



Contents

- 04 Annual report
- 06 Kuhn Group
- 08 Bucher Municipal
- 10 Bucher Hydraulics
- 12 Emhart Glass
- 14 Bucher Specials
- 16 Key figures Production
- 20 Key figures Employees and suppliers
- 24 About this report
- 25 GRI-C-level statement





This is the second sustainability report to be published by Bucher Industries. For Bucher, the concept of sustainability stands for corporate management with a long-term perspective. Our sustainability reports are prepared in accordance with the G3 standard of the Global Reporting Initiative (GRI), Application Level C. This 2012 report has a new structure, designed to ensure a simpler and clearer presentation. In the first part, we describe sustainability projects drawn from our broad range of activities. The "Key figures" section offers an at-a-glance presentation of the indicators relevant to the company. These cover the environment, employees and suppliers, and are based on the figures for 2011 and 2012.

On page 25, you will find the GRI Statement. The GRI Index is published as a separate document. It can be downloaded, together with the sustainability report, from our website www.bucherindustries.com.

Annual report

Our corporate culture requires decision-making that is shaped by long-term thinking. Even as a publicly listed company, Bucher has never given precedence to short-term solutions, but always favoured an even-handed approach, taking all stakeholders' interests into account. Our aim is to ensure dynamic development of our businesses, but with a solid foundation and a long perspective. That is why we see sustainability as a matter of balancing economic and social requirements and the conservation of natural resources. For us, there is no inherent contradiction in this ambitious and challenging goal.

For generations, we have pursued a sustainable approach to corporate management. Nonetheless, the present report is only the second to be published by Bucher. In comparison with 2011, most of the key indicators are little changed. This is a notable trend in itself, since Group sales for 2012 were 12% higher than the previous year. Yet energy consumption across the Group rose by only 2% and CO₂ emissions by 1%, while the figures for water consumption and waste water usage were actually lower. We will need to conduct analyses over several years to understand more clearly the context and the factors influencing the trend in the environmental indicators. A simple comparison of the rise or fall in energy consumption from one year to the next is of limited value.

First conclusions can be drawn from the data already collected. Changes in energy consumption at certain production sites in countries with energy resources that produce a lot of CO₂ have a disproportionate impact. That is why CO₂ emissions showed a less marked rise than energy consumption. One clear and welcome finding is the improvement in accident rates at our plants. Our employees have been involved in various initiatives and preventive measures as part of sustainability projects, both internally and externally. You will learn more about these on the following pages.

Sustainability reporting is, on the one hand, part of our accountability to stakeholder groups and the interested public. At the same time, we are aware that careful use of resources, sensitive management of personnel, prudent selection of suppliers and good relations with our customers and the wider community are important factors in improving competitiveness and thereby the long-term success of our Group. And we act accordingly.



There are also global trends which, by their very nature, influence our business and therefore the challenges facing sustainable corporate management. For example, the demographic trends affecting personnel at our sites and the strong growth of population in certain parts of the world, which set new challenges for our products, in particular agricultural machinery. To meet the demands of global population growth, agriculture has to achieve a massive increase in yield per hectare, otherwise more people will face starvation. However, the trend towards cost-effective, space-saving technologies that make sparing use of resources is one that affects all Bucher's divisions, products and production processes. Sustainability reporting, along with the gathering of data and subsequent evaluation, is a valuable tool for the ongoing development of our company.

These considerations are part of our internal dialogue. Already during the preparation of the first report, more than 50 managers from across the Group took part in a workshop at which we discussed and defined issues and questions on the theme of sustainability in the Bucher Group. The great commitment of all concerned is one reason for the high quality of the data resources. The results from the second report, which covers data for 2011 and 2012, were discussed again with the same management personnel, with a particular emphasis on further development of the analysis and conclusions. A process that is very much in the spirit of our long-term orientation.

Niederweningen, 30 July 2013

Muxuu

Philip Mosimann CEO Bucher Industries AG





Potential for fuel savings:

18%–35% through modified driving behaviour, care of materials and choice of fuel

15%–20% through choice of tyres, tyre pressure and evenly balanced weight of the tractor



Know how: Forty tips for saving fuel

Agricultural machinery specialist Kuhn Group is pursuing clear objectives in the area of sustainability: it aims to reduce fuel consumption and thereby CO₂ emissions by introducing innovative products. Kuhn Group is responding to growing customer requirements as well as fulfilling the high standards it has set itself in the development of agricultural machinery for sustainable production. There are four main drivers of innovation in product development: productivity of the machinery, efficient agricultural processes, optimised machine operation and the use of alternative energy sources.

The key to optimising machine operation is to make the interaction between man and machine as effective as possible. In doing so, regional differences have to be taken into consideration. Specialised technology plus intelligent operating techniques – that is a formula for significantly reducing greenhouse gas emissions, given that about half of all the fossil fuels consumed in the farming industry are used to run equipment and tractors. A further major factor influencing fuel consumption is the way the machinery is used in practice.

By way of orientation, Kuhn Group launched an information campaign in 2012. As part of this initiative, the company published a customer brochure with the motto "Forty tips for saving fuel". The aim of the attractive 50-page publication, which is packed with practical information and explanations about the product range, is to upgrade the knowledge of all concerned. The goal is to save fuel while taking into account the technical demands as well as the economic objectives of the farmers.

The right user attitude begins with selecting a level of engine power that corresponds to the actual requirements, and ends with correct maintenance of parts subject to wear and tear. To achieve that, the tractor and the agricultural machinery must be carefully matched and the overall weight distribution of the combination optimised. Another consideration, often underestimated but very important in practice, is getting the best tyres for the job. Size and air pressure must be suited to the intended work and the surface involved (road, firm or loose farmland). The right tyre pressure alone can reduce fuel consumption by up to 15%. The satisfaction of our customers and protection of the environment are central to the values Kuhn Group is committed to upholding. Our efforts to reduce CO₂ emissions is one way we aim to fulfil this promise to our customers.



Meticulous project management and transparent communication have been rewarded: MOVE was well received by customers, employees and suppliers.

Sustainable production in Australia: all thanks to MOVE

The Eyre Highway from Perth in Western Australia (WA) to Melbourne in the state of Victoria runs through long, arid stretches of the Australian outback – 3 440 kilometres of asphalt. Truck drivers at MacDonald Johnston, a Bucher Municipal company, had to ply this route 65 times a year, each time carrying two kits for refuse collection vehicles. Every year, they transported about 130 of the new kits on the long journey from the factory in Perth to be assembled into new vehicles at the Melbourne plant. Not anymore.

In 2012 MacDonald Johnston concentrated the entire production of refuse collection vehicles in Melbourne, closing down its assembly plant in Perth. The site there has been transformed into a modern sales and service centre for refuse collection vehicles in Western Australia. The MOVE project – the name for the successful relocation from Perth to Melbourne – made it possible. The business decision to make the transfer was taken in the interest of sustainable and efficient operations.

By focusing its Australian activities at a single assembly plant, MacDonald Johnston was able to organise its production infrastructure (power supply, ventilation, gas supply for welding, overhead cranes etc.) much more efficiently, at the same time reducing operational costs as well as benefiting from the generally lower cost structures in Melbourne. Above all, the big cuts in CO2 emissions and fuel consumption resulting from the elimination of the cross-country transport had a positive effect on the balance sheet of the MOVE project (see box). Further gains include greatly reduced throughput times thanks to optimisation of production planning. The company saves 15 man hours per vehicle kit just by buying in material at a more advanced stage of manufacture.

The 32 production workers in Perth benefited from the strength of Western Australia's economy. The region is the fastest growing in the country. Demand from Asia for raw materials has driven a boom in the mining industry and brought prosperity and full employment. None of the Perth employees had to move to Melbourne. Production workers were informed by management about the proposed transfer at a very early stage, and they were able to find jobs in the mining industry. In return, new jobs were created in Melbourne.







Sustainability gains through MOVE

Savings in transport operations: $350 \text{ tCO}_2 \text{ e}$ p.a.

Cost savings on fuel: CHF 166 000 p.a.

Time saved in production of vehicle kits: Side loader: 21hr or 18% Front loader: 21hr or 7%



Welcome Days 2012 evaluation:

Tour through production facility

28 out of 29 respondents considered the choice of subject matter good or very good

About 80% rated the presentations as good or very good

The idea of an informal network was successfully implemented

Welcome Days: for Executives and Specialists

Those who took part are still buzzing with enthusiasm. For them, the Welcome Days event was an all-round success. They experienced at first hand the real effort Bucher Hydraulics is making to introduce new management talent to its corporate culture. Thirty committed specialists and executives from Europe, China and the USA attended the division's first Welcome Days event. The idea behind the four-day get-together was to give newly recruited managers an insight into Bucher Hydraulics' strategy, vision and culture, as well as its products, methods and core processes, and also to establish a basis for common understanding and facilitate networking at management level.

There were good reasons for introducing the Welcome Days: Bucher Hydraulics is growing, developing new markets and opening production sites on four continents. Expansion also entails growing challenges for managers and specialists in divisional companies and centres of expertise. One of the skills they need is an ability to adapt to other cultures and lead international project teams, across cultural and departmental boundaries. They also have to deal with regional differences in customer requirements. Taking "people make the difference" as its guiding principle, Bucher Hydraulics decided to make an investment and developed the format for the annual Welcome Days. Apart from presentations and group projects, the programme includes a hiking tour and an evening gathering, with an opportunity to meet division president Daniel Weller in an informal setting.

The four days Welcome Days event took place in Switzerland and Germany in 2012. The choice of venue was no accident: the division's biggest plants are located in these two countries. Together they generate around half of Bucher Hydraulics' sales.

The great asset of the Welcome Days is the composition of the group, with many different nationalities and areas of activity represented, as well as a wide range of views.



Tempered flat glass has been used to make safety glass for over 80 years. Emhart Glass was the first to succeed in developing a glass for containers that is on a par with flat safety glass.

Tempered glass bottles: A milestone for the packaging industry

Glass is a valuable, recyclable material that has fascinated man for thousands of years. Every year, more than 250 billion glass containers are manufactured worldwide. The risks for health are minimal, since glass is manufactured from natural raw materials, silica sand and soda lime. As a chemically inert material, glass prevents chemicals and solvents from permeating and contaminating the contents, something that is a risk with plastic packaging such as PET (polythene terephthalate) containers.

A unique process developed by Emhart Glass, with worldwide patent protection, enables manufacturers to make much more stable glass bottles, so they can either be made more robust to withstand rough handling, or considerably lighter. This means the amount of glass required to manufacture tempered glass containers is much lower than for conventional glass packaging. Extensive laboratory testing of tempered glass bottles yielded encouraging results: containers made from tempered glass are suitable not only as disposable bottles but also very good as returnable bottles.

To temper the glass containers, they are heated to about 700 °C, then subjected to rapid, controlled cooling, inside and outside. This produces mechanical stresses of around 50 MPa on the inner and outer surfaces and tensile stresses of a similar magnitude on the inside. The result is a more stable glass container, reflected in a 30%–50% increase in burst pressure.

From mid-2013, the new process will enter the commercial sphere for the first time through collaboration with Vetropack, an innovation-driven customer, which will start industrial production at its factory in Pöchlarn, Austria. If the commercialisation of the process proves successful, tempered glass bottles will stay in circulation longer in future and offer significant reductions in the energy required for manufacture, transport and recycling.





Inspection at Emhart Glass

Advantages of tempered glass bottles at a glance

Glass bottles can be made lighter or more robust

Decreased usage of raw materials

Weight reduction improves CO₂ balance



Main advantages

Removal of dried-up, unripe and unfertilised fruit

Reduction of green parts from 2 to 4.5% in a standard machine to around 0.2 to 0.5%

Energy savings thanks to simple regulation of the operating speed

Lower water consumption than with all standard systems

- 01 Delta Oscillys 200 destemmer
- 02 Separator basket
- 03 separated stems
- 04 intact berries

Gentle movements: The Delta Oscillys destemmer

In the winemaking process, destemming is one major operation contributing to the quality of wine and especially red wine.

If the grapes are not carefully handled when they are separated from the stems, and if their integrity is not preserved, herbaceous flavours can find their way in the grape juice. Another consideration is that today the fruit is often harvested at a very late stage of ripening. That makes the grape skins more fragile. Gentle, hygienic separation of the grapes from the stems is therefore of prime importance.

Bucher Vaslin is making headlines with a completely new destemming process, based on oscillating motions of the separator basket. The Delta Oscillys has received several awards for its sophisticated technology, which subjects the grapes to less mechanical stress and conserves the fruit potential.

The patented process leaves the berry as intact as possible and releases less juice and "green" material during destemming. The berries are separated from the stems by means of a wide oscillatory motion of one or two baskets (depending on the model). The machine takes advantage of the fact that the berries have a higher moment of inertia than the stems. The mass of the grapes is increased artificially by acceleration until the critical speed for destemming is reached. Separation is brought about by stopping the stems on a perforated surface. The size of the perforations can be varied to fit the grape variety being processed.

The results speak for themselves: the berries and stems are completely separated in two different ways. The berries also pass through a calibrator where any remaining green parts are removed. The throughput volume of the machine can be adjusted to as much as 16 tonnes an hour. The destemmer is very simple to operate, so it conserves energy. Bucher Vaslin's engineers were able to dispense with the usual retaining tank, which means the machine can be cleaned very quickly, reducing water consumption and the burden on the waste water system. Delta Oscillys is quite unlike existing destemming machines for grapes. The gentle process leaves berries undamaged, reduces power and water consumption, and also offers an outstanding price-performance ratio.







Data source: 29 production sites of the Group

Key figures – Production

Bucher Industries records data for environmental indicators across the entire Group in standardised form. For the present report, all important production sites in all divisions of the Bucher Group were included, a total of 29 facilities. The focus of the survey was on energy data – and therefore implicitly on greenhouse gas emissions – as well as water consumption.

Bucher Group environmental indicators

		in %	2012	in %	2011	change	
Energy consumption in MW	h total		349 957		342 359	+2%	
Electricity		40%	138 863	39%	134861	+3%	
District heating		3%	10524	4%	12 244	-14%	
Heating fuels	total	50%	173797	49%	169321	+3%	
Heating oil		••••	6709	••••	11 280		
Natural gas			157 341		148839		
LPG/propane			9145		7 977		
Wood			282		823		
Diesel (emergency power))		320		401		
Motor fuels	total	8%	26773	8%	25933	+3%	
Diesel			15600		14724		
Petrol			5321		5947		
LPG/propane			5 5 2 4		4953		
Biodiesel			69		85		
Bioethanol			258		224		
CO ₂ emissions in tCO ₂ e	total		85 792		85 295	+1%	1)
Scope 1	total	52%	44 904	51%	43 545	+3%	2)
Heating fuels		••••	36449	••••	35 323		
Motor fuels		••••	6764	••••	6 5 5 6		
Volatile gases (e.g. refrige	rants)	••••	1543	••••	1535		
Process emissions							
(e.g. welding processes)			148		132		3)
Scope 2	total	48%	40 888	49%	41750	-2%	4)
Electricity			35281		34 902		
District heat			5608		6847		
Biogenic CO ₂ emissions			199		417		
Third-party sales of energy	•		-681		-293		
Water consumption in m ³	total		338 280		339723	-0.4%	
Drinking water			206338		195 639		
Process water			69386		59 2 52		
Collected rainwater			62 5 56		84832		
Waste water in m ³	total		334032		336 912	-1%	
Communal wastewater							
treatment plant			317000		320 520		
Seepage water			1918	••••	-		
Release into water bodies			852		1135		
External processing			14262		15 257		

¹⁾ Greenhouse gas inventory: calculated in accordance with the Greenhouse Gas Protocol and ISO standard 14064

 $^{\scriptscriptstyle 2)}$ Scope 1: emissions from direct energy usage

³⁾ Retrospective correction of a consumption rate (previous year: 61 tCO₂e)

⁴⁾ Scope 2: emissions from indirect energy usage

Data source

29 production sites accounting for about 80% of Group sales and about 90% of Group employees

Divisional environmental indicators

Kuhn Group		2012	2011	change	Bucher Municipal	2012	2011	change	
Energy consumption in MWh	total	214683	203 047	+6%	Total MWh	22 803	23 296	-2%	
Electricity		81886	77 760	+5%		8782	7 0 4 9	+25%	1)
District heating		-	-			-	-		
Heating fuels		113 859	107 243	+6%		9 796	12483	-22%	2)
Motor fuels		18937	18 043	+5%		4 225	3 7 6 5	+12%	
CO ₂ emissions in tCO ₂ e	total	41131	38 316	+7%	Total tCO₂e	7 316	6 804	+8%	3)
Scope 1		28236	26 667	+6%		3 809	4070	-6%	
Scope 2		12 895	11649	+11%		3 507	2734	+28%	
Water consumption in m ³	total	174 655	189 206	-8%	Total m ³	22 270	24739	-10%	
Waste water in m ³	total	174 655	189 206	-8%	Total m ³	21 437	23431	-9%	
Bucher Hydraulics		2012	2011	change ⁴⁾	Emhart Glass	2012	2011	change	
Energy consumption in MWh	total	32 3 19	31 512	+3%	Total MWh	71032	75679	-6%	5)
Electricity		22 5 2 3	21965	+3%		22791	25476	-11%	
District heating		375	339	+11%		10 149	11905	-15%	
Heating fuels		8217	8 095	+2%		37 578	37136	+1%	
Motor fuels		1 2 0 3	1112	+8%		514	1162	-56%	
CO ₂ emissions in tCO ₂ e	total	11044	10769	+3%	Total tCO₂e	24 364	27614	-12%	5)
Scope 1		2 4 1 7	2 390	+1%		8739	8 8 3 9	-1%	
Scope 2		8 6 2 7	8 379	+3%		15 625	18775	-17%	
Water consumption in m ³	total	36665	28 285	+30%	Total m ³	100 047	93 906	+7%	
Waste water in m ³	total	34186	28 285	+21%	Total m ³	99110	92 902	+7%	
Bucher Specials		2012	2011	change					
Energy consumption in MWh	Total	9121	8 824	+3%					
Electricity		2 880	2610	+10%					
District heating		-	-						
Heating fuels		4347	4 363	-0.4%					
Motor fuels		1894	1851	+2%					
CO ₂ emissions in tCO ₂ e	total	1938	1791	+8%					
Scope 1		1704	1 579	+8%					

 $^{\imath)}$ Bucher Municipal: The marked increase in total output resulted in higher electricity consumption.

total

total

234

4643

4643

212

3 5 8 8

3 0 8 8

+10%

+29% ⁶⁾

+50% ⁶⁾

²⁾ Bucher Municipal: Decrease in heating oil consumption at certain sites.

 $^{3)}\,$ Bucher Municipal: The rise in total emissions despite lower energy consumption was due to rising output in countries with higher CO₂ emissions in power generation.

⁴⁾ Bucher Hydraulics: In 2012 the scope of data collection was extended in the USA. As a result, 2012 and 2011 are not directly comparable.

⁵⁾ Emhart Glass: Disproportionate decrease in emissions compared with energy consumption; partly due to marked decrease in energy consumption with aboveaverage CO₂ emissions in China.

⁶⁾ Bucher Specials: Burst water pipe at Niederweningen site.

Scope 2

Water consumption in m³

Waste water in m³

Energy consumption, Group and divisions

In the 2012 reporting period, the Bucher Group's energy consumption totalled around 350 GWh. Greenhouse gas emissions amounted to nearly 86 000 tonnes of CO_2 equivalent (tCO₂e). Fuels for generating thermal energy and electricity usage are the main factor influencing the Group's energy consumption, with about 90% of the total. Renewable energy is used only in isolated cases: individual Group companies power vehicles with biofuels and make use of waste wood to fuel a combined heat and power station.



Greenhouse gas emissions, Group and divisions

In the reporting year, energy consumption at Bucher Industries increased slightly, while greenhouse gas emissions remained almost constant, despite the 11.7% year-on-year increase in net sales. Kuhn Group accounted for the biggest proportion of energy consumption with 60%, followed by Emhart Glass with 20%.



Environmental incidents

In 2012, there were no incidents involving significant releases of chemicals or emissions. No company faced legal action for possible infringements of environmental regulations or legislation.



Top ten nationalities of employees

The ten top nationalities account for a total of 91% of the employees in 29 production facilities. The Group's French workforce, the majority of whom work for Kuhn Group, represented the biggest overall percentage, with 28%.



Key figures – employees and suppliers

The know-how and experience of our employees is the key to business success. That is what we are building on and we offer our employees attractive jobs with prospects for advancement and a broad range of training opportunities.

Key figures employees

All key figures for employees relate to an annual average covering 29 significant production sites and over 80% of the workforce. In 2012 the average was 9 459 employees (Group average 10 383), in 2011 it was 8 417 employees (Group average 9 380). At Group level, the figures broken down in terms of different employment contracts (permanent, temporary), working-time models (full-time, part-time) or gender showed no significant changes. The total for the under-30 age group declined in the reporting year by one percentage point compared with the over-50 age group.







Days lost per employee

Accident statistics improved at Group level. Comparing 2011 and 2012, overall days lost per employee remained constant at 6.1. Individual long-term illnesses increased the proportion of days lost through illness per employee. As a matter of principle, the US sites only record days lost through occupational illnesses.



Turnover rate

The turnover rate for the Group as a whole relates only to employees on permanent employment contracts. The turnover rate remained constant in 2011 and 2012. Implementation of the first steps in the transfer of capacity from Europe to Asia at Emhart Glass led to an increase in the number of dismissals. After completion of a major order, Bucher Municipal adjusted its capacity to the normal, lower level. This necessitated lay-offs in Latvia because employees cannot be employed there on a temporary basis.



Average training per employee: 22 hours per year

The figures for 2012 showed no significant change year on year. Bucher invested an average of about three days per year in training for each employee.

Key figures suppliers

The Group practices active supply chain management based on fairness and aimed at building long-term relationships.

Share in spending on national suppliers

In the reporting year, the share of orders to suppliers based in the relevant country decreased by three percentage points to 63%. Emhart Glass reduced its local purchasing in favour of its own production in Malaysia.



¹⁾ The figure shown in the 2011 sustainability report was 63%. This was corrected to 66%.

About this report

The second sustainability report from Bucher Industries is the first to draw on data from two reporting years. For the first time, the 2012 report presents key data relating to production, employees and suppliers from the divisions as well as from the Group. The available data resources for both years were the same 29 significant production sites, which account for 80% of Group sales. The publication of the next report is planned for the end of June 2014.

Bucher follows the guidelines of the Global Reporting Initiative (GRI), the world's leading index. More information can be accessed at www.globalreporting.org. GRI verified and confirmed that this report and the complementary GRI Index, which is published as a separate document, fulfil the requirements of GRI, Application Level C. This report is available exclusively online at www.bucherindustries.com/de/node/464.

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GRI-C-Level Statement



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