This report presents developments in our corporate sustainability strategy, activities and results in 2013. Corporate Social Responsibility (CSR) performance is an integral part of our operations. Every year we work on further improvements to enhance the data and reporting cycle for our non-financial performance. We have not yet had our CSR performance verified externally. This report has been compiled in accordance with the third generation guidelines of the Global Reporting Initiative (G3.1).

This Sustainability Report is published in digital form only. To increase its readability and functionality, the report has been posted on our website in HTML format and can also be downloaded as a PDF document. In the event of textual inconsistencies between this English translation and the original Dutch version, the latter shall prevail.
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About Cosun

Profile

Royal Cosun is an agro-industrial group firmly rooted in the primary sector. We make ingredients and products from sugar beet, potatoes, chicory, fruit, vegetables and other vegetable raw materials for the international food industry, the foodservice sector and the retail channel. We also convert biomass into non-food applications such as animal feed, biobased chemicals and bio-energy (green gas).

Of the businesses that make up Cosun, Suiker Unie and Aviko are the most widely known. They have traditionally produced sugar and potato specialities respectively. Sensus produces inulin from chicory for use in foodstuffs. Inulin is a dietary fibre that reduces the sugar and fat content of food. SVZ processes fruit and vegetables into concentrates and purees for the food industry. The Duynie group is a trader and distributor of animal feed and develops advanced applications based on ‘green’ raw materials and by-products from the food industry. Cosun Biobased Products is a fledgling business, specialising in innovative products made from agricultural raw materials for use primarily in new applications in the biobased economy.

In addition to developing products themselves, the Cosun businesses draw on the expertise of the group research and development centre, Cosun Food Technology Centre (CFTC).

In close collaboration with the business groups, CFTC improves the use of agricultural raw materials, devises innovations in process technology, optimises energy management and, in cooperation with customers, develops new products. It works with a variety of European institutions and universities in the Netherlands and abroad.

Cosun is a cooperative of Dutch sugar beet growers. It was established in 1899.
Cosun Sustainability Report 2013

Maximising the value of raw materials

Our commercial success stands or falls on the value we extract from our raw materials. We therefore use all parts of the plant in a process known as biorefinery. The challenge is to extract as many components as possible at the same time.

Products

**Food for people and animals**
Cosun produces ingredients primarily for the food industry. By far the largest sales channel is industry. Sugar, inulin, potato flakes and fruit purées are processed and used in many products such as soft drinks and fruit juices, confectionery, biscuits and baked goods, breakfast products and cereal bars, dairy products and ice cream, savoury snacks, etc. Aviko sells many potato specialties and potato chip varieties in the foodservice sector and through the supermarket channel. Under the Van Gilse brand name, sugar specialities are marketed through the same channels.

Most of the pulp produced when sugar is extracted from the beet is processed into animal feed. Chicory pulp and residual flows from the potatoes, too, are processed into animal feed. This is the market in which the Duynie group is active, also for other companies in the food industry.

In addition to these ‘traditional’ applications, we encourage innovative applications and products. Natural colourings extracted from fruit and vegetables, for example, are used by the food industry. Demand for natural colourings is also growing from manufacturers of pharmaceuticals and ‘nutraceuticals’ (functional foods).

**Biobased chemicals & materials**
We are extracting more high value components from our potatoes, sugar beet, chicory, fruit and vegetables. The inulin derivative, CMI, for example, is used as a phosphate substitute in dishwasher detergents. It is also used on offshore oilrigs to prevent scaling and in desalination plants to purify salt water into drinking water. CMI is also biodegradable.

The starch that remains in the process water when potatoes are processed into chips and other products can be extracted and used as a raw material for paper and adhesives. We make horticultural potato cork from potato peelings, and ethanol and other chemicals from sugar beet. Molasses and thick juice are often processed by our customers into biobased products.

**Bio-energy**
The tops and tails of the sugar beet, some of the potato peelings and the fruit and vegetable residues used to be turned into compost. We can extract more value from them, however, if we ferment them into biogas and digestate. Suiker Unie upgrades the biogas into green gas and feeds it into the national natural gas network. Our goal is to produce more than 20 million cubic metres of green gas in the Netherlands every year, enough to meet the average annual needs of 15,000 households. When the digester in Anklam (Germany) is operational, Suiker Unie will have the capacity to produce more than 30 million m³ of green gas per annum. Suiker Unie also takes part in practical tests and runs several cars and trucks on its own green gas instead of diesel.

The digestate, which contains organic matter and minerals, is suitable to be returned to the fields so that nutrient cycles are closed.
Key figures

Consolidated net turnover of Cosun.
More information about financial and economic value on pages 16-17.

Recurring EBITDA is operating profit before depreciation and amortisation, after adjustment for activities divested and non-recurring items.

The members’ bonus is paid to the members as part of the quota beet price and recognised as a cost of raw materials in ordinary operating profit.

The beet yield per hectare, calculated on the average yield with average quality and after premium payments. More details on page 15.

Consolidated net turnover of Cosun.

Recurring EBITDA is operating profit before depreciation and amortisation, after adjustment for activities divested and non-recurring items.

The members’ bonus is paid to the members as part of the quota beet price and recognised as a cost of raw materials in ordinary operating profit.

The beet yield per hectare, calculated on the average yield with average quality and after premium payments. More details on page 15.
The lower part of the figure represents direct emissions caused by our use of fossil fuels. The upper part is the indirect emission relating to the purchase of electricity, converted into tonnes of CO₂. More details on page 18.

Total number of complaints about Cosun’s 30-plus production locations in the Netherlands and abroad. Most complaints related to odour nuisance. The values measured were within the limits of the environmental permits. See also page 22.

Total water consumption of all Cosun production locations in m³ per tonne of product. More details on page 19.

Total volume of residual material per tonne of product, broken down into organic, other separated and mixed flows. Read more on page 20.
Average number of staff during the year with a contract of employment with Cosun or one of its business groups.

Average number of FTEs by Cosun business group in 2013.

Total number of lost time incidents at Cosun business groups per 1,000 employees. For more details, see page 23.

Rate of sickness absence at the Dutch locations of the Cosun business groups, excluding maternity leave. More on page 24.
There has recently been much talk about the transition from a linear to a circular economy. The former consumes raw materials, the latter uses renewables, recycles inputs and minimises waste. Ambitious goals have been set, and the lessons necessary to bring about the transition are being learnt. But putting them into practice is often frustrated by red tape. Many rules act as a disincentive, regularly preventing us from closing our own mineral cycles. We are not allowed, for example, to return phosphate residues from our sugar production back to the fields so that they can be taken up by the beet during the growing season. We would welcome a general amnesty that enables us to gain experience recycling minerals within our own supply chain. We would then be in a position to help draft new rules that contribute to a circular economy.

Cosun is a cooperative of Dutch sugar beet growers. Its interests directly coincide with those of the arable farming industry. We share not only the same financial and economic ambitions but also the same concerns for the cultivation of high quality raw materials and the continuity of the primary sector and the processing industry. As a major arable cooperative, Cosun is willing and able to take the lead to enhance the sustainability of its vegetable raw materials but it relies on its growers and the regulatory authorities to achieve its ambitions.

Facts and fables
The sugar we produce from the sugar beet is used in many products. Its sweetness and other functional properties as a natural preservative are good reasons to use sugar in the food industry. The standard of living in the West has enabled people to treat themselves more frequently and take less physical exercise than in the past. The outcome is an increase in the number of overweight and obese people. This is plain for all to see.

There is a tendency to name the guilty parties. Either it is fat, or sugar and then lack of exercise. Scientists and other experts cannot agree on the precise cause of overweight or how the problem can be solved. Many diets are monotonous and dieters rarely achieve a lasting healthy weight. Overweight is the result of many self-reinforcing factors. It is a complex problem that cannot be solved by simple solutions, certainly not in the longer term.

As a food manufacturer, Cosun is part of this complex social problem. We also want to be part of the answer. We can make a difference by providing clear product information, developing low-calorie products and informing consumers that they can enjoy a treat but should do so responsibly.

All Cosun’s business groups promote exercise through their sponsorship policies and encourage their own staff to take part in sports events. Young people are a particularly vulnerable group. A healthy childhood is the best start for a long and healthy life. Cosun recognises the importance of making young people more aware of their dietary and exercise choices and is a participant in the JOGG programme in Breda to help young people achieve a healthy weight. It is a modest contribution to a serious problem. But the journey towards a more sustainable society is made up of many small steps.

Jos van Campen Robert Smith
Chairman of the Board President & CEO

Perspective on responsibility

We source most of our raw materials – sugar beet, potatoes and chicory roots – directly from the field and process them into foodstuffs and new applications for the biobased economy. The biobased economy seeks to maximise the value of green raw materials and closes cycles across a wide range of the supply chain.
Policy & organisation

Cosun takes a practical approach to corporate social responsibility (CSR). It can be seen in the way we weigh up the various interests when we take decisions. We look further and wider than just our own business groups and the current financial year.

Our vision
The world population is growing in number and in prosperity. Raw materials, farm land and energy are becoming scarcer. These trends are bringing matters to a head and confronting us with fundamental choices. We do not want our current standard of living to deprive future generations of nature or irreplaceable resources. We must learn to use the world’s natural wealth more carefully and efficiently.

Cosun wishes to play its part in the sustainable development of those areas in which it is active and can bring its influence to bear.

COSUN CSR POLICY

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Mission</th>
<th>Pillars</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External</strong></td>
<td>Cosun operates close to the arable sector and works with farmers on the sustainable cultivation of vegetable raw materials. We are convinced that the refinery of vegetable raw materials is essential to make optimal and sustainable use of our agricultural raw materials and natural resources. We deliver ingredients for food and feed, materials for many non-food applications and ultimately for energy production. We carefully balance respect for people, planet and profit with the continuity of the business and the cooperative.</td>
<td>Cosun’s sustainability policy is built on four pillars:</td>
</tr>
<tr>
<td>• Members of the cooperative</td>
<td>• Investment in the knowledge and expertise of the growers and suppliers of our raw materials • Higher yield per hectare • Mineral cycles closed wherever possible</td>
<td>1. Sustainable cultivation</td>
</tr>
<tr>
<td>• Customers</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Suppliers/service providers, partners</td>
<td></td>
<td>2. Financial and economic value creation</td>
</tr>
<tr>
<td>• Consumers</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Local residents</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Potential employees</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Politicians and public authorities</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Financial institutions</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Education</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• Media (press)</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td>• NGOs</td>
<td></td>
<td>• For members (income through the beet price) • For staff (salaries and pensions) • For society (products and taxes)</td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td>3. Sustainable production processes</td>
</tr>
<tr>
<td>• Employees</td>
<td></td>
<td>• Optimal use of raw materials and consumables, including water • Energy savings and lower CO₂ emissions • Waste prevention • Caring for the social environment; minimising nuisance</td>
</tr>
<tr>
<td>• Works Councils</td>
<td></td>
<td>4. Investing in staff</td>
</tr>
<tr>
<td></td>
<td><strong>External guidelines</strong></td>
<td>• Safe and dependable working environment (codes of conduct) • Fitness and employability • Education and training</td>
</tr>
<tr>
<td></td>
<td>• GRI</td>
<td></td>
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<tr>
<td></td>
<td>• NCR Code for Cooperatives</td>
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<tr>
<td></td>
<td><strong>Internal guidelines</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Code of conduct • Regulations</td>
<td></td>
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</tbody>
</table>
## Targets

We have set a number of social and environmental targets to measure the results of our efforts. We also account to our members for the return earned on the capital invested and our contribution to the financial result per hectare of sugar beet. Responsibility for the financial result is shared between our members/beet growers and ourselves as a sugar manufacturer. More information on our financial results can be found in our Annual Report for 2013.

### People
- **Reduce lost-time accidents** ultimately to zero.
- **Reduce sickness absenteeism** in any event to at least 10% less than the average in the food industry (2013: 5%).
- **Reduce the number of complaints by local residents** about our production sites. The target for 2015 is less than one per site.

### Environment
- **Reduce energy consumption** in our production processes by 2% on average per annum. This will also reduce the CO₂ emissions of our activities.
- **Make maximum use** of the organic residues from our production processes and convert them into green gas in the final instance.

### Other targets
We also take measures in other areas that complement the targets set out above. We have taken initiatives to make the cultivation of our agricultural raw materials more sustainable, to make better use of water during both the cultivation and processing of the crops, to increase cooperation in the supply chain with a view to sustainable innovation, to lower CO₂ emissions from transport and to facilitate the professional development of our staff through education and training. We also report on these measures in this report. We monitor the impact of our efforts in these areas but we have not yet set overarching targets for the Cosun group as a whole.

### Embedded
Corporate social responsibility is embedded in our strategy. Final responsibility for policy is borne by the Board, with the Supervisory Board overseeing its implementation by the Executive Board. The CEO reports to the Board.

### Cooperation and coordination
The group directors are responsible for setting and implementing their business groups’ policies. At group level, the policies are coordinated by the CSR platform.

The members of the platform are:
- Robert Smith, **CEO and Chairman of the CSR platform**
- Iwan Blankers, **director, Sensus**
- Jobien Laurijssen, **SVZ sustainability manager** (as from 1 December 2013)
- Derk van Manen, **Duynie Group R&D manager**
- Frank van Noord, **Suiker Unie R&D director**
- John Stoopen, **member of the Central Works Council**
- Martin van de Ven, **director, Aviko**
- Willy van Oorschot, **Cosun corporate communication manager**

Each business group has its own steering group; some have also appointed working groups in specific areas such as the environment and employee relations. The business groups’ management teams coordinate, direct, monitor and report on their activities to the Cosun platform. In consultation with the business groups, a working group at group level compiles management reports and the Annual Report.
Cultivation of vegetable raw materials

Sustainable use of the land entails the highest possible yield per hectare without degrading the quality of the soil so that future generations can also grow their own food. Clean water and biodiversity are integral to a sustainable food supply.

This principle is at the heart of how our vegetable raw materials are grown. It is a decisive factor in the size and quality of the crop, and also in the return we make on our production processes. It is why we and our growers invest in the further improvement, optimisation and sustainability of cultivation.

Minimising the use of pesticides and herbicides reduces the environmental burden and helps the growers control their costs. Modern farming techniques protect the soil and preserve biodiversity. They also improve the quality of groundwater and surface water.

Water spraying can always be considered if the conditions are appropriate. Growers on lighter soil types could perhaps have watered their crops a little more during the 2013 growing season in order to optimise the sugar yield. The development of the beet was held back by the relatively dry summer and the deficit could not be made up for in the autumn. Every effort must be made to increase the yield per hectare.

Significantly less energy and consumables are needed per unit of end product than just a few years ago. Further improvements are still possible. The direct contact between the Agricultural Services and the growers makes this a truly joint responsibility.

Cosun’s beet cultivation has traditionally been a cooperative undertaking, with all parties in the supply chain recognising the importance of supplying high-quality raw materials to the sugar factories. This shared responsibility is manifest in the study groups and demonstrations to improve sowing, growing and lifting techniques. They have been common practice at Suiker Unie for many years and have also been introduced at the other business groups.

Potatoes

New varieties are the starting point for further improvements in the cultivation of potatoes. Aviko studies new varieties to increase the yield per hectare and thus lower the cost of raw materials per tonne of end product.
The research will be extended in the future to select varieties on the basis of their nitrogen efficiency. Aviko has noted that customers are increasingly demanding products made from potatoes grown in controlled cultivation. They are making additional demands on the use of fertilisers, crop protection agents and crop rotation. Customers in Asia are particularly concerned about the presence of residues in the potatoes but their concerns are not yet widespread.

Aviko is guided in part by the demands and specific requirements of its customers and in part by its own initiatives because in the longer term only sustainable production methods can ensure sufficient raw materials of the required quality. This is one of the reasons Aviko is working with the Skylark Foundation. Potato growers who have adopted its methods can benefit from Aviko’s knowledge and experience of selecting varieties, working the soil, fertilisation and crop protection. Aviko enjoys sharing this knowledge. It also increases the quality of the raw materials, a common interest of both the growers and suppliers and Aviko as the processor of the potatoes.

Chicory

In chicory growing, weeds are usually controlled by a combination of chemical, mechanical and other non-chemical techniques. Sensus has introduced its own online crop registration and evaluation programme for chicory growers: i-Top Online. Participation in the programme is still quite low. Sensus is promoting the initiative in part by improving the programme’s ease of use because it helps the participants select the best crop protection agents and so improve the harvest.

More extensive use was made of cleaning equipment in 2013 to remove the tare soil attaching to the harvested roots. It was particularly opportune because heavy rainfall in the autumn increased the amount of tare. In cooperation with the growers (Chicory Tare Reduction Practical Network) in more distant areas from the factory in Roosendaal, several types of cleaner were used to determine which worked best. We also wanted to increase and share our knowledge. The figures show that cleaning reduces the amount of tare transported to the factory by about half. This is good for the growers as it cuts their transport costs and increases their financial yield. Sensus benefits because less soil is transported to the factory. Sensus provides the cleaning equipment, the growers have to use it. This form of cooperation has been well received, not least because it benefits both the grower and the processor.

Sensus will continue to invest in improving the profitability of chicory cultivation in order to ensure itself of sufficient raw materials of good quality. Providing cleaning equipment is such an investment. Sensus also invests in advising and supporting its growers by providing people and systems. The IRS Institute for Rational Sugar Production took on a full-time chicory specialist in 2013. Sensus’s Agro division was enlarged to increase its accessibility and visibility to growers and intermediaries. Sensus attaches great value to increasing the commitment by and to its growers. It is important if it is to achieve its goals, its sustainability targets and secure the continuity of its operations.

Fruit & vegetables

SVZ processes a wide range of fruit and vegetables, working with a variety of crops of different sizes in several countries. In eastern Europe, for example, soft fruit are often grown on plots of less than one hectare. SVZ therefore uses many suppliers. Spanish strawberries, by contrast, are usually sourced from large cooperatives. Various vegetables are grown under contract for SVZ. Contracts provide a gateway for more intensive forms of cooperation with the growers, for example in the form of joint investments in specific cultivation techniques, the selection of new varieties and the scale of operations.

The supply chains are relatively complex but after many years’ cooperation with the growers we can be confident that the crops are properly checked and controlled. SVZ’s agronomy team works closely with the growers to keep them informed of the latest developments in, for example, the responsible use of pesticides. In the Polish growing areas, training courses and seminars are provided at a variety of locations. In Spain SVZ is working with several customers and two European universities on a long-term study of irrigation in arid areas. A variety of irrigation methods (e.g. by means of sensors that emit a signal when the soil moisture content drops) and irrigation systems (e.g. shock pulse) are being tested. The flow pattern of water in sandy soils has also been studied. The results will enrich our knowledge of responsible and efficient irrigation in arid areas.

SVZ is also noticing that more customers are asking about the sustainable farming principles behind the products they buy. SVZ evaluated a large number of growers in 2013 against customer-specific sustainable farming standards. It then drew up plans to train and educate growers to work more sustainably. SVZ was certified by a multinational customer as a sustainable supplier of several types of soft fruit in 2013.
**Sugar beet**

Suiker Unie encourages its growers to use Unitip. This programme gives ambitious beet growers an insight into their own progress, enables comparisons with other growers and generates useful information for both the participants and Suiker Unie. About one in five of the growers are actively participating in Unitip. Participation is not compulsory but Suiker Unie invites its suppliers to use it as it can help them maximise the sugar yield per hectare. Both the growers and Suiker Unie benefit from the increased sustainability and higher income.

Suiker Unie invests in Unitip by adding new modules. Recent additions include modules to monitor and control energy consumption during cultivation. Everything is directed at reducing costs for the growers and securing their future. The profitability of beet cultivation underpins the sugar production industry in the Netherlands.

There is a direct relationship between the sugar yield per hectare and energy consumption during cultivation (use of machinery, etc.). The measures taken to increase the yield per hectare have both financial and environmental benefits.

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**Figure 1: Sugar yield**

*in kg per hectare*

![Graph showing sugar yield from 2001 to 2013. The average yield per year and average yield per five years (including the previous four years) are indicated.](image)

**Figure 2: Energy consumption in beet cultivation in the Netherlands**

*in MJ per tonne of sugar*

![Graph showing energy consumption from 2001 to 2013. The energy consumption for different yield levels is indicated.](image)

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**Miscellaneous**

The companies in the Duynie group source their raw materials from other companies in the food industry rather than directly from growers. Internal suppliers are Suiker Unie, Sensus and Aviko. Cosun Biobased Products also sources its raw materials from internal suppliers.
Financial and economic value: for customers, members and staff

Cosun considers the results and main developments at and around the cooperative in its Annual Report for 2013. It looks in detail at the figures in the annual accounts. In this chapter we focus on the value of our operations in terms of turnover, our members’ and employees’ income, and our investments to secure the continuity of our operations.

Cosun creates added value and is a significant economic actor:
- by upgrading raw materials into products for our customers;
- by making substantial payments to members, suppliers, employees, the government and financiers.

The table below shows the added value that Cosun generates by selling its products, after deduction of payments to suppliers and members for their products and services. In 2013, we created €831 million. Of this amount, €610 million was paid to employees, members, the government and financiers. The balance of the added value we created was added to reserves to be invested in assets and the expansion of activities.

### Added value

(amounts in millions of euros)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net turnover</td>
<td>2,166</td>
<td>1,945</td>
</tr>
<tr>
<td>Other revenue and stock movements</td>
<td>50</td>
<td>91</td>
</tr>
<tr>
<td>Payments to suppliers of raw materials</td>
<td>+/- 1,056</td>
<td>+/- 876</td>
</tr>
<tr>
<td>Payments to other suppliers</td>
<td>+/- 329</td>
<td>+/- 323</td>
</tr>
<tr>
<td><strong>Added value created</strong></td>
<td><strong>831</strong></td>
<td><strong>837</strong></td>
</tr>
<tr>
<td>Employees (salaries)</td>
<td>217</td>
<td>213</td>
</tr>
<tr>
<td>Members (beet payments and members’ bonus)</td>
<td>360</td>
<td>356</td>
</tr>
<tr>
<td>Financers (interest)</td>
<td>+/- 1</td>
<td>6</td>
</tr>
<tr>
<td>Government (taxes)</td>
<td>33</td>
<td>48</td>
</tr>
<tr>
<td><strong>Value created for stakeholders</strong></td>
<td><strong>610</strong></td>
<td><strong>623</strong></td>
</tr>
<tr>
<td>Retained profit</td>
<td>139</td>
<td>138</td>
</tr>
<tr>
<td>Depreciation</td>
<td>82</td>
<td>76</td>
</tr>
<tr>
<td><strong>Value created for reinvestment</strong></td>
<td><strong>222</strong></td>
<td><strong>214</strong></td>
</tr>
</tbody>
</table>
We create value by making optimal use of our vegetable raw materials. Total turnover increased by 11% to €2,166 million in 2013. Nearly all our activities reported higher turnover thanks to a combination of organic growth, higher selling prices and a number of small acquisitions. Suiker Unie profited from additional sales of quota sugar in the European market and high sugar prices. Aviko's turnover was lifted by higher selling prices but sales were slightly lower than in 2012. Our other activities (Sensus, SVZ and Duynie) also reported growth in 2013. Most of our turnover is made in Europe (about 90%).

Result
Cosun again reported good financial results in 2013. Earnings before depreciation and amortisation after adjustment for disposals and non-recurring results (recurring EBITDA) fell from €270 million in 2012 to €241 million in 2013. Despite this decline the result was again substantially higher than that achieved in 2009-2011.

Members
As a cooperative, we pay out a substantial proportion of our earnings to our members. Despite the lower recurring EBITDA, a number of non-recurring items lifted the members’ bonus to a historic high of €187 million (up 5% on 2012). The average sugar yield per hectare was fractionally lower than in 2012 (13.2 tonnes versus 13.5 tonnes). As a result, the average financial yield for Dutch beet growers was €4,917 per hectare, €46 higher than in the previous year. The financial yield per hectare is an important barometer of the profitability of beet cultivation, Cosun’s ambition is to realise the highest financial yield per hectare of sugar beet in the EU for its member/growers. It again succeeded in this ambition in 2013.
At group level, Cosun monitors the CO2 emissions of its factories, the water consumption of its processes, the volume of residual matter and the number of complaints made by local residents. We monitor the performance of all our production sites, including those outside the Netherlands.

Energy savings have been high on the agenda at Cosun for many years. A substantial proportion of our costs consist of energy costs. Our target is to reduce energy consumption per entity of produce by at least 2% per annum every year. We have achieved this target in the past five years. This may not seem a very impressive achievement but it is. All our business groups have been making significant energy savings for many decades. Every additional saving requires a far greater effort. The composition and quality of the crops we process varies from year to year. We have no influence on how this affects our energy consumption.

The figures have not been adjusted for the acquisition or divestment of activities during the year.

Figure 4 shows how many tonnes of CO2 are emitted for every tonne of product made by Cosun. The direct emission is a result of the use of fossil fuels. The indirect emission represents electricity purchased converted into tonnes of CO2.

**Optimising the production processes**

When we process our vegetable raw materials, our care for the environment often comes down to preventing waste. We aim to make optimal use of all our raw materials and consumables, energy, water and residual matter, and to reduce our odour and noise emissions. We take a critical approach to road safety around our locations and the appearance of our buildings, facilities and sites.
The figures are shown after adjustment for the conversion of the electricity consumed to CO₂ emissions. In previous years we had used an average conversion factor for all European countries. With effect from 2013 we have applied a more precise factor per country. For the sake of comparability, we have recalculated the figures for 2009-2012 using the new conversion factor. We found that the European average gave too favourable a picture. This has now been corrected. The proportion of electricity is relatively low because many of the factories use cogeneration plants, combusting gas to generate a large proportion of their own electricity.

**Boiler efficiency**
Both the direct and the indirect emission of CO₂ per tonne of product were lower in 2013 than in 2012. Higher capacity utilisation in the factories reduced energy consumption per tonne. Cosun is constantly seeking ways to improve its use of existing production capacity, paying particular attention to reducing gas and electricity consumption. A boiler efficiency benchmark study was rolled out across Cosun in 2013. Nearly all production sites produce steam as a source of energy. Natural gas is combusted in the boiler house to heat water into steam and simultaneously generate electricity (cogeneration). The cogenerated steam or the steam produced from the residual heat from the generation process can then be used to heat all manner of product flows. If the heat can be recovered, less natural gas needs to be used. More heat can be recovered by investing in modifications or in new equipment.

The study took measurements of energy generation and used a calculation model to determine its efficiency. Every situation is unique, but comparisons can still be made. The comparative study revealed that significant savings could be made without having to make additional investments. One way is to set the equipment more accurately. We informed the participating locations of how profitable investments could improve their efficiency. We did not overlook smaller savings, for example by replacing the lights at Suiker Unie’s sugar specialities factory in Puttershoek with low-energy bulbs. Such energy-saving ideas and suggestions were often put forward by the staff. The benefits are two-fold: we achieve demonstrable savings and the staff are rewarded for their commitment. One of the ways Suiker Unie encourages its staff is an internal motivation campaign to promote CSR themes.

**More savings**
Another practical study to reduce energy consumption even further will be carried out in 2014. We intend to fit frequency convertors to pumps and ventilators to lower energy consumption and inform our businesses of the potential savings that can be achieved using the technology. Preparations for the study commenced in early 2014. By calculating the potential savings at various locations and in different circumstances and by carrying out practical tests, we are creating enthusiasm for and belief in this method of energy saving. Cosun Food Technology Centre (CFTC) acts as a promoter and disseminator of knowledge that the locations can put into practice in their improvement and maintenance programmes.

Cosun is also studying the CO₂ emissions in the links before and after the production processes, such as the transport of raw materials to the factories and the transport of products to our customers. We can reduce the number of transport kilometres per tonne of product – and thus our CO₂ emissions – through better planning and loading, carrying return loads where possible, using lighter and more economical vehicles, improving driving behaviour and the like. Another example is to offer semi-manufactures to customers. By selling liquid thick juice, for example, Suiker Unie no longer needs to carry out an energy-intensive crystallisation process. Customers use the product directly in their own processes and no longer need to add water. This reduces the total energy consumption in the supply chain.

**Water consumption**
The food industry uses a lot of water, not only to wash the raw materials but also as process water and to clean our processing equipment. The vegetable raw materials themselves also contain a lot of water that we can use. Suiker Unie extracts the water from the sugar beet it processes and uses it in the production process. The total volume of water in m³ is directly related to the size of the harvest processed. In and of itself, therefore, absolute water consumption is of relatively little importance.

![Figure 5: Water consumption](image)

We prefer to consider our water consumption in terms of m³ per tonne of end product. We must reduce this ratio in order to save water.
As we produce foodstuffs, the water must be of drinking water quality. Water can be re-used after treatment but not indefinitely because of food safety standards. Surplus water is treated in our own facilities and discharged into the surface water or the public sewer. Our water treatment plants work to high standards, so high in fact that we can sometimes discharge water into vulnerable inland waters subject to strict environmental rules. As fresh water is becoming increasingly scarcer, we are looking for ways to use water of high quality that we no longer need. In cooperation with the TOM Horticultural Development Company, we are storing 300,000 m³ of treated water from the sugar factory in Dinteloord to water plants in adjacent greenhouses.

The Sensus site in Roosendaal uses about 800,000 m³ of water every year. It switched from tap water to groundwater in 2013. It will pump up groundwater from deep below its site rather than use the tap water that water companies often extract from vulnerable nature areas. Using groundwater is better for the environment and is financially beneficial to Suiker Unie. Sensus Zwolle also draws groundwater from deep below its site and treats it by means of reverse osmosis. It uses about 100,000 m³ per annum. It is of the utmost importance that the water satisfies all quality requirements to be able to produce high value inulin powder.

North Brabant became the first province in the Netherlands to decide to give legal protection to the sources from which food companies draw their water. Precisely how each source will be protected depends on the site’s specific features. The protection means that we will be assured of good quality groundwater in the longer term for use in our production processes.

Waste
Cosun recognises two kinds of waste: separated and mixed. Separated waste consists of paper and board, wood, plastic and chemicals. Per tonne of product, there was a slight decline in the volume of separated waste in 2013 in comparison with the previous two years. What remains is mixed waste. The volume of this waste increased in 2013 for two reasons. Firstly, a branch of Duynie in Great Britain processed more returned products (such as bread and biscuits wrapped in paper and plastic) into animal feed. A large proportion of the packaging material could not be recycled and was therefore disposed of as mixed waste. Secondly, SVZ acquired a facility in Rijkevorsel in 2012. Its renovations and expansion in 2013 produced a great deal of waste.

Cosun’s goal is to prevent waste and make maximum use of re-usable materials. Our Total Productive Management (TPM) programme pays specific attention to keeping production areas clean and orderly.
Bio-energy
Suiker Unie produces green gas from vegetable residuals such as beet tops and tails, foliage and some of the pulp remaining after the beet have been processed into sugar. Pulp is turned into gas only if the fresh pulp cannot be sold as animal feed. Drying the pulp costs so much energy that it is better for the environment to turn it into energy (in the form of biogas).

Since the biomass digester in Anklam came on stream in early 2013, Suiker Unie has been operating three digesters that together produce 30 million m³ of gas per annum. Most of the green gas is not used by Suiker Unie itself but is fed into the national gas transmission network. Financially, this is the most attractive option. Some of Suiker Unie’s trucks, however, drive on the green gas.

This is putting into practice our green deal with the government to make our transport more sustainable.

Other production units within Cosun have been producing biogas from process water by means of methane reactors for many years. Aviko supplies process water to an adjacent water treatment plant that recovers energy and minerals (chiefly phosphate) from it. This helps close the mineral cycle as the minerals can be returned to the fields as plant nutrients. This is technically feasible but is currently frustrated by regulations.

Limiting nuisance to local residents
Cosun has more than 30 production sites in the Netherlands and abroad. Their large-scale production processes are sometimes a source of nuisance to local residents.

Where factories are located close to residential areas, residents may be inconvenienced by odours or noise. The transport of raw materials to our factories can also cause a nuisance for people who live along the supply routes and close to the factories.

In 2013 we received a total of 161 complaints, a sharp increase on 2012, when we received 62. The increase was attributable to just three of the 30-plus production sites: Dinteloord, Vierverlaten (both Suiker Unie) and Lomm (Aviko). Four complaints related to Duynie and SVZ. No complaints were received about sites outside the Netherlands.
Odour nuisance
The biomass digesters at the sugar factories in Dinteloord and Vierverlaten are a source of odour nuisance despite all the calculations and tests made in advance. As the plant is completely new and we have no practical experience with it, we are learning on the job and making improvements as we go. More complaints were received about noise nuisance in Vierverlaten. The sources have been traced and were addressed relatively quickly.

Odour nuisance was due chiefly to the way in which the biomass was stored at the plants. It is now covered in order to reduce odour. Although the measures have reduced the odour, local residents are still experiencing some nuisance. We are therefore looking for additional measures to prevent the problem. The odour emissions measured at both locations are within the limits set in the environmental permit. Nevertheless, Suiker Unie thinks it undesirable that local residents are inconvenienced.

Investing in the staff
Cosun wants to grow, under its own steam and through acquisitions. We therefore expect the number of employees to increase in the years ahead. Cosun has relatively more older employees than younger ones. When the seniors retire, we must have enough sufficiently qualified junior employees to fill the vacancies. And the staff who have worked with us for many years must keep their know-how and skills up to date. Cosun encourages them to continue learning and share their knowledge with younger members of staff who have less specific work experience.

Defective equipment in Lomm
The complaints about Aviko’s chip factory in Lomm were due in part to an initiative taken by the local management. A complaint about odour nuisance was received at the beginning of 2013. A study found that the equipment to neutralise odour at the plant was not in proper working order. The cause of the defect was not discovered until later. It accordingly took longer than planned to take appropriate action. The gas washers are currently being re-calibrated and re-set.

In late 2013 Aviko Lomm switched from working three shifts to five shifts. Pursuant to the environmental permit, the change had to be reported to the permit issuer. Management took the initiative to involve the residents of Lomm when extending the working hours and organised an information evening in September. Comments by residents revealed that the complaints procedure was not working properly. Aviko had not received all the residents’ complaints. Aviko undertook to revise its complaints procedure and opened a dedicated email address and telephone line. A great deal of use was made of them immediately they went live. As a result, 35 complaints of ‘frying smells’ were received in the final quarter of 2013. The number is expected to fall sharply as the measures take effect.
Education and training

The average number of training days per FTE is about three working days per annum. A substantial proportion was dedicated to the TPM programme being conducted at all Cosun's business groups. Courses were also provided to improve the staff's position on the external labour market if they cannot be offered alternative work following a reorganisation. The staff are also offered opportunities to take additional courses to be eligible for other internal positions.

Cosun takes on trainees every year who carry out a practical internship or research project. More than 100 students were welcomed to the Cosun locations in the Netherlands in 2013. Most of them were taking a secondary vocational education course, often in a technical field. Figure 10 shows the ratio of trainees from secondary vocational education, higher professional education and university education.

The supervision provided for young trainees reflects the profile of a business that is actively engaged in society. There are benefits on both sides: the students have an opportunity to gain practical experience in their specialisation under the supervision of experienced professionals and Cosun receives young potential employees who have penetrating questions and fresh ideas.

Safe working conditions

Safety at work remains a matter of concern. Cosun's overall score may have declined slightly but the number of lost-time incidents and accidents is still too high. Sensus and Suiker Unie in particular reported more accidents and near-accidents than in the previous year. Aviko and SVZ reported fewer. Duynie reported zero lost-time incidents and accidents. CFTC had reported zero cases in 2012 but recorded a couple of incidents in 2013.

The reported increase may be prompted partly by an increase in awareness. Nowadays relatively minor incidents are reported as well.

Many factories have appointed their own safety expert and have rolled out special programmes to enable the staff to go home healthy at the end of the working day. Accidents, however, are not yet a thing of the past. The approach differs from one factory to another but there is a lot of common ground, with the staff being directly involved in their own safety, preferably at their own convenience. At Aviko, the staff have introduced an SOS form to report dangerous conditions. However, the form does not reveal dangerous behaviour, which may remain hidden for many years and not come to light until after an incident or accident has occurred. Safety awareness must be our first priority and we are increasing it through staff training courses and instructions.

Despite the extra efforts made in 2012, Sensus was unable to lower its lost-time accident rate in 2013. It therefore launched a safety awareness campaign at its site in Zwolle at the beginning of 2014. Roosendaal will follow suit this autumn so that workers in the chicory campaign will also be involved. Small groups of employees tackle a theme every month such as personal protection equipment and working at height. The staff must learn to anticipate the risks and act accordingly. Getting involved can sometimes lead to accidents. This was the case when staff in Zwolle responded to the consequences of a dust explosion.

To embed safe working practices at Sensus, an experienced operator has been trained as a safety expert. He is often to be seen on the work floor at both sites to observe the staff and point out unsafe conduct. He uses a registration system to analyse unsafe conditions and take action.

Suiker Unie was also unable to reduce the number of incidents and accidents. Changes in the working environment proved inadequate; awareness of how to work safely and, more importantly, how to act appropriately are decisive. A safety expert has been appointed at the two sugar factories in the Netherlands to point out unsafe working practices. Many very experienced members of staff are not fully aware of the risks they take, precisely because they are so experienced and skilled in their work. We received good news from Suiker Unie's specialities factory in Puttershoek: at the beginning of 2014 it had been working accident-free for almost two years.

Figure 10: Number of trainees Cosun 2013

Figure 11: Number of lost-time accidents indexed per 1,000 FTEs
It is still too early to talk about a permanent turning point but if it is partly the outcome of the safety programme launched in 2012, we can conclude that the programme is working.

Measures were also taken at other factories to increase safety and make staff aware of how they can play their part, because changes in the structure and equipment are not enough. The Safety, Environment & Health component of the TPM programme gives high priority to safe staff conduct.

**Health and fitness**

The rate of sickness absenteeism at Cosun increased slightly from 3.5% in 2012 to 3.8% in 2013. In comparison with the average rate for the industry as a whole (source: Statistics Netherlands), this is relatively low. The increase itself, however, is not, and there is no clear explanation for it. In relative terms, there was a sharper increase at Suiker Unie and Sensus than at Aviko and CFTC/Cosun, whereas Duynie and SVZ reported lower absenteeism rates.

With a view to the ageing workforce and the increase in the retirement age, Aviko launched a preventative programme five years ago to help its staff become and remain fit. Surveys have found that many people at increased risk revert to their old habits if the coaching is stopped after six months. They put on weight, start smoking again and take less exercise. More is needed to make a real and lasting change in their behaviour.

The sweeping deregulation of the European sugar market in three years’ time will have consequences for Suiker Unie. Managers will assume a more important role and will have to pay more attention to the staff, involving them in what is happening and nurturing their self-confidence.

**Young disabled employees**

Aviko and Rixona have set themselves the goal of taking on four young disabled people by 2014. The first was employed in 2013 in an invoicing department. A procedure to take someone on in the facilities department commenced in early 2014. Aviko also wants to fulfil its responsibilities in this area. Young disabled people require more attention and assistance than other employees. The aim is to coach them so that they can carry out their duties independently in due course. The lack of work experience requires additional input from both sides. The first experiences have been promising.

Suiker Unie laid down in its collective labour agreement that it would find appropriate work for five young disabled people. It has comfortably achieved this goal: at the beginning of 2014 six young disabled people were working in its factories. Finding appropriate work was sometimes a question of trial and error but when successful both sides are very pleased with the result.

The coaching provided to people in the high risk group was therefore extended to a whole year in 2013. The programme is expensive but if the investment is measured against the cost of long-term sickness absenteeism it is clear that it is money well spent, regardless of the improvements in the participants’ health.

Suiker Unie treats its sickness absenteeism rate as an indicator of staff fitness. The rate was slightly higher in 2013, with a particularly sharp increase in short-term absenteeism. A clear, demonstrable cause cannot be given. The staff might be working under greater pressure or uncertainty.
Diversity in terms of gender balance, ethnic minorities and people with physical or mental disabilities is not a decisive factor in recruitment procedure to fill vacancies or in internal career development. The acid test is the right person in the right place.

Figure 14: Breakdown male/female
Group employees, average FTEs in 2013

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### Reporting suspected wrongdoing

Cosun introduced a code of conduct for all members of staff more than ten years ago. The code offers them guidance in their day-to-day activities. Specific regulations such as a whistleblower scheme are also in place within Cosun.

Anyone who suspects wrongdoing or a breach of integrity by one or more colleagues can report it, anonymously if necessary, to a counsellor. To increase accessibility a dedicated reporting line known as Speak Up has been introduced. Staff can contact a counsellor by telephone or the website and receive help from a translator if they do not speak Dutch. We regularly draw attention to this reporting channel, for example by means of articles in the staff magazine, posters in the canteens and changing rooms and through the members of the local Works Councils.

In 2011 we received six reports, four via the Speak Up system and two directly to the group managers. No reports had been received in 2012. This may mean there was no reason to make a report or that the staff were no longer aware of the system. We accordingly included an information sheet on Speak Up with the staff’s payslips at the beginning of 2013.

It cannot be said with certainty whether this helped but four cases were reported via Speak Up in 2013, from Germany, the Netherlands, Poland and the US. The reports were concerned with internal matters such as suspected favouritism and administrative cases concerning dismissal and absenteeism. In all cases, the matter was resolved by a good talk, sometimes with a P&O officer acting as an intermediary. Management styles and the transparency of internal rules were sharpened up to prevent the reoccurrence of wrongdoing.

We are pleased that these channels are in place to report suspected wrongdoing and that they are used in practice. They must be brought to the staff’s notice from time to time to ensure that staff know they are available if necessary.