

NEW ZEALAND: ESTIMATES OF SUPPORT TO AGRICULTURE

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DEFINITIONS AND SOURCES

Table 1. Agricultural Support Estimates / Total Transfers contains country Total Support Estimate (TSE) and derived indicators, which cover all agricultural production, i.e. all agricultural commodities produced in the country. Definitions of basic data sets refer to the specific programmes applied in the country. For the Producer Support Estimate (PSE) and Consumer Support Estimate (CSE), each policy measure is classified according to implementation criteria, which include: the *transfer basis* of support (output, input, area/animal numbers/receipts/income, and non-commodity criteria); whether support is based on *current or non-current basis*; whether *production is required* or *not* to receive payment. Each policy measure is also assigned several “labels” indicating additional implementation criteria. “MPS commodities”, which vary across countries, are those for which the market price support is explicitly calculated in Tables 4.1 – 4.11.

Table 2. Breakdown of PSE by Commodity and Other Transfers provides a breakdown of the total PSE into four categories reflecting the flexibility given to farmers regarding which commodity to produce within the various policy measures. These categories are: Single Commodity Transfers (SCT); Group Commodity Transfers (GCT); All Commodity Transfers (ACT); and Other Transfers to Producers (OTP). All data sets in Table 2 come from Tables 1 and 3.1 – 3.11 where definitions are included.

Tables 3.1 – 3.11 Producer Single Commodity Transfers contain producer SCT by commodity, which are calculated for New Zealand for the following commodity: wheat, barley, oats, maize, milk, beef and veal, pig meat, poultry meat, eggs, sheep and wool (Tables 3.1-3.11) provided that the value of production of that commodity exceeds 1% of the total value of production. In addition, SCT for “other commodities” is also calculated (Table 3.12), which covers transfers *to single commodities other than MPS commodities*. All data sets in the calculation of producer SCT by commodity come from Tables 1 and 4.1-4.12 where definitions are included.

Tables 4.1 – 4.12 contain **Market Price Support (MPS)** and **Consumer Single Commodity Transfers** (consumer SCT) by commodity, calculated for the same set of commodities as **Tables 3.1 to 3.12**. Definitions are provided only for basic data sets from which all the other data sets in this table are derived.

Definitions of the indicators, criteria for classification of policy transfers included in support estimation, and methods of calculation are contained in [the PSE Manual](#) (*OECD’s Producer Support Estimate and Related indicators of Agricultural Support: Concepts, Calculations, Interpretation and Use*).

TABLE 1: New Zealand: Total Support Estimate

Definitions:

I. Total value of production (at farm gate): Total agricultural production valued at farm gate prices, i.e. value (at farm gate) of all agricultural commodities produced in the country [1].

I.1. Of which share of MPS commodities (%): Share of commodities for which MPS is explicitly calculated (in Tables 4.1-4-11) in the total value of agricultural production.

II. Total value of consumption (at farm gate): Consumption of all commodities domestically produced valued at farm gate prices, and estimated by increasing the value of consumption (at farm gate) of the MPS commodities according to their share in the total value of agricultural production [(II.1) / (I.1) x100].

II.1. Of which MPS commodities: Sum of the value of consumption (at farm gate prices) of the MPS commodities as indicated in Tables 4.1-4.11.

III.1 Producer Support Estimate (PSE): Associated with total agricultural production, i.e. for all commodities domestically produced [Sum of A to G; when negative, the amounts represent an implicit or explicit tax on producers].

A. Support based on commodity outputs

A.1. Market Price Support: On quantities domestically produced (excluding for on-farm feed use -- excess feed cost) of all agricultural commodities, estimated by increasing the MPS for the MPS commodities (sum of the MPS for the MPS commodities listed in the rows below) according to their share in the total value of agricultural production [(ΣMPS commodities) / (I.1) x 100].

A.2. Payments based on output:

Stabilisation loan write-off (up to 1986): One-off transitional payment; Payments of NZ\$ 25/tonne announced after the harvest and granted to all wheat sold for the 1986/87 harvest. These transfers are included in the wheat SCT (Table 3.1).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO

B. Payments based on input use

B.1. Variable input use

Fuel payment: (up to 1986) Value of the exemption on the proportion of the Motor Spirits Duty paid to the National Roads Fund. These transfers are included in the ACT.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Labour payment: (up to 1986) Budgetary expenditure covering part of wages for a maximum period of twenty-six weeks for workers employed under the Job Opportunity Scheme. These transfers are included in the sheep meat, wool, beef and milk SCT (Tables 3.9; 3.10; 3.5 and 3.4).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Fertiliser payment: (up to 30th June 1986) Budgetary expenditure to the fertiliser industry to cover costs associated with reduced prices paid by farmers. These transfers are included in the sheep meat, wool, beef and milk SCT (Tables 3.9; 3.10; 3.5 and 3.4).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO

B.2 Fixed capital formation

Capital grants: (up to 1993) Budgetary expenditure under the Livestock Incentive Scheme (LIS) and the Land Development and Encouragement Loan Scheme (LDELS) on payments to farmers as "an incentive to the improvement of reverted or under-utilized land". These transfers are included in the sheep meat, wool, beef and milk SCT (Tables 3.9; 3.10; 3.5 and 3.4).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO

Rural Bank and Finance Corporation: interest concessions: (up to 1990/91) Provided by the Rural Banking and Finance Corporation, the Department of Maori Affairs and the Department of Lands and Survey. Total value calculated as the difference between the market rate and the subsidized rate paid by the farmers, multiplied by the value of outstanding loans to purchase fixed inputs. These transfers are included in the sheep meat, wool, beef and milk SCT (Tables 3.9; 3.10; 3.5 and 3.4).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

B.3. Based on use of on-farm services

Agricultural pest control: (up to 1992) Budgetary expenditures for rabbits control and grants to pest destruction boards for carrying out pest eradication as well as operating costs of the Agricultural Destruction Council. These transfers are included in the ACT.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Animal health division (disease control): (up to 1989/90) Budgetary expenditure on programmes to safeguard the health of New Zealand's agricultural animal population, namely export quality assurance for live animals, promotion on animal health and the reduction of production limiting diseases, disease surveillance and disease eradication. These transfers are included in all livestock GCT.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Noxious weeds eradication: Budgetary expenditure on the control of noxious seeds, including payments for employment of Noxious Plants Officers, for the Nassella Tussock Boards, for the eradication of Australian Sedge and the noxious plant control scheme. The scheme was discontinued in February 1985 but payments continued to be made through 1991/92. These transfers are included in the ACT.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Te Ture Whenua Maori Network: Budgetary expenditure to improve productivity of Maori owned land through the purchase of tools, interventions and research. Allocated \$3.2 million per year, starting in 2015/16.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

C. Payments based on current area planted/animal numbers/revenues/incomes

Income tax concessions: (up to 1990): Major tax concessions on farmer's income were given in 1986. These transfers are included in the ACT.

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

Climatic disaster relief scheme: Formerly budgetary expenditure on interest concessions by the Rural Banking and Finance Corporation (RBFC) on loans to farmers for restoring boundary fences and stock water supplies due to adverse climatic conditions and payments related to hail damage for horticultural crops. [The RBFC no longer exists.] Now budgetary expenditure through MAF to assist with recovery in the aftermath of large-scale climatic disasters that are beyond the ability of a region or community to manage. These transfers are included in the ACT.

Use of labels: Production and payment limits: NO; Variable payment rates: YES (Payments rates vary according to the severity of damage by natural disasters); Input constraints: NO.

D. Payments based on non-current area planted/animal numbers/revenues/incomes – production required

Producer board debt write-off: Budgetary expenditure on debt write-off by sheep meat and beef producer boards. [This scheme was removed in 1986.] These transfers are included in the sheep meat, wool, beef and milk SCT (Tables 3.9; 3.10; 3.5 and 3.4).

Use of labels: Production and payment limits: NO; Variable payment rates: NO; Input constraints: NO.

E. Payments based on non-current area planted/animal numbers/revenues/incomes – production not required

F. Payments based on non-commodity criteria

F.1. Long-term resource retirement

F.2. Specific non-commodity output

F.3. Other non-commodity criteria

G. Miscellaneous payments

III.2 Percentage PSE $[100 \times (\text{III.1}) / ((\text{I}) + (\text{Sum of A2 to G}))]$

III.3 Producer NPC: For all agricultural commodities the producer NPC is estimated as a weighted average of the producer NPC calculated for the individual MPS commodities and shown in Table 4. For each commodity Producer NPC = [domestic price received by producers (at the farm gate) + unit payments based on output] / border price (also at the farm gate).

III.4 Producer NAC $[1 / (100 - (\text{III.2})) \times 100]$

IV. General Services Support Estimate (GSSE): total budgetary expenditure to support general services provided to agriculture [Sum of H to M].

H. Agricultural knowledge and innovation system

H.1. Agricultural knowledge generation

Budgetary expenditure by the Ministry of Agriculture and Fisheries, the Department of Scientific and Industrial Research and the Department of Lands and Survey up to 1988/89. From 1990 onward, budgetary expenditure provided through the Public Good Science Fund (PGSF), administered by the Foundation of Science, Research and Technology (FRST).

From 2001, Sustainable Farming Fund (SFF) has been provided in order to help rural communities in the sustainable use of land-based resources. Eligible projects are those of up to three years' duration that help with the transfer of the information and technology from experts into the hands of the wider community

Extension: Budgetary expenditure on the Advisory and Services Division of MAF allocated to all commodities according to their share in the total value of production. [These services were privatised in 1992.]

H.2. Agricultural knowledge transfer

H2.a. education

H2.b. extension services

Budgetary expenditure on agricultural education by the Tertiary Education Commission (TEC) to Industry Training Organizations. [No data available up to 1995].

I. Inspection and control

I.1. Agricultural product safety and inspection

I.2. Pest and disease inspection and control

Regulatory system (primary processing): From mid-1990s, budgetary expenditure on regulatory programme for animal products, dairy products, agricultural compounds and veterinary medicines (includes standard setting, programme development, systems audit, verification, and enforcement).

Agricultural quarantine service: Until mid-1990s, budgetary expenditure on the control of agricultural products' entry into the country.

Regulatory system (biosecurity): From mid-1990s, budgetary expenditure on all aspects of the biosecurity system relevant to agricultural production (includes standard setting, operational systems, accreditation, official assurances, border clearances, surveillance programmes, and response activities).

Pest management: (From 1994) Budgetary expenditure allocated by MAF for control of tuberculosis vectors (primarily possums) and also by Regional Councils for control of animal and plant pests (to protect health and life of agricultural plants and livestock, plus native flora and fauna). This expenditure was formerly classified as PSE B3 until 2009.

Response to Kiwifruit disease (Psa): (From 2012) Budgetary expenditure allocated by the Ministry for Primary Industries for managing the kiwifruit disease Psa. Kiwifruit growers who have been severely impacted by Psa may be eligible for Rural Assistance Payments, when they have no other significant income from farm business as a result of Pse, or other sources of income and realisable cash assets. Payments for a maximum of 12 months.

Rural Veterinary Bonding Scheme: (From FY 2012-13) Budgetary expenditure allocated by the Ministry for Primary Industries to address shortages of veterinarians working with production animals. Under the Scheme, new veterinary graduates volunteer to work for a minimum of three years in an eligible veterinary practice that has an overall production animal focus. In return, the Scheme provides a taxable payment of \$11,000 for each year worked in that practice, for a maximum of five years. There are 30 new places to be filled each year. (<http://www.nzva.org.nz/vets-vet-businesses/rural-bonding-scheme?destination=node%2F1917>).

I.3. Input control

Meat and dairy inspection programme: Until mid-1990s, budgetary expenditure for the control of hygiene standards and grading; replaced, in 1990, by a Quality Assurance programme for inspection, laboratory analysis, audit and certification; plus costs of seed certification for wheat and coarse grains.

J. Development and maintenance of infrastructure

J.1. Hydrological infrastructure

Community irrigation schemes: (since 1990/91) Budgetary expenditures under the community irrigation scheme covering the operation and maintenance of the Crown's existing irrigation schemes until they are sold to private buyers, the cost of the sale of irrigation assets.

Flood control and land drainage: Since 1994, budgetary expenditures by Regional Councils to support initial construction of flood protection and land drainage schemes to reduce the effects of flooding on life and property.

J.2. Storage, marketing and other physical infrastructure

Soil conservation: Since 1994, budgetary expenditures by Regional Councils on cost-share programmes to encourage best land management practices, e.g. prevention of erosion.

J.3. Institutional infrastructure

OVERSEER nutrient management tool: budgetary expenditures for further development of the nutrient management tool. \$1.1 million for three years (2015-2017).

J.4. Farm restructuring

K. Marketing and promotion

K.1. Collective schemes for processing and marketing

K.2. Promotion of agricultural products

L. Cost of public stockholding

M. Miscellaneous

V.1 Consumer Support Estimate (CSE): Associated with agricultural production, i.e. for the quantities of commodities domestically produced, excluding the quantities used on-farm as feed -- excess feed cost. [Sum of N to Q; when negative, the amounts represent an implicit tax on consumers].

N. Transfers to producers from consumers: Associated with market price support on all domestically produced commodities, estimated by increasing the transfers calculated for the MPS commodities according to their share in the total value of production $[(N.1) / (I.1) \times 100]$.

N.1. Of which MPS commodities: Sum of the values of transfers from consumers to producers associated with market price support for the MPS commodities as calculated in Tables 4.1 to 4.11.

O. Other transfers from consumers: Transfers to the budget associated with market price support on the quantities imported of domestically produced commodities, estimated by increasing the transfers calculated for the MPS commodities according to their share in the total value of production $[(O.1) / (I.1) \times 100]$.

O.1. Of which MPS commodities: Sum of the transfers to the budget associated with market price support on the quantities imported of the MPS commodities as calculated in Tables 4.1 to 4.11.

P. Transfers to consumers from taxpayers

P.1. Commodity specific transfers to consumers: Sum of commodity specific transfers from taxpayers to consumers (farm gate level)

P.2. Non-commodity specific transfers to consumers: Sum of non-commodity specific transfers from taxpayers to consumers

Q. Excess Feed Cost: Associated with market price support on quantities of domestically produced crops and used on-farm as feed as calculated

V.2 Percentage CSE $[100 \times (V.1) / ((II) + (P))]$

V.3 Consumer NPC: For all agricultural commodities the consumer NPC is estimated as a weighted average of the consumer NPC calculated for the individual MPS commodities and shown in Table 2. For each commodity consumer NPC = domestic price paid by consumers (at the farm gate)/ border price (also at the farm gate).

V.4 Consumer NAC $[(1 / (100 - (V.2)) \times 100]$

VI. Total Support Estimate $[(III.1) + (IV) + (P)]$ and $[(R) + (S) - (T)]$

R. Transfers from consumers $[(N)+(O)]$

S. Transfers from taxpayers $[(III.1)-(N)+(IV)+(P)]$

T. Budget revenues $[(O)]$

TABLE 2. New Zealand: Breakdown of PSE by commodity specificity and other transfers

All data sets in Table 2 to come from Tables 1 and 4.1 to 4.12 where definitions are included.

Definitions:

I. Producer Single Commodity Transfers (producer SCT): the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm level, arising from policy measures directly linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the payment. This includes policies where payments are specified on a per-commodity basis [Sum of SCTs for individual commodities from Tables 3.1-3.12].

Percentage producer SCT: is the commodity SCT expressed as a share of gross farm receipts for the specific commodities (including support in the denominator). This indicator can be expressed for the total SCT (Table 2), or for a specific commodity (Table 3.1 to 3.12).

$$\%SCT = 100 * SCT / (Value\ of\ production_{COM} + A.2_{COM} + B_{COM} + C_{COM} + D_{COM})$$

$$Share\ in\ Total\ PSE\ (\%): SCT_{SHARE} = 100 * SCT / PSE$$

II. Group commodity transfers (GCT): the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures whose payments are made on the basis that one or more of a designated list of commodities is produced. That is, a producer may produce from a set of allowable commodities and receive a transfer that does not vary with respect to this decision [GCT = B_{GROUP} + C_{GROUP} + D_{GROUP}].

$$Share\ in\ Total\ PSE\ (\%): GCT_{SHARE} = 100 * GCT / PSE$$

Transfers to specific groups of commodities: the GCT indicator is calculated for New Zealand for the following groups of commodities: All livestock

III. All commodity transfers (ACT): the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures that place no restrictions on the commodity produced but require the recipient to produce some commodity of their choice [ACT = C_{ALL} + B_{ALL} + D_{ALL}].

$$Share\ in\ Total\ PSE\ (\%): ACT_{SHARE} = 100 * ACT / PSE$$

IV. Other Transfers to Producers (OTP): the annual monetary value of gross transfers made under policies that do not fall in the above three cases (SCT, GCT, ACT). That is, payments that do not require any commodity production at all. [OTP = E + F + G]

$$Share\ in\ Total\ PSE\ (\%): OTP_{SHARE} = 100 * OTP / PSE$$

$$V. Total\ PSE: PSE = A + B + C + D + E + F + G = SCT + GCT + ACT + OTP$$

$$Percentage\ PSE: \%PSE = 100 * PSE / (Total\ Value\ of\ Production\ at\ farm\ gate + A.2 + B + C + D + E + F + G)$$

TABLE 3. New Zealand: Producer Single Commodity Transfers (by commodity)

Tables 3.1 to 3.12, provide information on Producer Single Commodity Transfers (PSCT) for the following commodities: wheat, maize, barley, oats, sunflower, sugar beet, milk, beef, pig meat, poultry, eggs and “other commodities”. All data sets in the calculation SCT by commodity come from Tables 1 and 4.1 – 4.12 where definitions are included.

Definitions:

I. Level of production: Data from respective commodity Tables 4.1 – 4.11 (Market Price Support tables)

II. Value of production (at farm gate): Data for respective commodity Tables 4.1 – 4.11 (Market Price Support tables)

III. Producer Single Commodity Transfers: Sum of transfers to respective single commodity in categories A, B, C and D.

A. Support based on commodity output

A1. Market Price Support [Data for respective commodity from Table 4]

A2. Payments based on output

Payments based on output (A.2) provided to respective single commodity [Data from Table 1]

B. Payments based on input use, single commodity [B.1_{COM} + B.2_{COM} + B.3_{COM}]

B1. Based on variable input use

Payments based on variable input use (B.1_{COM}) provided to respective single commodity [Data from Table 1].

B2. Based on Fixed capital formation

Payments based on fixed capital formation (B.2_{COM}) provided to respective single commodity [Data from Table 1].

B3. Based on on-farm services

Payments based on on-farm services (B.3_{COM}) provided to respective single commodity [Data from Table 1].

C. Payments based on current A/An/R/I, production required, single commodity

Payments based on current A/An/R/I (C_{COM}) provided to respective single commodity [Data from Table 1].

D. Payments based on non-current A/An/R/I, production required, single commodity

Payments based on non-current A/An/R/I, production required (D_{COM}) provided to respective single commodity [Data from Table 1].

IV. Percentage producer SCT : %SCT = 100*(III) / ((II) + (A.2) + (B_{COM}) + (C_{COM}) + (D_{COM}))

TABLE 4. New Zealand: Market Price Support and Consumer Single Commodity Transfers

Tables 4.1 to 4.12, contain calculation of the Market Price Support (MPS) and Consumer Single Commodity Transfers (consumer SCT) for the following commodities: wheat, maize, barley, oats, sunflower, sugar beet, milk, beef, pig meat, poultry, eggs and “other commodities”. The data sets used in calculation of the MPS and consumer SCT by commodity are described below.

I. Level of production

Cereals: Total production of all cultivators from all sources [1].

Milk: Milk production, calculated as the sum of town milk and manufacturing milk production [1].

Meats: Total production in carcass weight of slaughtering (including dairy cattle for beef, pig meat, mutton and lamb for sheep meat); canned meat production (for beef) and animals exported live (for sheep) (number exported multiplied by 0.020). Includes production from rural slaughterhouses, on-farm kill, and pet food factory kill [2].

Poultry: Commercial production in carcass weight of meat of chicken, roasting fowl, duck and turkey. Goose and pheasant meat is not included [2].

Wool: Total production of greasy and scoured wool in greasy equivalent weight; excluding slip wool and wool on sheepskins (which is exported).

Eggs: Commercial egg production, dozen converted to tonnes ($0.702 = 12 \text{ eggs} \times 58.5 \text{ grams per egg}$) [2].

II. Producer price

Cereals, poultry and milk, meats and wool: Implicit average farm-gate price calculated by dividing the value of production by the level of production. Since 1987, barley price refers only to feed barley.

Eggs: From 2006, producer price is estimated using the retail price of egg, assuming the producer price would have changed the same rate as the retail price [2].

IV. Level of consumption:

Cereals: Apparent consumption, i.e. production minus exports (in the following year) [3].

Milk: Apparent consumption of market fresh milk, plus consumption of milk products in milk equivalent [3].

Beef and veal: Local disappearance of beef and veal, including farm and rural slaughterhouse kill, carcass weight; and carcass weight equivalent of canned and miscellaneous processed beef and veal [3].

Pig meat: Total apparent consumption (i.e. production minus net exports of pork, bacon and ham), carcass weight [3].

Poultry meat: Assumed equal to production [3].

Sheep meat: Total apparent consumption of mutton and lamb, carcass weight [3].

Wool: Consumption of wool, in greasy equivalent, obtained by multiplying consumption of clean wool by 1.33 [4].

Eggs: Assumed to be equal to production.

VII. Reference prices:

Milk: Border prices of butter and SMP converted into a milk equivalent border price using technical coefficients minus a processing margin, calendar year. The border price of butter is the butter average export unit value, f.o.b., year ended 30 June [8], and the border price of SMP is Skim milk and buttermilk powder f.o.b. export price, year ended 30 June [8]. The processing margin is calculated as the difference between the domestic wholesale price (domestic wholesale prices of butter and SMP converted into milk equivalent price using technical coefficients) and the producer price. The domestic wholesale price of butter and SMP is assumed to be the same as the border prices of butter and SMP.

Pig meat: Implicit import price obtained by applying the tariff rate to the wholesale price (estimated as the producer price plus processing margin estimated at 50 per cent of the producer price).

Poultry meat: Weighted unit value of US producer farm gate prices of poultry meat (broilers, chickens and turkeys). [6].

Eggs: Export unit value of eggs-in-shells exported by the European Community minus processing margin estimated as 5 per cent of the producer price [7].

Sources:

[1] New Zealand Department of Statistics (NZDS), *Situation and Outlook for New Zealand Agriculture and Forestry*, and data reported in various serials published by the Ministry of Agriculture and Forestry (MAF).

[2] 1986-1990: New Zealand Department of Statistics (data transmitted by MAF). 1991 onward: MAF estimate.

[3] MAF replies to the OECD Agricultural Directorate's "Medium-Term Market Developments and Policies Questionnaire"(AGLINK).

[4] New Zealand Wool Board, annual report -- year ended June; since 1991, OECD Secretariat estimates.

[5] MAF NZ *Agricultural Statistics*, various years, *New Zealand Dairy Board, Annual Report*, various years.

[6] USDA, *Poultry: Production and Value*, various years. OECD PSE/CSE database, US calculation.

[7] EUROSTAT, External trade-Exports, various years.

[8] OECD *Aglink Databases*.