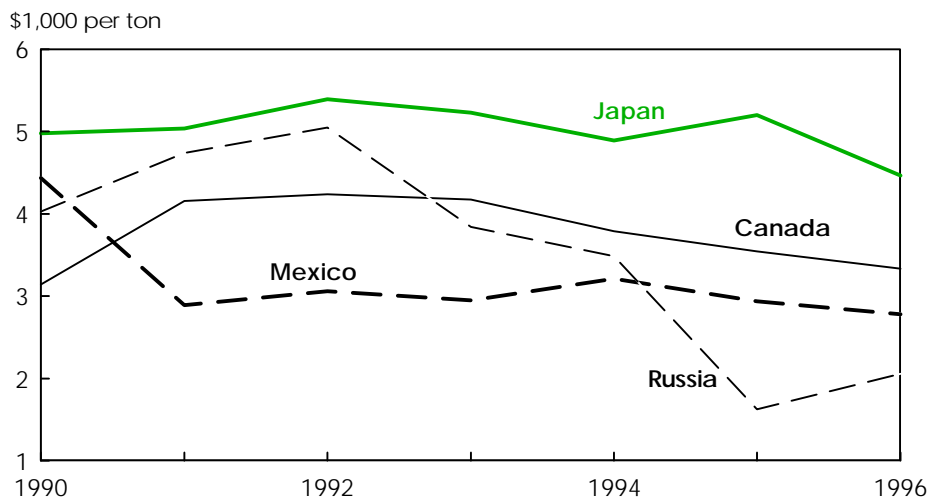
Japan trails only the U.S. in beef import volume with projected 1998 imports of 914,000 tons, and the gap has narrowed considerably since Japan began liberalizing its market in the mid-1980's. However, Japan is the world's leading beef importer in value terms due to imports of high-valued cuts. Japan's import volume climbed 317 percent between 1985 and 1996, and is expected to increase 4

percent per year through 2005. Japan is committed to reducing its beef tariffs in accordance with World Trade Organization (WTO) commitments, and imports are projected to increase from 60 to almost 70 percent of consumption by 2000 as a result.

Australia and the U.S. are the major suppliers of beef to Japan and are likely to remain so for the foreseeable future. The U.S. provides the vast majority of Japan's grain-fed beef imports, while Australia supplies grass-fed and some short-fed beef. Short-feeding, done to add some marbling, involves grain feeding for less than 90 days, in contrast to 140-150 days of grain feeding in the U.S. Argentina could ship beef to Japan under its new FMD-free status, but is not expected to challenge either the U.S. or Australia for dominance.

Russia has been a substantial importer of beef, a fact which was obscured by the large amount of internal trade in the Soviet Union. However, imports fell dramatically following the breakup of the Soviet Union. Declines in consumer incomes and the economic restructuring of the livestock sector, including the loss of production subsidies, has led to a sharp decline in beef production, down 65 percent since the late 1980's. As government

Japan Imports Higher Valued Cuts of U.S. Beef



Annual average U.S. export unit values for beef and veal.
Source: U.S. Bureau of the Census.

Economic Research Service, USDA

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support for consumption was eliminated, per capita consumption declined to levels more in keeping with countries at a similar economic level. Imports of low-value beef from other former Soviet republics, other European countries, and the U.S. have risen as production fell.

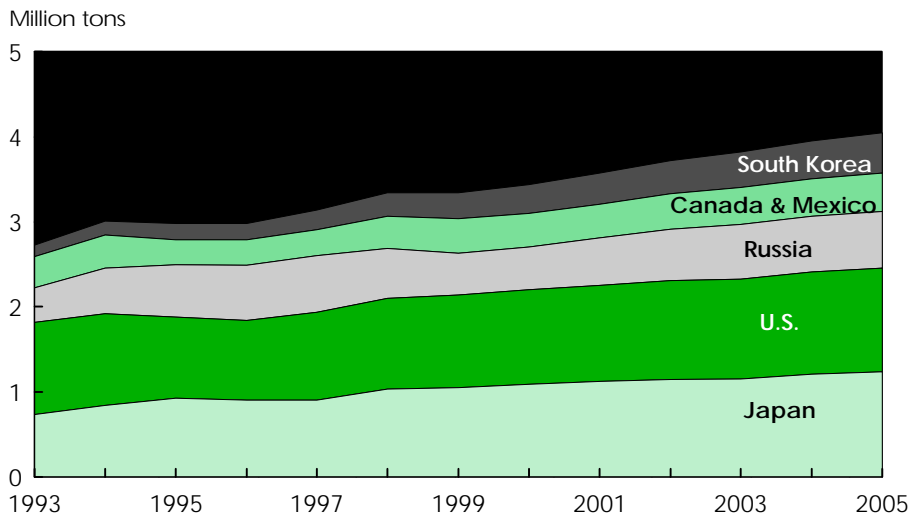
In the next decade, Russia's beef production is expected to begin increasing and will likely offset some imports. However, by the middle of the decade, imports could rise again as demand growth due to income gains outstrips beef production growth.

The EU currently ranks as the world's third-largest exporter and fourth-largest importer (excluding intra-EU trade). EU policy had been geared to maintaining market balances by exporting beef under subsidies and limiting imports. Imports have traditionally been supplied by the U.S., Argentina, and Brazil. However, the U.S. has been excluded from shipping product to the EU since 1989 because of the EU's ban on beef produced with growth-promoting agents such as anabolics. A recent WTO panel has overturned the ban, but the EU plans to appeal the ruling and will likely continue to try to prevent U.S. beef from entering.

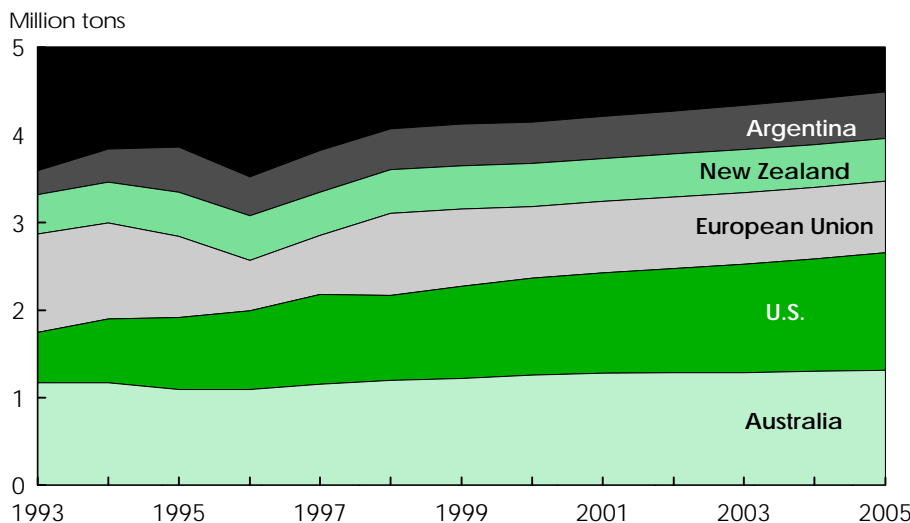
Over the past several years, EU beef imports have been dampened by large internal stocks of beef as well as by consumer concerns over the safety of beef consumption in reaction to the BSE outbreaks in Europe. Given large domestic beef supplies, it is highly unlikely that EU government will favor expanding imports beyond its WTO commitments. It is also unlikely that these large stocks can be marketed without use of export subsidies or a substantial decline in the domestic market price to near world levels. Unless the EU violates its WTO commitments to limit the use of export subsidies, it is left with the unpalatable choice of either reducing production or carrying larger stocks.

Like the U.S., Canada imports fresh, chilled, and frozen beef only from FMD-free countries and limits imports through a tariff-rate quota (TRQ). However, the U.S. and Mexico are exempt from TRQ's under the terms of the U.S.-Canada Free Trade Agreement and its successor, the

U.S. and Japan Are the Leading Beef* Importers . . .



. . . While U.S. and Australia Are the Leading Exporters



1997 preliminary; 1998-2005 projected.
*Includes veal.
Economic Research Service, USDA

North American Free Trade Agreement (NAFTA). Under the terms of these two agreements, each nation exempted the other from any quantitative limits, and under the accelerated schedule of tariff reductions there are no tariffs remaining among the three countries. Consequently, the U.S. has become Canada's primary source of imported beef.

Canada is in the liquidation phase of its cattle cycle. Imports are projected to decline over the next several years as large amounts of domestic beef compete with imported product, but will then increase as the next inventory buildup begins. The U.S. has traditionally shipped higher value, grain-fed beef to the population centers of eastern Canada. But there has been an expansion of slaughter capacity in western Canada by U.S. firms

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which are beginning to market more product in the East. This recent expansion, coupled with the potential for growth in domestic cattle feeding due to changes in Canadian grain policies, could place U.S. exports to Canada under increased competition.

The world's five largest exporters—

Australia, the U.S., the EU, New Zealand, and Argentina—account for about 75-80 percent of world beef trade. However, since the mid-1980's a number of shifts have occurred among major traders. Brazil, for example, the third-largest beef exporter in the mid-1980's, has fallen to sixth due to several factors such as increasing domestic demand absorbing a larger share of internal supplies, government policy that continues to discourage meat production, and Brazil's inability to achieve FMD-free status. On the other hand, the U.S. has seen its share of world beef exports expand sharply over the past 15 years.

U.S. beef exports have grown from less than 1 percent of production in 1980 to almost 8 percent in 1997, lifting the U.S. from eighth-largest exporter to second. U.S. beef exports are projected up 2 percent at 870,000 tons in 1997 and another 9 percent in 1998 at 950,000. The majority of the long-term growth in U.S. exports can be tied to trade liberalizing agreements. Well-positioned as a producer of disease-free, well-marbled beef, the U.S. has been able to capitalize on market liberalization in the 1980's and 1990's.

The Japan-U.S. Beef Citrus Agreement of 1988, and both the U.S.-Canada and North American Free Trade Agreements, have helped to open substantial new marketing opportunities for U.S. beef exports. Trade with these three countries—Canada, Mexico, and Japan—represented 80 percent of U.S. beef exports in 1996. These trade gains, coupled with an expanding market in Korea, are expected to continue boosting U.S. exports through 2005 to about 12 percent of production.

The U.S. will likely become a net beef exporter (volume terms) by the middle of the next decade.

Following the European BSE crisis, *Australia* has overtaken the EU as the world's leading beef exporter, but is expected to come under increasing competition from the U.S. for that position. As an FMD-free exporter, Australia has been a major supplier of grass-fed beef for the processing industries in the U.S. and Canada, and has been increasing its role as a supplier of meat to a number of Pacific Rim markets, primarily Japan and South Korea.

Since 1985, Australian exports have increased 60 percent. Australia is projected to export 1.095 million tons in 1997, which will decline slightly to 1.075 million of exports in 1998 as herds are rebuilt. Because Australia produces primarily grass-fed beef, production and exports of beef have been subject to the uncertainties of weather and its impact on the quality and quantity of forage. Australia has gone through several periods of drought, which have often forced early liquidation of herds and a near-term jump in production, followed by production cutbacks as herds are rebuilt.

Although Australia has attempted to develop a feedlot industry both to offset forage shortfalls and expand into the higher end beef markets, feed-grain sufficiency remains a problem. Feed-grain imports to Australia are effectively prohibited by regulations preventing the incidental importation of unwanted pests—i.e., insects, weeds, or plant diseases. As long as imports of feed grains are blocked by sanitary barriers, the growth of Australia's feedlot industry will be limited.

New Zealand is the world's fourth-largest exporter, but exports have shown little growth since the mid-1980's, hovering around 500,000 tons. Like Australia, New Zealand is FMD-free and produces

grass-fed beef. However, New Zealand beef production is dominated by dairy operations. New Zealand, which exports manufacturing-grade beef to the U.S. and Canada, has shown less interest than Australia in expanding into the growing Pacific Rim markets. Over the next 10 years, New Zealand's beef production is expected to decline marginally as low beef prices and weakening dairy prices encourage producers to look for more profitable alternatives to beef and dairy production.

Argentina remains the world's fifth-largest beef exporter, despite a fall in its share of global exports from 13 percent in 1985 to 9 percent in 1996. Traditionally, Argentina supplied the EU with fresh beef and the U.S. with processing beef. Recently Argentina has taken advantage of increased market liberalization under MERCOSUR—a customs union comprised of Argentina, Brazil, Paraguay, and Uruguay—to expand sales dramatically to Brazil. MERCOSUR imposes a common external tariff on members, and internal tariffs that are small and declining, or already zero. Argentina's sales to the U.S. will be limited by the U.S.'s WTO beef tariff-rate quota.

In the past, Argentina's FMD status had prevented it from expanding into the growth markets of the Pacific Rim. Now that Argentina has been successful in its FMD eradication program and has received approval of regionalized FMD-free status, the door could open to the rapidly growing beef import markets of Asia. Argentina could possibly compete better in Pacific Rim markets by shifting production toward grain-fed beef, because large supplies of FMD-free, grass-fed beef already exist in Australia and New Zealand. If Argentina adopts such a strategy, it is expected to overtake New Zealand as the fourth-largest exporter early in the next decade.

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