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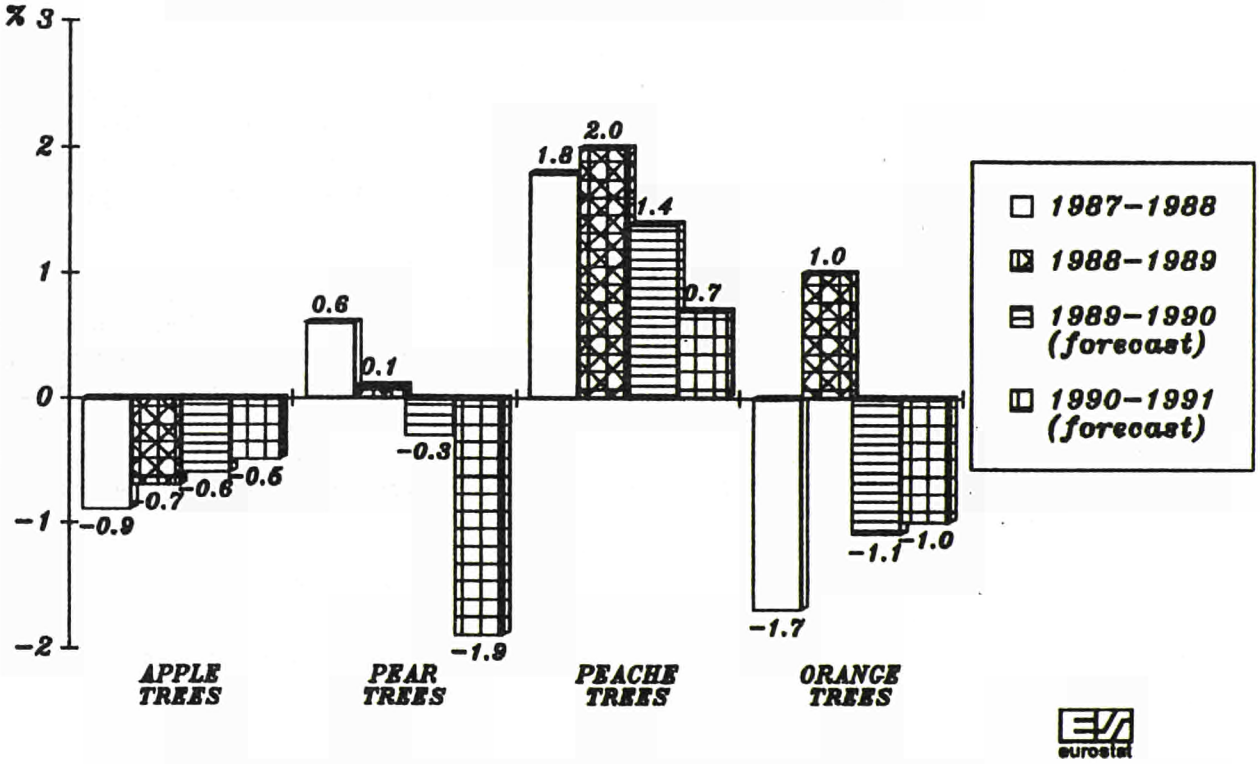
CHANGES IN THE ACREAGE OF APPLE, PEAR, PEACH AND ORANGE ORCHARDS IN EUROPE

Downward trend in the acreage of apple, pear and orange orchards in Europe, and slower growth in the acreage of peach orchards.

Initial results, covering all twelve Member States for the first time, of the annual surveys on the grubbing up and planting of apple, pear, peach and orange orchards, do not show any changes in trends compared with the ten-Member Community. Generally speaking, the reduction in commercial plantations (production of fruit for sale) of apples, pears and oranges is continuing, as is the increase in the area under peach trees.

Changes in orchard acreage in Europe (Annual rate of change, 1987–1991)



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During the last two years for which information is available, the steady reduction in the area of orchards producing **dessert apples** in Europe (EUR 12) has continued, falling from 319 000 ha in 1979 to 273 000 ha in 1989. Forecasts for 1989-90 and 1990-91 indicate a continuation of this trend, which began with sharp reductions in acreage during 1984-85 and 1985-86, though it will increasingly lose momentum.

The slight increases in the acreage of orchards given to the production of **dessert pears** observed during 1987-88 and 1988-89 succeeded a longstanding marked downward trend in this area. However, this downward trend is expected to return during the two years of the forecast period (1989-90 and 1990-91).

Trends in the acreages under **orange trees** were similar to those of pear orchards, although more stable. Between 1979 and 1989, the acreage of orange plantations in Europe dropped by around 3 000 ha to a current level of some 265 000 ha. However, the available estimates for the most recent years show that year-on-year rates of change vary quite considerably. Not only are these rates often very different, but they sometimes reflect changing trends in the areas under production. This happened again in 1988 and 1989, when there was a reduction in acreage of 1.7% during the first year and an increase of 1% during the second. This does not, however, mean a reversal of the underlying trend, which remains downward, forecasts for 1989-90 and 1990-91 pointing to further reductions of around 1% per year.

The trend in the total area planted with **peach trees** in Europe (EUR 12) has been quite different. Total acreage in 1989 was 241 000 ha, representing an increase of 48 000 ha since 1981. This upward trend seems likely to continue during the early nineties, although estimates for 1989-90 and 1990-91 suggest that the rate of growth will slow.

METHODOLOGICAL NOTE

Determining the production potential of plantations of certain species of fruit trees in Europe and providing short and medium-term forecasts of trends in production are the main objectives of the statistical surveys that EEC Member States are required to carry out under Council Directive 76/625/EEC. The data in this document relate to the acreage of commercial plantations for each of the four species in question. "Commercial plantation" is taken to mean an agricultural holding in which a minimum area of 1 500 m^2 is planted with trees producing or intending to produce primarily fruit for sale.

The estimates contained in this document are based on a slightly different annual series to that used before the last basic survey (carried out in 1987). Annual values have been adjusted so that, for years when a basic survey is carried out, the value calculated using annual data coincides with that recorded in the basic survey. For the purpose of this new series, greater weight is therefore attached to basic surveys than to annual data on planting and grubbing up. However, this adjustment has been made in such a way that the trend in data from basic surveys is in line with the data from annual surveys. The adjustment is made as follows:

Every five years the annual series [1] is rebased by taking the value from the basic survey and adding to it the balance of planting minus clearing for every subsequent year up to the year of the next basic survey. This five-year series is then recalculated so as to bring area values for the year N + 5 and the new basic survey into line.

Forecasts are based on a model that allows estimates to be made of future acreages devoted to fruit production by relating the area under production to two independent variables, namely lagged producer prices and time. The formula is as follows:

$S = f(P_{t-n}, T)$ where S = area
P_{t-n} = lagged prices (in real terms)
T = time.

(1) The "annual" series forwarded by the United Kingdom is taken from the annual Agricultural Census and is independent of the values recorded by the statistical services of that Member State in basic surveys. Calculations are made on the basis of a new "annual" series worked out by Eurostat using data from basic surveys to which are added the year-on-year balances sent in by the United Kingdom.

Table 1.1: APPLE TREES, changes in the area planted (up to 1989) and forecasts (1990 onwards)

Unit: 1000 ha

ANNEE	EUR 12	EUR 10	EUR 9	B	DK	D	GR	E	F	IRL	I	L	NL	P	UK	ANNEE
1977	320.8	228.6	211.8	8.3	6.1	26.7	16.8 *	67.0	60.9	0.5	69.4	0.6	20.0	25.3	19.3	1977
1978	320.8	229.4	211.9	8.3	5.9	26.6	17.5 *	66.1	59.9	0.5	71.9	0.6	19.8	25.3	18.4	1978
1979	318.7	229.4	211.5	8.2	5.6	26.3	17.8 *	63.9	59.0	0.5	74.2	0.6	19.2	25.4	18.0	1979
1980	313.6	226.8	208.2	7.9	5.0	25.7	18.6 *	61.6	59.0	0.4	75.9	0.6	17.2	25.2	16.5	1980
1981	308.8	223.4	204.4	7.8	4.6	24.9	19.0 *	60.5	56.7	0.3	77.5	0.6	16.3	24.9	15.7	1981
1982	308.1	223.6	204.4	7.9	4.3	24.3	19.2	60.7	56.0	0.3	80.0	0.6	16.0	23.8	15.0	1982
1983	304.3	223.2	204.5	8.1	4.0	24.0	18.7	58.0	56.6	0.3	80.5	0.6	15.8	23.1	14.6	1983
1984	300.3	223.8	205.5	8.4	3.6	23.9	18.3	54.7	57.9	0.3	80.9	0.6	15.8	21.9	14.2	1984
1985	292.1	222.0	204.6	8.5	3.4	23.9	17.4	50.6	58.6	0.3	79.9	0.6	15.6	19.4	13.9	1985
1986	280.5	221.1	204.5	8.7	3.1	23.5	16.6	42.3	59.9	0.2	79.8	0.6	15.0	17.2	13.8	1986
1987	277.3	221.7	205.9	8.8	2.9	24.1	15.7	38.6	60.9	0.3	79.4	0.6	15.1	17.1	13.8	1987
1988	274.8	219.6	204.8	9.2	2.8	24.7	14.8	37.3	61.4	0.3	77.2	0.6	15.4	17.9	13.2	1988
1989	273.0	217.7	203.0	9.6	2.5	25.2	14.6	36.9	61.8	0.3	74.5	0.6	15.9	18.3	12.7	1989
1990	271.4	217.4	202.6	9.6	2.3	25.0	14.8	36.1	61.7	0.3	75.1	0.6	15.7	17.8	12.3	1990
1991	270.1	217.2	202.6	9.6	2.1	24.8	14.6	35.5	61.7	0.3	76.1	0.6	15.4	17.4	12.0	1991

* Eurostat estimate

Table 1.2: APPLE TREES, rates of change (1) in the area of apple orchards (up to 1989) and forecasts (1990 onwards).

ANNEE	EUR 12	EUR 10	EUR 9	B	DK	D	GR	E	F	IRL	I	L	NL	P	UK	ANNEE
1978	0.0	0.4	0.0	-0.1	-2.3	-0.4	4.6	-1.3	-1.6	2.3	3.6	-0.8	-1.3	0.1	-4.7	1978
1979	-0.7	0.0	-0.2	-1.3	-6.1	-1.1	1.7	-3.3	-1.5	-4.4	3.3	-3.0	-3.0	0.6	-2.4	1979
1980	-1.6	-1.1	-1.6	-3.6	-9.9	-2.3	4.4	-3.6	0.0	-12.4	2.3	-2.2	-10.3	-1.0	-8.2	1980
1981	-1.5	-1.5	-1.9	-2.0	-8.1	-3.1	2.2	-1.8	-3.9	-14.1	2.1	-2.6	-5.1	-1.2	-4.9	1981
1982	-0.2	0.1	0.0	1.5	-5.9	-2.4	1.2	0.3	-1.3	-3.2	3.2	-1.3	-2.1	-4.4	-4.2	1982
1983	-1.2	-0.2	0.0	3.1	-8.1	-1.1	-2.6	-4.5	1.1	-21.5	0.7	0.1	-1.2	-2.8	-2.8	1983
1984	-1.3	0.3	0.5	3.0	-9.5	-0.4	-2.4	-5.7	2.3	-0.9	0.6	0.3	-0.3	-5.4	-2.6	1984
1985	-2.7	-0.8	-0.5	2.0	-5.6	-0.1	-4.8	-7.4	1.2	-3.6	-1.3	0.0	-1.2	-11.1	-2.0	1985
1986	-4.0	-0.4	-0.1	1.9	-9.3	-1.6	-4.7	-16.4	2.2	-4.9	-0.1	-0.2	-3.9	-11.8	-1.3	1986
1987	-1.1	0.3	0.7	1.6	-6.4	2.4	-5.1	-8.8	1.7	6.1	-0.4	0.1	1.1	-0.4	0.4	1987
1988	-0.9	-0.9	-0.5	4.6	-2.3	2.5	-6.1	-3.3	0.8	10.2	-2.8	0.1	1.7	4.6	-4.3	1988
1989	-0.7	-0.9	-0.9	4.2	-11.8	2.2	-0.9	-1.0	0.6	7.1	-3.5	-1.0	3.1	2.5	-4.2	1989
1990	-0.6	-0.1	-0.2	0.1	-8.6	-0.8	1.3	-2.2	-0.1	-3.0	0.8	-1.1	-1.4	-2.6	-2.9	1990
1991	-0.5	-0.1	0.0	-0.1	-8.2	-0.7	-1.4	-1.7	-0.1	-2.4	1.3	-0.3	-1.5	-2.6	-2.3	1991

(1) (N/(N-1)-1)*100, where N = year.

Table 2.1: PEAR TREES, changes in the area planted (up to 1989) and forecasts (1990 onwards)

Unit: 1000 ha

ANNEE	EUR 12	EUR 10	EUR 9	B	DK	D	GR	E	F	I	L	NL	P	UK	ANNEE
1977	136.1	93.1	85.9	3.6	0.7	2.5	7.3 *	35.7	24.0	44.6	0.0	5.7	7.2	4.7	1977
1978	134.2	91.7	84.6	3.5	0.7	2.3	7.1 *	34.9	23.3	44.8	0.0	5.5	7.6	4.5	1978
1979	133.7	90.5	83.7	3.4	0.6	2.2	6.9 *	35.3	22.9	45.0	0.0	5.3	7.9	4.3	1979
1980	133.9	89.3	82.6	3.4	0.6	2.1	6.7 *	36.4	22.3	45.1	0.0	5.1	8.3	4.2	1980
1981	131.5	87.3	80.7	3.3	0.5	1.9	6.6 *	35.8	19.9	46.0	0.0	4.9	8.4	4.1	1981
1982	131.9	86.8	80.3	3.2	0.5	1.8	6.5	36.6	19.2	46.8	0.0	4.9	8.5	4.0	1982
1983	127.7	82.6	76.3	3.3	0.4	1.7	6.3	36.6	18.4	43.6	0.0	4.9	8.6	3.9	1983
1984	124.8	80.2	74.0	3.3	0.4	1.7	6.2	36.0	17.8	42.1	0.0	4.8	8.6	3.8	1984
1985	122.3	77.1	71.2	3.4	0.4	1.6	5.9	36.5	17.2	40.0	0.0	4.9	8.7	3.7	1985
1986	118.8	74.3	68.8	3.3	0.4	1.6	5.5	35.7	16.1	39.2	0.0	4.5	8.8	3.7	1986
1987	116.6	72.1	67.0	3.3	0.4	1.6	5.1	34.4	15.4	38.0	0.0	4.5	10.0	3.7	1987
1988	117.3	72.6	67.1	3.4	0.4	1.7	5.6	34.7	15.0	38.5	0.0	4.5	10.0	3.6	1988
1989	117.5	72.6	67.4	3.4	0.3	1.7	5.2	34.8	14.4	39.6	0.0	4.4	10.1	3.4	1989
1990	117.1	71.9	66.9	3.4	0.3	1.7	5.1	34.9	14.0	39.8	0.0	4.3	10.3	3.4	1990
1991	114.9	69.7	64.7	3.4	0.3	1.7	5.0	34.8	13.5	38.3	0.0	4.2	10.5	3.3	1991

* Eurostat estimate

Table 2.2: PEAR TREES, rates of change (1) in the area of pear orchards (up to 1989) and forecasts (1990 onwards).

ANNEE	EUR 12	EUR 10	EUR 9	B	DK	D	GR	E	F	I	L	NL	P	UK	ANNEE
1978	-1.4	-1.5	-1.4	-2.4	-7.9	-5.4	-2.7	-2.2	-2.9	0.5	1.7	-3.8	4.9	-5.4	1978
1979	-0.4	-1.3	-1.2	-2.5	-11.7	-5.7	-2.8	1.1	-2.0	0.3	-6.6	-4.0	4.1	-2.7	1979
1980	0.2	-1.4	-1.3	-1.8	-6.1	-5.2	-2.8	3.1	-2.6	0.3	1.8	-4.0	4.8	-3.9	1980
1981	-1.8	-2.3	-2.3	-2.6	-3.4	-6.8	-1.7	-1.6	-10.7	2.1	1.7	-2.7	2.2	-2.5	1981
1982	0.3	-0.5	-0.5	-1.2	-9.3	-7.6	-0.9	2.2	-3.3	1.5	-6.8	-1.5	0.4	-2.6	1982
1983	-3.2	-4.9	-5.0	1.7	-10.5	-3.8	-3.0	0.0	-4.1	-6.7	1.8	0.7	0.9	-2.6	1983
1984	-2.3	-2.9	-3.0	1.2	-5.7	-3.0	-1.9	-1.6	-3.4	-3.5	1.8	-0.9	0.8	-1.4	1984
1985	-2.0	-3.8	-3.7	1.0	3.4	-1.9	-4.4	1.4	-3.7	-4.9	1.8	0.7	0.7	-1.7	1985
1986	-2.9	-3.7	-3.4	-0.4	-16.5	-2.6	-7.3	-2.2	-6.3	-2.1	1.7	-7.2	1.3	-1.3	1986
1987	-1.8	-2.9	-2.6	-0.2	7.9	-1.8	-6.4	-3.6	-3.9	-2.9	1.7	-0.1	14.3	-0.2	1987
1988	0.6	0.7	0.1	0.9	8.4	9.6	8.4	0.8	-3.0	1.2	0.0	-0.8	-0.4	-1.9	1988
1989	0.1	-0.1	0.4	2.0	-17.6	1.8	-5.9	0.3	-3.7	2.9	8.3	-2.2	1.1	-5.7	1989
1990	-0.3	-0.9	-0.7	-0.6	-7.3	-2.6	-3.4	0.2	-3.3	0.6	-7.7	-2.3	1.7	-1.6	1990
1991	-1.8	-3.2	-3.3	-0.1	-5.7	-2.1	-1.7	-0.2	-3.1	-4.0	0.0	-1.3	1.6	-1.7	1991

(1) (N/(N-1)-1)*100, where N = year.

Table 3.1: PEACHE TREES, changes in the area planted (up to 1989) and forecasts (1990 onwards)

Un.: 1000 ha

ANNEE	EUR 12	EUR 10	EUR 9	D	GR	E	F	I	P	ANNEE
1977	201.2	143.6	119.3	0.3	24.3 *	48.9	39.2	79.9	8.7	1977
1978	200.6	145.2	118.6	0.3	26.7 *	46.6	35.9	82.5	8.8	1978
1979	197.0	141.4	117.0	0.2	24.4 *	46.8	33.5	83.3	8.8	1979
1980	195.1	139.2	114.8	0.2	24.5 *	47.9	32.2	82.4	8.0	1980
1981	193.4	138.0	113.4	0.2	24.6 *	48.6	29.8	83.5	6.8	1981
1982	194.0	137.6	112.9	0.1	24.7	50.8	27.7	85.1	5.6	1982
1983	197.2	138.5	115.1	0.1	23.4	53.1	27.7	87.3	5.7	1983
1984	204.9	140.2	116.5	0.1	23.6	58.8	28.6	87.8	6.0	1984
1985	214.9	145.4	120.2	0.1	25.1	63.6	29.6	90.5	6.0	1985
1986	223.7	149.3	122.7	0.1	26.6	68.0	30.7	91.9	6.4	1986
1987	232.1	152.9	125.0	0.1	27.9	71.9	31.1	93.8	7.2	1987
1988	236.4	153.6	123.8	0.1	29.8	74.3	31.7	92.0	8.5	1988
1989	241.1	155.4	123.9	0.1	31.5	76.7	31.9	91.9	9.1	1989
1990	244.5	156.3	124.6	0.1	31.7	79.4	31.9	92.6	8.9	1990
1991	246.3	156.3	124.5	0.1	31.8	81.2	31.2	93.2	8.7	1991

* Eurostat estimate

Table 3.2: PEACHS TREES, rates of change (1) in the area of peach orchards (up to 1989) and forecasts (1990 onwards).

ANNEE	EUR 12	EUR 10	EUR 9	D	GR	E	F	I	P	ANNEE
1978	-0.3	1.1	-0.6	-9.9	9.8	-4.7	-8.4	3.2	0.5	1978
1979	-1.8	-2.6	-1.3	-11.4	-8.6	0.4	-6.6	1.1	-0.1	1979
1980	-1.0	-1.5	-1.9	-12.8	0.4	2.4	-3.9	-1.1	-9.2	1980
1981	-0.9	-0.9	-1.2	-12.2	0.4	1.5	-7.5	1.3	-14.1	1981
1982	0.3	-0.3	-0.5	-17.9	0.7	4.5	-7.1	1.9	-18.3	1982
1983	1.7	0.6	2.0	-0.7	-5.6	4.5	-0.1	2.7	1.1	1983
1984	3.9	1.2	1.2	-2.9	1.1	10.7	3.5	0.5	5.7	1984
1985	4.9	3.7	3.2	0.0	6.4	8.1	3.4	3.1	0.2	1985
1986	4.1	2.7	2.0	0.0	5.9	7.1	3.6	1.5	6.7	1986
1987	3.7	2.4	1.9	2.9	4.8	5.7	1.6	2.0	13.0	1987
1988	1.8	0.4	-1.0	0.7	6.7	3.3	1.7	-1.9	17.3	1988
1989	2.0	1.2	0.1	2.8	5.9	3.2	0.7	-0.1	6.8	1989
1990	1.4	0.6	0.6	-20.0	0.5	3.5	0.1	0.8	-1.9	1990
1991	0.7	0.0	-0.1	-3.4	0.5	2.4	-2.4	0.7	-1.8	1991

(1) (N/(N-1)-1)*100, where N = year.

Table 4.1: ORANGE TREES, changes in the area planted (up to 1989) and and forecasts (1990 onwards)

Unit: 1000 hectares

ANNEE	EUR 12	EUR 10	GR	E	F	I	P	ANNEE
1977	249.9	133.6	30.6 *	109.9	0.1 *	102.9	6.4	1977
1978	268.0	133.9	30.4 *	127.4	0.1 *	103.4	6.7	1978
1979	266.6	135.3	31.0 *	124.3	0.1 *	104.2	7.0	1979
1980	270.9	135.4	30.5 *	128.1	0.1 *	104.8	7.4	1980
1981	269.0	136.9	31.8 *	124.5	0.1 *	105.0	7.5	1981
1982	274.4	139.0	31.1	127.7	0.1 *	107.8	7.8	1982
1983	269.4	138.1	31.0	123.3	0.1 *	107.0	8.0	1983
1984	269.1	136.9	30.9	124.0	0.1 *	105.8	8.2	1984
1985	268.8	134.7	31.0	125.8	0.1 *	103.5	8.4	1985
1986	267.2	132.2	31.0	126.1	0.1 *	101.1	8.9	1986
1987	266.7	129.8	31.0	127.6	0.1	98.6	9.4	1987
1988	262.2	130.2	31.4	122.7	0.1	98.7	9.3	1988
1989	264.8	131.3	32.0	123.7	0.1	99.2	9.7	1989
1990	261.9	132.0	31.9	120.2	0.1	100.0	9.7	1990
1991	259.4	130.7	32.1	118.9	0.1	98.4	9.8	1991

* Eurostat estimate

Table 4.2: ORANGE TREES, rates of change (1) in the area of orange orchards (up to 1989) and forecasts (1990 onwards).

ANNEE	EUR 12	EUR 10	GR	E	F	I	P	ANNEE
1978	7.3	0.2	-0.5 *	15.9	0.0	0.5	4.9	1978
1979	-0.5	1.1	1.8 *	-2.4	0.0	0.9	4.5	1979
1980	1.6	0.1	-1.5 *	3.1	0.0	0.5	4.9	1980
1981	-0.7	1.1	4.3 *	-2.8	0.0	0.2	2.3	1981
1982	2.0	1.5	-2.3	2.6	0.0	2.7	3.0	1982
1983	-1.8	-0.6	-0.3	-3.5	0.0	-0.7	3.4	1983
1984	-0.1	-0.9	-0.3	0.6	0.0	-1.1	2.3	1984
1985	-0.1	-1.6	0.3	1.4	0.0	-2.1	2.7	1985
1986	-0.6	-1.8	0.1	0.3	0.0	-2.4	5.4	1986
1987	-0.2	-1.8	0.0	1.2	0.0	-2.4	5.4	1987
1988	-1.7	0.3	1.3	-3.8	0.0	0.1	-0.2	1988
1989	1.0	0.9	1.8	0.8	0.0	0.6	4.3	1989
1990	-1.1	0.5	-0.4	-2.8	0.0	0.8	0.0	1990
1991	-1.0	-1.0	0.8	-1.0	0.0	-1.6	0.7	1991

(1) (N/(N-1)-1)*100, where N = year.