



COMMITTED TO THE FUTURE

2023 CSR REPORT

CRISTAL UNION

C'est ensemble
que nous avançons.



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EDITORIAL



Xavier Astolfi,
General Manager
Olivier de Bohan,
Chairman

Against the background of the energy crisis and the dangers posed by climate change, our beet/sugar/ alcohol production division holds all the cards to be able to reinvent itself.

A leader in this sector, our Cooperative Group Cristal Union has already taken up numerous challenges and has become one of the pioneers of this transformation!

For many years, we have demonstrated that we have an ambitious roadmap aimed at reducing our energy consumption and increasing decarbonization and this strategy has just been validated by the Science Based Targets initiative (SBTi), a global standard in this field. Our goal: to reduce our greenhouse gas emissions by a further 23% by 2030, compared to 2019 and make all our sugar production facilities self-sufficient in energy by 2050, using part of the beet pulp to supply them with energy!

Pioneers in terms of water management, we also set ourselves the goal of no longer drawing water from the natural environment to operate our sugar factories by 2030.

Because this transformation can only be achieved with the help of our cooperative members and employees, we make every effort to support them and provide them with what they need: agricultural research and development, ending the use of neonicotinoids, well-being at work, safety, etc.

WE ARE CONVINCED OF THIS STRATEGY AND PROUD OF IT - THE BEET/SUGAR/ALCOHOL INDUSTRY IS AN INDUSTRY OF THE FUTURE THAT HELPS ENSURE OUR COUNTRY'S FOOD, ENERGY AND HEALTH SOVEREIGNTY.

CRISTAL UNION COMMITS ITS STAKEHOLDERS TO ITS CSR STRATEGY

In 2022, Cristal Union commissioned the Transitions consulting agency to carry out a Materiality analysis which measures its internal and external stakeholders' perceptions and expectations of its CSR strategy. More than 200 stakeholders were consulted: 48 cooperative members, 145 employees, 4 environmental associations, 1 regional authority (Grand Reims), 3 technical institutes (ITB, INRAE and AIBS) and 5 customers.

These consultations made it possible to map our CSR issues across 5 pillars: governance, economy, environment, social and local.

This work has also made it possible to measure the importance given to certain topics such as water management or agroecology.

GOVERNANCE

ECONOMY

ENVIRONMENT

SOCIAL

LOCAL

CRISTAL UNION

1

BUILDING ON THE STRENGTHS OF THE COOPERATIVE MODEL

OUR MISSION

“ BRINGING TOGETHER LONG-TERM INTERESTS: THOSE OF OUR CUSTOMERS, OUR COOPERATIVE MEMBERS, OUR EMPLOYEES, OUR PARTNERS FOR EXCELLENCE IN AGRICULTURAL AND INDUSTRIAL PRODUCTION THAT IS BOTH EFFICIENT AND RESPONSIBLE, AND GEARED TOWARDS THE CHALLENGES OF TOMORROW. ”

CRISTAL UNION: A MAJOR PLAYER IN THE FRENCH SUGAR BEET INDUSTRY

Cristal Union is a French Cooperative Group which is among the leading European producers of sugar, alcohol and bioethanol.

We provide our 2,500 customers with high-quality products from an increasingly secure supply chain and which have a carbon footprint amongst the smallest on the European market.

Daddy



erstein

Our major sugar brands Daddy (found in 2 out of 3 households!) and Erstein are very well-known to French consumers. With its Eridania brand, Cristal Union is also a leader on the Italian market.



1st

SUGAR SUPPLIER TO THE FRENCH AGRI-FOOD INDUSTRY



1st

EUROPEAN RECTIFIED ALCOHOL PRODUCER

Top quality alcohol products sought by the top brands



3rd

EUROPEAN BIOETHANOL PRODUCER

E85 ethanol and 95-E10 unleaded (10% ethanol) fuels. These biofuels are made from the residues of beet or wine production



BEET AND ALFALFA PULP

Beet by-products can be used for animal feed or energy production

AN IMPORTANT CONTRIBUTION TO REGIONAL ECONOMIES

Cristal Union produces 100% French sugar beet and products which are entirely made in France, with short supply chains of around 30 km on average between field and production site.

With 9,000 cooperative members cultivating 40% of the French sugar beet production area and 2,000 employees at our 13 production sites in France, Cristal Union Group is a major contributor to the economies and dynamics of rural communities. Through its activities, Cristal Union supports 23,000 jobs in France (Source: Utopies Local Footprint® Survey, June 2022).

More than 5,000 visitors per year come to our sites, including many elected officials. In November 2022, the Secretary of State for Rural Affairs, Dominique Faure, and French government spokesperson, Olivier Véran, visited our sites at Bazancourt and Arcis-sur-Aube, respectively, to mark their exemplary industrial decarbonization.

We are one of the founding members of the association "Dirigeants Responsables – Marne (Responsible Leaders – Marne)" created at the end of 2022, in partnership with the Urban Community of Grand Reims, to promote the spread of good practice between regional leaders in terms of decarbonization and sustainable development.

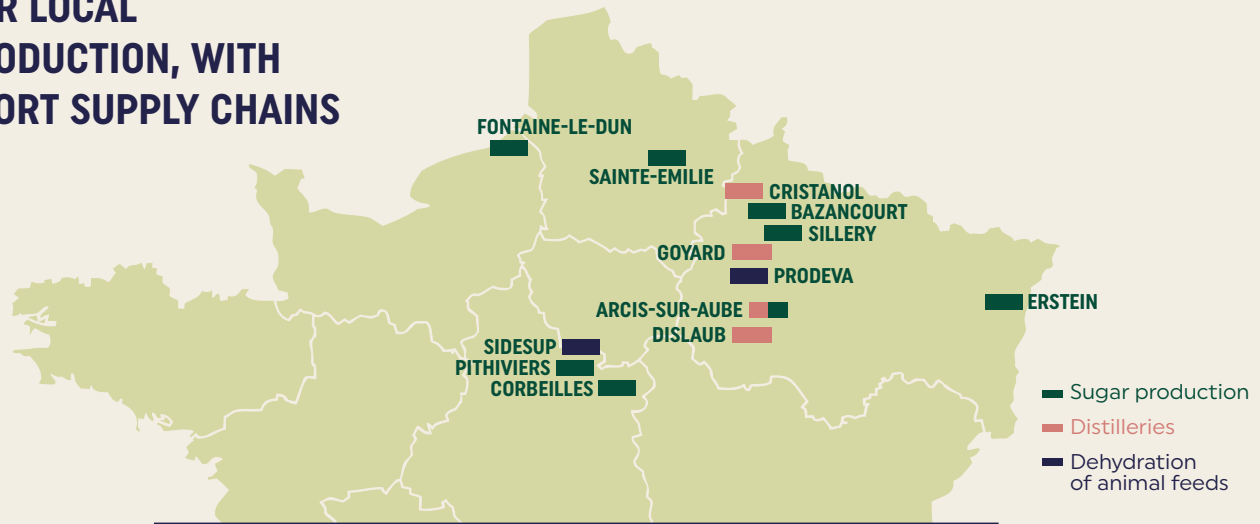
We participate in many important local events in the regions in which we operate, such as the Foire de Châlons.




Banques Alimentaires

For more than 20 years, Cristal Union has been making regular donations of sugar to the Marne Food Banks and, since 2022, an agreement has been signed to distribute sugar throughout the area, where needed.

OUR LOCAL PRODUCTION, WITH SHORT SUPPLY CHAINS



40% 
OF FRENCH SUGAR BEET PRODUCTION AREA

13 
PRODUCTION SITES IN FRANCE

30 KM 
AVERAGE DISTANCE BETWEEN FIELDS AND SUGAR FACTORIES

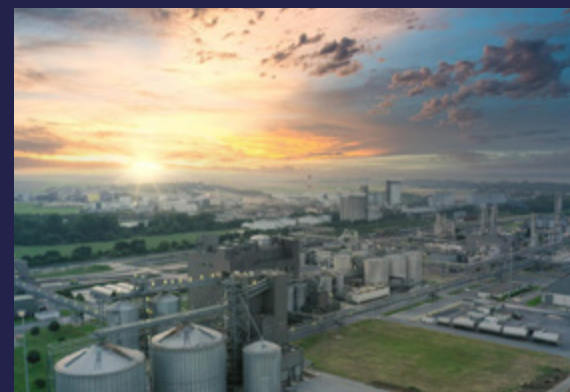
180 
MILLION EUROS INVESTED ON OUR INDUSTRIAL SITES OVER 2 YEARS

STRONG VALUES

UNITED	EXPERTS
AGILE	COMMITTED

SYNERGIES THAT SUPPORT THE BIOECONOMY

At Bazancourt-Pomacle, our biorefinery interacts with numerous other businesses in the industry, such as Air Liquide, to reuse the carbon dioxide produced from the fermentation process which is fed back into the circular economy. At this site, we have also encouraged the establishment of a European Center for Biotechnology and Bioeconomics (ECBB) which brings together the scientific and technical skills and expertise of four academic departments from AgroParisTech, CentraleSupélec, NEOMA Business School and the University of Reims Champagne-Ardenne. We are also supporting an initiative led by the Nord Est Start Up association, Le Village by CA Reims, focused on open innovation.



9,000 FARMERS JOINED IN A COOPERATIVE

Founded in 2000 as a result of the merger of several sugar-producing cooperatives and one distillery, Cristal Union has remained loyal to its founding cooperative values. The cooperative model is at the heart of our organization and our operations.

The Cooperative is based on a **democratic system of governance**, with a Board of Directors and an Office composed of elected members from the 9,000 sugar beet and alfalfa farmers, members of the cooperative.

Our cooperative members meet at the General Assembly once a year. For the rest of the year, they rely on their representatives: the cooperative members that they elected. It is a powerful model that allows us to make the decisions necessary for the smooth running of the Group, for the benefit of the majority of its cooperative members.



OLIVIER DE BOHAN,
CHAIR

WHAT IS THE ROLE OF THE COOPERATIVE?

Olivier de Bohan: “ Our role as a cooperative, is to enhance the value of the crops brought in by our cooperative farmers to the Group's factories and then to sell the resulting products of their crops through our commercial entity, Cristalco. It is also to support our cooperative members, as closely as possible, to meet the expectations and needs they may have for their farms. ”

HOW CAN YOU SUPPORT YOUR EMPLOYEES?

Olivier de Bohan: “ Following on from the period of intense and unexpected frosts that hit sugar beet crops in 2021, we launched an exceptional series of

CRISTAL UNION: A COOPERATIVE READY FOR THE FUTURE!

support measures which provided beet seed free of charge to those of our members impacted by the weather.

Now, we stand by them to help them to move on from the ban on neonicotinoids and give them a future, with agronomics support and financial incentives. This sends a strong signal to our members that we support them and encourage them to maintain or even increase their beet acreage. ”

WHY GROW SUGAR BEET?

Olivier de Bohan: “ We are lucky that, first of all, we grow an exceptional crop, the sugar beet, which is used for the production of sugar, alcohol and bioethanol. Through our activity we contribute to the France's food, energy and even health sovereignty, because some of our alcohol is used for pharmaceutical purposes.

We hope that all these activities can continue.

France is the leading beet-producing country in Europe with 400,000 hectares of plantations and it shall remain so. ”

WHAT DO YOU THINK THE COOPERATIVE WILL BE LIKE IN THE FUTURE?

Olivier de Bohan: “ One of the topics that particularly motivates me is to always ensure the involvement of young people. We need a new generation capable of committing to the collective for it to continue. This is why we have set up mechanisms such as the 'Atout Jeunes' program whose aim is to introduce our young members to the world of the cooperative. More than ever, we need to renew the generations. We can't write the future of our cooperative without them. ”

2,000 EMPLOYEES WITH DIVERSIFIED SKILLS

Industrial logistics specialist, boilermaker, packaging line manager, process manager, automation regulation electrician, electromechanician, warehousekeeper, crop relations manager, etc., the skills offered by Cristal Union employees in our sugar factories and distilleries are extremely diverse. Each employee, through their skills and expertise, makes their contribution to the success of the group.

For some of our production teams, their duties vary between the beet growing season, when the plants are in production and in between, during the site maintenance and investment period. This is the opportunity for our employees to acquire a dual skillset and enjoy the added benefit of practicing two different activities. Beyond each person's skillset, related to his or her position, they must also be aware of the safety rules and procedures, apply them, disseminate them and enforce them.



XAVIER ASTOLFI,
General Manager

SAFETY AT OUR SITES IS A PRIORITY

“ OUR GROUP INVESTS €14 MILLION PER YEAR IN SAFETY AT OUR SITES AND WE HAVE SET UP A PROGRAM CALLED GLOBAL SECU, WHICH DEFINES OUT THE SAFETY RULES TO BE FOLLOWED BASED ON BEHAVIOR, LEADERSHIP, SETTING THE EXAMPLE, MAKING SURE EVERYONE IS AWARE OF THEIR RESPONSIBILITY AND ENSURING THE ENGAGEMENT OF OUR STAKEHOLDERS. OUR COMMITMENT IS TO ELIMINATE SERIOUS ACCIDENTS AT ALL OF OUR INDUSTRIAL SITES. ”

THE GLOBAL SECU PROGRAM INCLUDES:

1 dedicated security briefing per day and per team, which is an important opportunity to discuss any difficulties and allow problems to be resolved quickly

12 safety meetings per year with 350 external contractors

100 safety meetings/training sessions per year with transport companies, bringing together 1,500 truck drivers

2,300 inspections per year at our production sites, to promote safe practices and react to potentially dangerous behavior

700 seasonal workers trained each year in safety measures

The **5S** method is used at all of our sites: this proven method, founded on the principles of order and cleanliness, aids our work on a daily basis and helps avoid unnecessary risks

50 people dedicated to prevention and to raising awareness, supporting and deploying our safety program

2 safety awards, one for our internal benchmark and the second to recognize the performance of our sub-contractors



SUPPORTING OUR TALENTS

Faithful to our cooperative values, we consider that the good functioning of a company rests on its most important assets: the diverse talents of which it is made!

GENDER EQUALITY

92/100 

THIS WAS THE GENDER EQUALITY SCORE AT CRISTAL UNION IN 2022

A great score in a sector that has long remained very male-oriented! At Cristal Union, we are taking action on a daily basis to ensure a mix in our recruits and therefore in jobs and to promote our talented female employees.

YOUTH EMPLOYMENT

106 

WORK-STUDY INTERNS ARE CURRENTLY EMPLOYED WITHIN OUR TEAMS AT CRISTAL UNION

A new recruitment campaign is underway, with nearly 80 jobs being offered at our various sites and across the various activities. Each year, a significant proportion of work-study contracts lead to hirings. In 2022, 228 people aged 25 and under joined our teams (all types of contracts combined, company internships).

WELLBEING AT WORK

75% 

THIS IS THE PERCENTAGE OF EMPLOYEES SATISFIED WITH WORKING AT CRISTAL UNION, ACCORDING TO THE PERSONNEL BAROMETER THAT WE CARRY OUT EVERY TWO YEARS

As part of our Work-Life Quality Agreement (QVT), we are continuing our activities on work-life balance, improving working conditions, combating discrimination and the right to switch off. We have also implemented a professional individual support campaign. For employees who feel the need, we have made available to them a free, personalized and strictly confidential counseling and psychological support service.

DISABILITY SITUATIONS

5.41% 

THIS IS THE PERCENTAGE OF PEOPLE WITH DISABILITIES IN OUR TEAMS IN 2022

Following the diagnosis carried out in 2019 by the Association for the Management of the Fund for the Professional Integration of People with Disabilities (AGEFIPH), we defined and implemented an inclusion strategy which included numerous awareness-raising campaigns (poster campaigns, employee communications, awareness workshops, attendance at DuoDay events, etc.).

A disability representative has also been appointed at each of our sites. Their role is to meet with and support employees with disabilities, to inform and help those wanting to work towards obtaining recognition as a disabled worker, to consider solutions for keeping an employee in employment, or to develop the use of the specialist protected employment sector. Cristal Union also created a diversity & equal opportunities committee which meets twice a year to define and monitor implementation of the disability policy.

EDUCATION

85% 

PERCENTAGE OF CRISTAL UNION EMPLOYEES WHO COMPLETED A TRAINING COURSE IN 2022

Cristal Union employees benefit from a very wide range of training courses complemented by educational tools, e-learning, virtual classes, hands-on training, etc. The Group created its own training school, Cristal Academy, which allows learners to train in real conditions, in the field. We expanded our computer system dedicated to training: this allows our field teams to capitalize on our know-how and contributes significantly to the transmission of knowledge, in particular facilitating the on-boarding of new recruits. This tool is now deployed at all our industrial sites.

In 2022, many training courses were created as a result!



LAURIANE DELUNEL,
Director of
Human Resources

**“ AT CRISTAL UNION,
WE ARE COMMITTED
TO OUR COLLECTIVE SUCCESS! ”**

**WHAT IS THE BUSINESS CULTURE
AT CRISTAL UNION?**

Lauriane Delunel: “ The fact that Cristal Union is organized as a cooperative influences the way we operate! We're united and therefore move forward together; this is part of our values. This is really what shapes our way of looking at things. In the Group, we are intrinsically committed to our collective success and teamwork. For example, we set up Collaborative Working Groups dedicated to continuous improvement, which constantly improve our Worklife Quality and our operational performance. ”

**WHAT IS YOUR MESSAGE TO FUTURE EMPLOYEES OF
CRISTAL UNION?**

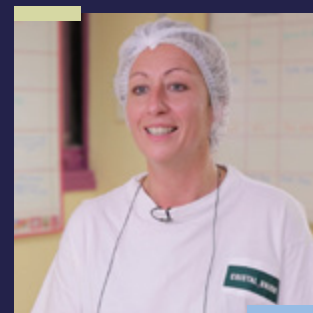
Lauriane Delunel: “ If you want to work in a small, tightly-knit team and you are looking for a stimulating and rewarding working environment, Cristal Union is the perfect choice for you! As soon as you arrive at Cristal Union, you will benefit from a training process structured to help you accomplish your tasks independently and effectively.

In addition to career opportunities, there is an attractive remuneration, share-options and profit-sharing scheme, social security packages (health insurance, provident insurance, housing support), but also many advantages offered by the Social and Economic Committees (CSE) at our Institutions. ”

HOW DOES A CAREER AT CRISTAL UNION DEVELOP?

Lauriane Delunel: “ We monitor the progress of every employee's career path. This is why we developed a high-level training system - providing an average of 18 hours of training per employee in 2022 and an individual professional support service. At Cristal Union, an employee can start as a boilermaker, train in process management and then, with time and through the training courses offered, become Foreman. The Group promotes internal mobility with a dedicated internal job market. ”

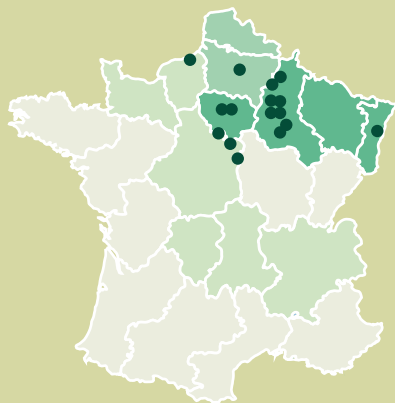
*“ Before working in the industry, I was a childcare assistant. After undergoing a career change, I was hired by Cristal Union. I completed several months of training to become a packaging line manager. It is a very varied and fast-paced job and success relies on teamwork. I have learned a lot and progressed through contact with others, in the field and through the Cristal Academy, our in-house training school. For me, working at Cristal Union means working safely, being recognized from a salary point of view and progressing throughout your career...
Anyone who wants to learn will be happy! ”*



CHRISTELLE LEROUGE,
Line Manager

23,000 JOBS IN FRANCE THANKS TO CRISTAL UNION'S ACTIVITIES

(Based on 2020 activity figures)



A PRECISE AND OBJECTIVE MEASURE OF THE SOCIO-ECONOMIC FOOTPRINT OF CRISTAL UNION IN FRANCE

In 2021, Cristal Union asked Utopies to analyze our contribution to the economy of the French regions. All of Cristal Union's finances were analyzed: our purchasing, sales, remuneration of all employees and the contributions we paid.

10 PRODUCTION SITES
+ 1 ADMINISTRATIVE SITE (PARIS-REIMS)
+ 5 CRISTAL UNION FRENCH SUBSIDIARIES,
INCLUDING CRISTALCO.

Number of Full Time Equivalent (FTE) Jobs
5 FTEs  6,580 FTEs

WHY DID WE CARRY OUT THIS STUDY?

- To better understand our impact beyond our direct operations
- For yet more transparency in our business model: the study was carried out at ALL OUR SITES
- To objectify our contributions to regional economies
- Because better understanding means being better able to explain our activities and having better dialog with our stakeholders

" Anchored in the heart of rural areas, our sites contribute to the local economic dynamism while radiating out to all of our regions. "

XAVIER ASTOLFI





CRISTAL UNION, AN IMPORTANT CONTRIBUTOR TO THE LOCAL ECONOMY IN OUR REGIONS

The results of this study are something to be proud of!
Cristal Union's activities in France allow us to create value and support economic dynamism and employment*!

" For every €1 of turnover, we generate almost as much additional GDP in the French economy. This is real value creation! "

XAVIER ASTOLFI

€1.7 billion

TURNOVER generated in 2020/21



€1.6 billion

additional GDP generated in the French economy by Cristal Union

EMPLOYMENT MULTIPLIER EFFECT OF UNION CRYSTAL ACTIVITY

1 JOB

within the Cristal Union Group



10 ADDITIONAL-JOBS

supported in France

IN TOTAL 23,000 JOBS

supported in France by Cristal Union's activities



" With this ratio of 10 jobs created for every 1 job at Cristal Union, we have a balanced economic model which enables us to retain our skills internally while contributing to the external economy. "

XAVIER ASTOLFI

TOP 4 JOBS IN VARIOUS TOP SECTORS, PRIMARILY:

1

24%



AGRI-FOOD INDUSTRIES

2

20%



AGRICULTURE

3

17%



LOGISTICS & SHIPPING

4

9%



TRADING & COMMERCE

86%

of French suppliers

FOCUS ON THE AGRICULTURAL SECTOR

9,800

cooperative members supply Cristal Union with agricultural raw materials

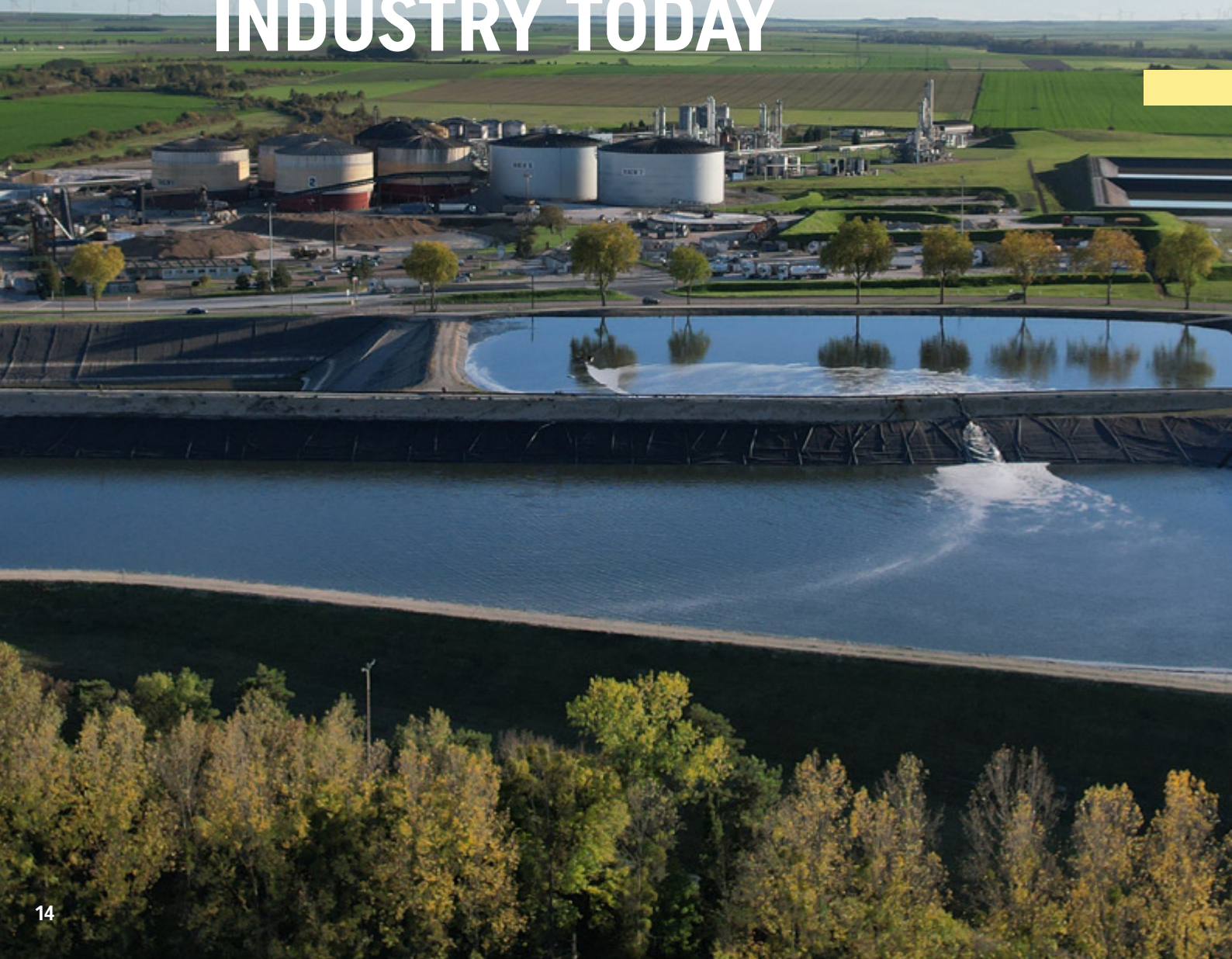
1,700

FTE jobs on these farms supported by Cristal Union



2

BUILDING TOMORROW'S AGRICULTURE AND INDUSTRY TODAY



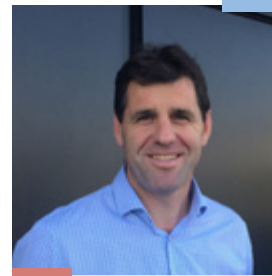
OUR ROADMAP

“ INNOVATE AND CONSTANTLY SEEK WAYS TO REDUCE ENERGY CONSUMPTION, DECARBONIZE, ETC. FOR EVEN MORE SUSTAINABLE ACTIVITIES! ”

AN AMBITIOUS DECARBONIZATION ROADMAP VALIDATED BY THE SBTi

The IPCC reports are clear: it is now essential that we act in a coordinated fashion, each playing their part, to reduce the rate of global warming.

It is with this in mind, also in line with its decarbonization activities, that Cristal Union has joined the Science Based Targets initiative (SBTi) which validates a company's efforts at reducing greenhouse gas emissions against a database produced on the basis of climate science. This initiative was created by the Carbon Disclosure Project (CDP), World Resource Institute (WRI), WWF and the United Nations Global Compact (UNGC).



PASCAL HAMON,
Industrial Director

A DECARBONIZATION ROADMAP VALIDATED BY THE SBTi

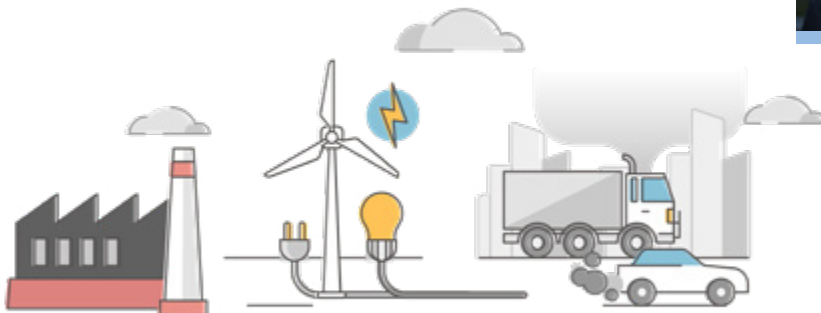
Cristal Union is committed to reducing its greenhouse gas emissions by 23% by 2030 compared to 2019 across Scopes 1, 2 & 3. This goal, validated by the SBTi, will contribute to the collective effort to maintain global warming well below 2°C by 2100.

“ At an industrial level, our Group has injected pioneering and significant levels of investment in programs that have already helped us to reduce our greenhouse gas emissions by 15% over 10 years. Our next step is to accelerate further our energy savings and 2030 decarbonization program. Our aim is to produce our own energy and make our sugar factories self-sufficient in energy and our sugar totally decarbonized by 2050. ”

A COMPLETE ACTION PLAN ACROSS 3 SCOPES!



BRUNO LABILLOY,
Agricultural Director



SCOPE 1
Direct emissions linked to production activities

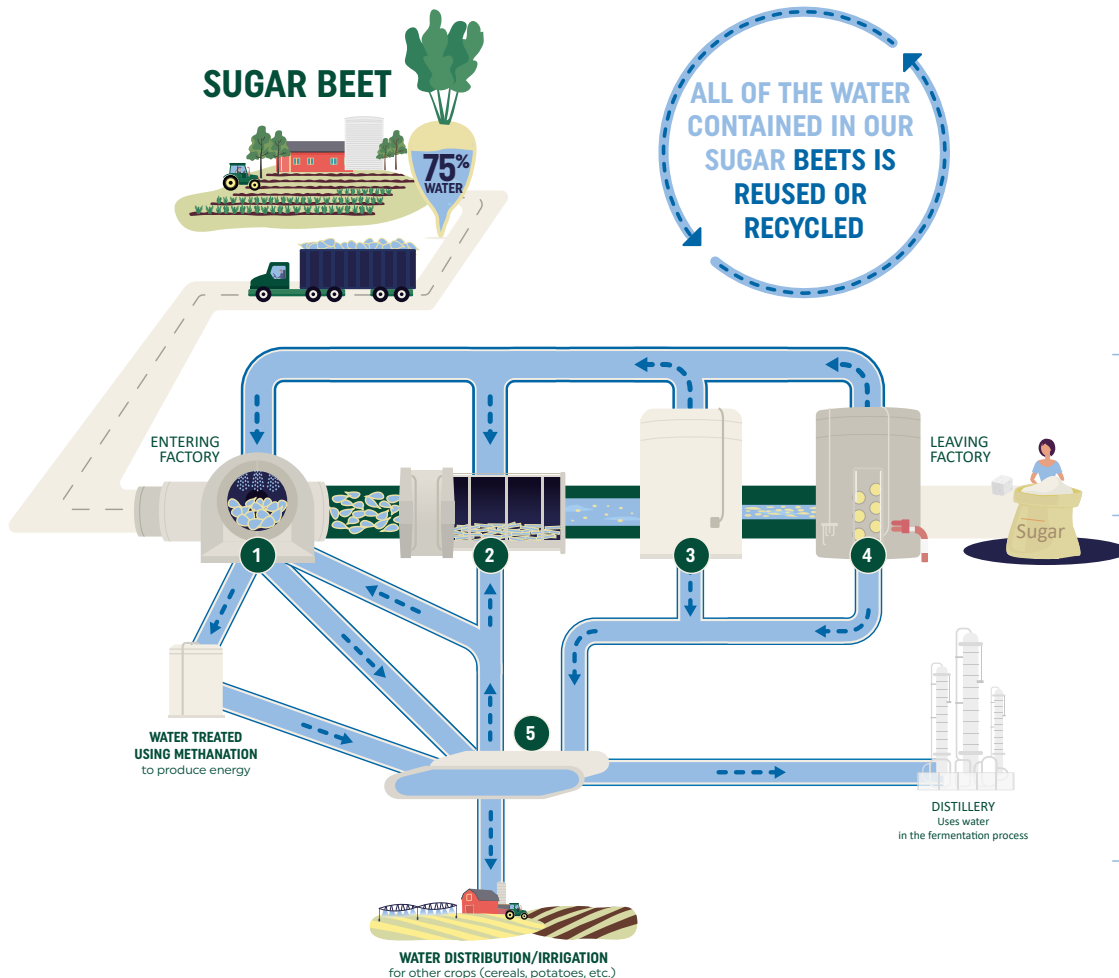
SCOPE 2
Indirect emissions associated with the production of electricity, heat or steam brought in to power the company's operations

SCOPE 3
Other emissions indirectly produced by the company's activities such as transport to customers or the supply of raw materials (sugar beets, wheat, etc.)

“ On the topic of agricultural decarbonization, the challenge is to move forward while maintaining our members' agricultural yield and profitability. Our first action was to support volunteer cooperative members as they carried out a precise review of their business' carbon footprint before offering them a free self-diagnosis tool which is now accessible to all our cooperative members. At the same time, we are testing precision agricultural solutions which can help optimize nitrogen uptake in sugar beet and which represent a major lever in reducing GHG emissions on farms. ”

THE LARGEST BY-PRODUCT OF A SUGAR FACTORY IS WATER!

Sugar beets contain 75% water. Water is therefore by far the primary component extracted from sugar beets, in terms of volume, far more even than sugar! With this in mind, Cristal Union is making every effort to make the most of this rare and precious resource.



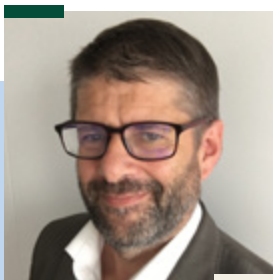
- The water recovered during the syrup and crystallization process is reused to wash the sugar beets and extract the sugar.
- After the sugar beets have been processed, the excess water is stored in reservoirs adjacent to the sugar factories. Once decanted, it is used to irrigate the surrounding crop fields. In 2022, Cristal Union provided its cooperative members with nearly 7 million m³ water for irrigation and spraying.
- Organic matter in the water used for washing is recovered to produce renewable energy.

1 WASHING SUGAR BEETS

2 SEPARATION
(sugary juice extracted from beets)

3 SYRUP REFINEMENT

4 CRYSTALLIZATION



MICHEL MANGION
CSR Director

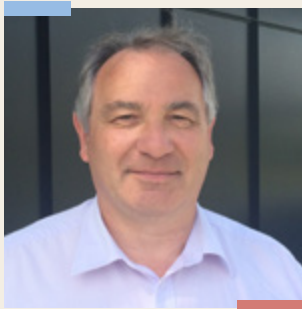
A TARGET OF 0 M³ OF WATER DRAWN FROM THE NATURAL ENVIRONMENT!

“ THANKS TO EVERYONE'S EFFORTS AND NUMEROUS INVESTMENTS BETWEEN 2010 AND 2022, OUR GROUP HAS REDUCED THE AMOUNT OF WATER IT DRAWS FROM THE NATURAL ENVIRONMENT BY 60%, OR MORE THAN 5.5 MILLION M³ OF WATER SAVED PER YEAR! OUR CURRENT TARGET IS TO BE COMPLETELY AUTONOMOUS BY 2030, MEANING WE WILL STOP DRAWING ANY WATER FROM THE NATURAL ENVIRONMENT IN ORDER TO OPERATE THE GROUP'S SUGAR PRODUCTION FACILITIES. ”

CRISTAL VISION *SMART SUGAR BEET*: AN APPROACH TO THE CONTINUOUS IMPROVEMENT OF AGRICULTURAL PRACTICES

Our 9,000 cooperative members who produce sugar beet and alfalfa are in direct contact with the land on a daily basis. They have regularly had to adapt their practices to better control their environmental footprint.

To support them in this approach, in 2015, we set up a benchmark, CRISTAL VISION *smart sugar beet*, which makes it possible to evaluate agricultural practices and certify that they meet the most demanding international standards in terms of sustainability, such as those drawn up by the Sustainable Agriculture Initiative Platform (SAI). Our benchmark goes even further on many points.



WILLIAM HUET,
Agronomy Manager

“
CRISTAL VISION
IS AN EVOLVING AND
DEMANDING TOOL!

”

HOW DOES THE CRISTAL VISION BENCHMARK WORK?

William Huet: “ CRISTAL VISION, *smart sugar beet* is an overall and demanding approach to continuous improvement! In practice, our cooperative members complete a self-assessment questionnaire about their practices every 3 years, comprising 50 questions on subjects as diverse as safety on their farm, fuel storage, maintaining soil fertility, carbon footprint and regenerative agriculture. In addition, we audit 100 farms per year in more depth. ”

HOW IS THE BENCHMARK DEVELOPED?

William Huet: “ Thanks to everyone's involvement, we have further developed our CRISTAL VISION mechanism and included new sustainability criteria, such as agroecology and experimentation with new agronomy practices, in order to ensure our plants are supplied while reducing our environmental impact. ”

WHAT ARE THE RESULTS?

William Huet: “ In 2015, 64% of our growers were already Gold or Silver SAI certified (i.e. meeting the highest levels of certification). In 2022, 77% of our growers are now Gold or Silver SAI certified! To go further, we are adding other criteria into CRISTAL VISION which are not taken into account by SAI, such as the evaluation of our cooperative members' agroecological practices. ”

A TRIPLE SUSTAINABLE COMMITMENT

1

EXPERIMENT AND SHARE NEW AGRONOMIC PRACTICES

12

EXPERT AGRONOMISTS

These experts support our cooperative members and advise them throughout the crop cycle, organize agronomy meetings and visits to testing platforms in order to share the results of the year's experiments.

60

"CROP RELATIONSHIP" MANAGERS

In direct contact with our farmers, the experts act as a relay for information and innovations on a daily basis.

15,000

TESTING OF MICRO-PLOTS DEDICATED TO THE PRACTICES OF TOMORROW

- Performance Tests and Evaluations of different varieties of sugar beet
- Studies to find ways to fight against biological threats
- Trials of new tools such as the Farmdroid robot that allows us to sow and weed along and in between the rows of beets for efficient and eco-friendly weeding

TECHNICAL NOTICES

ISSUED LOCALLY THROUGHOUT THE YEAR

- An annual brochure summarizing the agronomics R&D work for the year and advice according to the specifics of each growing region
- Regular "agronomy briefings" providing agronomics advice based on current events, customized by geographic area

SUGAR BEETS

CULTIVATED USING REGENERATIVE AGRICULTURE

Soil regeneration techniques are implemented by some of our cooperative members who are supported by our agronomics department in partnership with the association Pour Une Agriculture du Vivant (PADV) (Towards Living Agriculture). Regenerative agriculture consists of preserving soils from erosion over the long term using various means:

- avoid leaving soil bare and exposed to climatic hazards by maximizing soil coverage
- limit soil tillage to preserve its structure and its lifespan while maximizing the quality of crop planting

All of this helps promote biodiversity. For a crop to be considered agro-ecological, the minimum regeneration index threshold defined by PADV is 40/100, which requires, for example, the use of:

- long rotation cycles
- coverage with vegetation between crop cycles
- reduced tillage adapted to plot context

2

EVALUATE OUR AGRICULTURAL PRACTICES AND ADAPT THEM TO THE HIGHEST STANDARDS

TAILOR-MADE

AGRONOMICS ADVICE

Some 20 end-of-season meetings are organized at the start of winter to take stock of the sugar beet growing season currently coming to an end and prepare for the next season.

These help us to take stock of the year's climatic conditions, pressure from the various biological threats, which varieties are recommended and to discuss the development of agricultural practices and the expectations of all involved.

SELF-DIAGNOSTICS

TOOLS

Cristal Union is providing two new tools to its cooperative members:

- MyEasyCarbon, which can be used to provide a simplified carbon diagnosis for a farm and identify the levers available to improve its carbon footprint.
- Cristal Aphids Watch, an application for detecting yellowing virus vector aphids in the crop fields.

77%

OF OUR SUGAR BEET CROPS ARE CERTIFIED GOLD OR SILVER SAI IN 2022



this certification attests to the high level of sustainability of our agricultural raw materials.

3

ENSURE OUR SITES HAVE SECURE SUPPLIES WHILE LIMITING OUR IMPACT ON THE ENVIRONMENT

OVER **1,000** TONNES OF GREENHOUSE GAS EMISSIONS AVOIDED

by removing the earth from our sugar beets, the use of grated hoppers and optimizing return journeys at full capacity. These solutions help us optimize the loading of trucks and thus reduce the number of trips required between our fields and our sites.

Experimentation with the transport of beets using trucks with a total weight of 48 tonnes (instead of 44 tonnes) was also started in 2022/2023, with the aim of reducing the number of journeys, with extremely positive results.

16 SAFETY MEETINGS PER YEAR

to prepare the crop season in the best conditions with beet transport companies.

GEOLOCATION

OF BEET SILOS AND TRUCKS IN THE COUNTRYSIDE

to optimize journeys and reduce distances as much as possible.

STATE-OF-THE-ART R&D AND AGRONOMICS ADVICE

Our investment in innovation and agronomics R&D allows us to test highly innovative production methods, with reduced environmental impact and to offer tailor-made agronomics advice to accelerate the agroecological transition of beet cultivation, promote technical routes with less fertilizers and promote soil quality and biodiversity.

AN AMBITIOUS PLAN FOR DECARBONIZATION OF THE AGRICULTURAL SECTOR TO ENSURE OUR ALIGNMENT WITH THE SBTI ROADMAP



1. LARGE-SCALE CARBON ANALYSES AND CROP ROTATION TESTS

Cristal Union started by supporting its cooperative members in the implementation of an accurate analysis of their farm's carbon footprint and then through the deployment of a simplified tool for the self-diagnosis of their farm's greenhouse gas emissions and carbon storage, made available to all its members.



The MyEasyCarbon **tool**, which was developed in partnership with the company MyEasyFarm, is based on the method promoted by the Low Carbon certification program for arable crops validated by the French Ministry of Ecological Transition. Completely free for Cristal Union cooperative members, this tool provides access, within twenty minutes, to an analysis of a farm's net carbon footprint, calculated on the basis of GHG emissions and carbon storage in the soil and determines what effective levers are available to improve this result.



In addition, large-scale crop rotation tests are conducted in partnership with TERRASOLIS. The objective is to play with a complementary range of crops to reduce the overall environmental impact of a farm.

2. EXPERIMENTS TO REDUCE THE IMPACT OF NITROGEN FERTILIZERS

Today, carbon studies and analyses are clear: nitrogen is the source of 80% of a farm's GHG emissions (Source: Agribalyse). Several solutions which help to return carbon to soils or optimize the uptake of nitrogen in a targeted and precise manner, as close as possible to the plant, are therefore being studied. Cristal Union's agronomics department supports its cooperative members in the management of their use of nitrogen fertilizers: advice is adapted according to the types of soils and potential yield of each plot; linking with service providers for the establishment of systematic measurement of nitrogen residue before beet planting in order to apply the right dose of fertilizer.

The Group's Agricultural R&D Department is also experimenting with different materials and techniques for targeted fertilization. For example, seed drills can be equipped to spread nitrogen as close as possible to the row of beets. This technique could save between 15 and 20% of fertilizer inputs. Another thread is the work on coverage between crop cycles, including legumes, which, once destroyed, return the nitrogen to the soil. Other threads such as the use of nitrification inhibitors are planned in order to delay the formation of N₂O during nitrogen uptake. However, any impact on the availability of nitrogen to sugar beet is yet to be verified.

A COMBINATION OF RESEARCH AND INNOVATION TO FIGHT AGAINST BIOLOGICAL THREATS

OUR AGRONOMICS TEAMS AND OUR PARTNERS, RESEARCH INSTITUTES, CHAMBERS OF AGRICULTURE AND PILOT FARMS ARE EXPERIMENTING WITH NEW SOLUTIONS TO COMBAT BIOLOGICAL THREATS BY LIMITING THE USE OF PLANT TREATMENT PRODUCTS.

THE CRISTAL CERC'OAD® TOOL TO FIGHT AGAINST CERCOSPORIOSIS

In 2018, Cristal Union's agronomics teams developed the Cristal Cerc'OAD® mobile application so that farmers could effectively fight against beet cercosporiosis, a leaf disease caused by an insect, by scheduling their activities at the right time, as soon as the first symptoms of the disease appear.



ALONGSIDE THE GOVERNMENT AND INDUSTRY STAKEHOLDERS, WE ARE COMMITTED BY THE PNRI TO FIGHT AGAINST BEET YELLOWING VIRUS

On January 19, 2023, the Court of Justice of the European Union ruled that the Member States were no longer permitted to use neonicotinoids in seed coatings to fight beet yellowing virus, a viral disease caused by aphids.

Since 2020, alongside the government and industry stakeholders, Cristal Union continues to contribute actively to the French National Research and Innovation Plan (PNRI), aimed at identifying and developing effective alternative thanks to the active work of plant breeders, varietal selection will provide the best results.



Until this solution is operational, our agronomics teams have implemented a prevention plan and a mobile application, Cristal Aphids Watch, to detect the arrival of yellowing virus vector aphids in crop fields as early as possible. Where yellowing virus infection is proven, targeted leaf-based insecticides will be used to control the aphids.

ACTIONS TO SUPPORT BIODIVERSITY



WE ARE PIONEERS OF ORGANIC FARMING IN OUR SECTOR

In 2017, we were the first to invest in the creation of an organic sugar beet production industry in France.

In 2022, our ORGANIC beet sugar production was certified FAIR FOR LIFE which attests to the responsible, sustainable, and equitable nature of our production capacity.

BEE HAPPY

In 2021, Cristal Union launched Operation BEE HAPPY, which aims to plant 1,200 hectares of areas of interest for pollinators by the summer of 2023. By 2022, 800 Cristal Union cooperative members were committed to the operation. They planted a total area of 880 hectares of honey-producing crop coverage. The operation continues in 2023!



1,600
hectares
of honey-producing
crop coverage
in 3 years



AN APPROACH TO HVE CERTIFICATION

Our agronomics department supports volunteer cooperative members through their High Environmental Value (HVE) certification process by experimenting with low-input technical routes compatible with this standard.

APILUZ

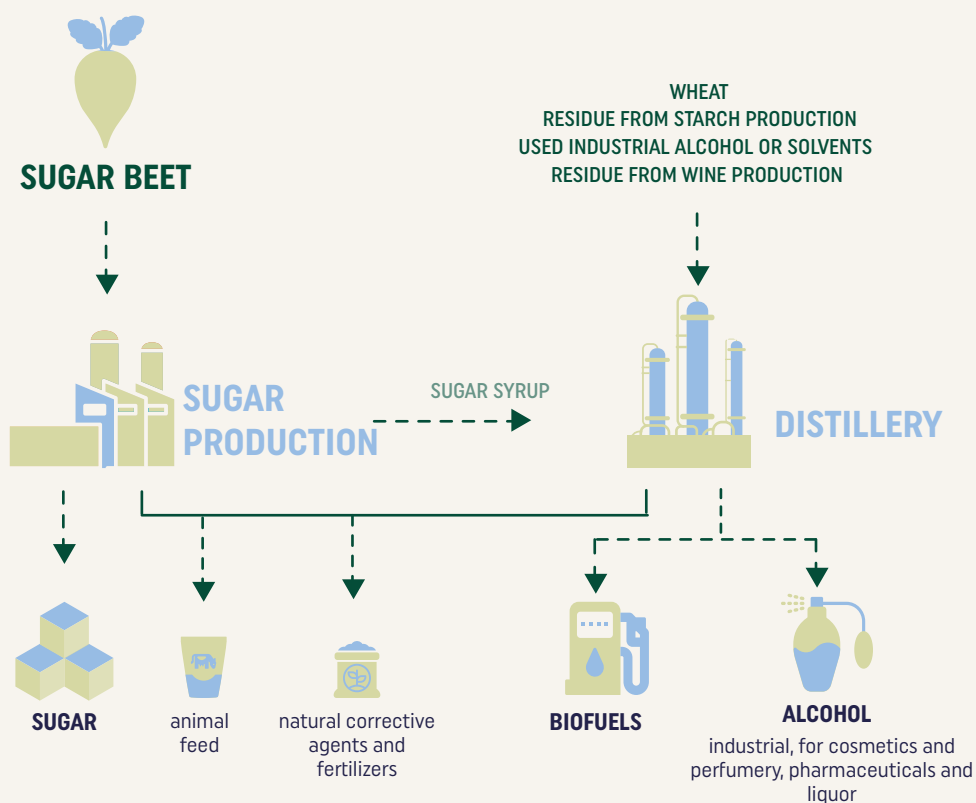
Cristal Union is participating in a biodiversity initiative in Champagne-Ardenne in partnership with the Symbiose association, which aims to establish and maintain flowering strips of alfalfa at the heart of crop fields in order to feed pollinators. In total, 450 hectares of flowering strips of alfalfa were sponsored by Cristal Union in 2022.



MAKING THE MOST OF OUR RAW MATERIALS AND RESOURCES IS AT THE HEART OF OUR DNA

Our raw material, the sugar beet, is used in its entirety: we extract the sugar for crystallization or transform it into alcohol and bioethanol - we dehydrate its pulp and we reuse all the water it contains! In addition, at our industrial sites, we also use wheat, alfalfa and the by-products from wine and starch production and even regenerate some industrial alcohol and solvent products, always in line with the logic of the circular economy.

IN SUGAR BEET AND OUR OTHER RAW MATERIALS: NOTHING IS LOST, EVERYTHING IS TRANSFORMED.



The sugar beets produced by our cooperative members are the Group's primary source of supply and are used to produce sugar and alcohol.

Sugar is used by our customers and consumers especially for the production of food and beverages. The various alcohol products are used by the food and cosmetics industries, perfumery and pharmaceuticals. Cristal Union is also Europe's second-largest producer of bioethanol.

The by-products and residues from our sugar factories and distilleries are also reused: beet pulp for energy production or animal feed, foam from sugar production is used as a calcium corrective agent for acidic agricultural land, vinasse for agricultural fertilization.

Whatever the activity being carried out, Cristal Union operates using the logic of the circular economy and extracts the maximum value from all its agricultural supplies. The Group's sugar factories generate very little waste: less than 0.2 kg per tonne of beet.



OUR DISTILLERIES HAVE DIVERSIFIED THEIR SUPPLIES BEYOND SUGAR BEET



The Cristanol distillery is supplied with sugar syrup from the sugar factory at Bazancourt, but also with wheat from local cooperatives and turns it into very high quality alcohol. Cristanol also converts residue from nearby starch production into biofuel with a very low environmental footprint.

The Jean Goyard distillery collects residues from the local wine industry and transforms it into high value-added products: polyphenols, essential oils, agricultural fertilizers, etc.

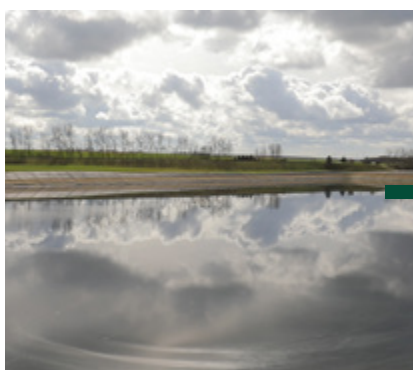


Dislaub is a specialist in alcohol production and recycling and high-quality solvents, in a dynamic approach to the circular economy. Its activity covers:

- The production of fine alcohol mainly for the pharmaceutical, cosmetics and perfumery markets. This is obtained from raw beet alcohol from Cristal Union Group factories.
- Alcohol and solvents from industry are regenerated and, after their impurities have been removed, can be reused. These regenerated alcohol and solvent products, with a purity of more than 99.5%, benefit from a unique industrial technique which has been developed and mastered over a period of 30 years.

OUR SUGAR FACTORIES ARE AT THE FOREFRONT OF WATER MANAGEMENT

As mentioned on page 17, all of the Cristal Union sugar factories reuse the water from beets to operate their sites during the season. Some go even further!



Since 2018, the sugar factory at Sainte-Emilie has been totally self-sufficient in water for its operation and the site even produces 730,000 m³ of additional water! This water is used to irrigate crops around the site (e.g. potato crops) and/or plots operated by Cristal Union cooperative farmers.

At Fontaine-Le-Dun, the water used for washing beets is decanted and any organic matter in the water is methanized and then transformed into biogas. The purified water exiting the methanizer can also be used to irrigate farmers' crops.



A WINNING LEAD IN THE RACE TO REDUCE OUR ENERGY CONSUMPTION AND DECARBONIZE OUR SITES

Cristal Union has been investing for years in reducing its energy consumption and emissions of greenhouse gases and the current energy crisis only highlights the need for this CSR strategy, driving us to go even faster! The Group has set itself an ambitious roadmap, validated by the Science Based Target initiative (SBTi), founded by the UN, CDP and WWF.

Our roadmap can be divided into three phases:

- Between 2010 and 2020, we completed our energy transition, with a 15% reduction of CO₂ emissions and an 8% reduction of energy consumption.
- By 2030, we will consume even less energy and further decarbonize our operations, with 10% less energy consumed and 35% lower CO₂ emissions compared to 2015.
- By 2050, we aim to have fully energy-autonomous sugar factories!

2010-2020

-15% EMISSIONS OF CO₂

-8% ENERGY CONSUMED

WE HAVE COMPLETED OUR ENERGY TRANSITION

All of our sugar production factories and distilleries have stopped using coal and now have boilers fueled by natural gas or biomass (renewable energy source).

We have also significantly reduced our energy consumption after having finely adjusted our tools and consumption to meet our needs as closely as possible.

3 DECARBONIZATION PROJECTS ARE WINNERS OF "FRANCE RELANCE" (FRENCH RECOVERY INVESTMENT PLAN)



BAZANCOURT: DEHYDRATION OVENS POWERED BY BIOMASS

At Bazancourt, Cristal Union has invested €4 million to supply its drying ovens with biomass and, in April 2022, to commission a storage platform to ensure a sufficient wood fuel supply. This initiative which is saving 65,000 tonnes of CO₂ per year has been supported by the French government, as part of the France Relance program.

SIDESUP: A THIRD DRYING LINE POWERED BY BIOMASS

Cristal Union has invested €5 million (with help from State subsidies) in its subsidiary Sidesup to create a third dehydration line which operates using a hot gas generator powered by biomass. Work on this project, to be completed in the summer of 2022, will help support the large-scale development of organic alfalfa production in the south of Paris by Cristal Union, the leader in this industry.



SAINTE-EMILIE: A DRYER WILL RECOVER ALL THE HEAT AND STEAM FROM THE BEETS!

In September 2023, the Cristal Union sugar factory at Sainte-Émilie will commission a brand new indirect drying unit for beet pulp (pulp dehydration workshop). The dryer - with a total unladen weight of 400 tonnes! - will be able to recover all the heat and steam from the dried beet pulp for reuse in the sugar factory and thus reduce CO₂ emissions from this dehydration step by 90%.

The Group has invested €25 million in this project (which has been praised by France Relance) and partially subsidized by certain ADEME schemes and Energy Savings Certificates (CEE). It is part of a truly global approach to the circular economy:

- The drying unit will be able to dry 75 tonnes/hour of pulp without additional consumption of gas by the sugar factory. The steam used for drying will be produced by the sugar factory's boiler running on natural gas and, thanks to this dryer, the steam from pulp drying, previously evacuated to the atmosphere, will be recovered and used in the industrial sugar production process.
- 130,000 m³ of water evaporated in the drying process will be recovered. This additional water will be used to irrigate crops around the plant.
- The site will no longer need to dehydrate its beet pulp at the Epéanancourt site located 30 km away and will therefore save many truck journeys.



BY 2030

LESS ENERGY CONSUMPTION, CONTINUED DECARBONIZATION

-35% CO₂ EMISSIONS vs 2015

-10% ENERGY CONSUMED vs 2015

The action plan is clear:

- improve our energy efficiency,
- reuse the residual energy from our processes,
- further reduce our dependence on fossil fuels

STRONG ACTIONS AIMED AT CONSUMING LESS AND BETTER!



Even before decarbonizing, it is important to reduce energy consumption. All unconsumed energy is a gain - it is a strategy which pays in environmental terms and in the context of an energy crisis.

For our 2022 growing season, our Group took the decision to stop using gas-fired machinery for its pulp dehydration activities in favor of biomass boilers only, of which the deployment has been accelerated.

Other measures will allow us to consume less of the energy available and, above all, to use it better. In this way, we can store intermediate products and reserve the end of the transformation process for the period between crop cycles when the energy is more easily mobilized.

Optimized energy consumption also requires close monitoring of weekly consumption.

The energy ratios to be respected by our sugar factories during the crop season have been modeled using a tool developed internally, taking into account external influence parameters such as beet yield levels, outside temperature, or the percentage of syrup stored, which can result in a variation of energy requirements and identify, if necessary, any unusual overconsumption of energy. This management tool allows us to react in real time in order to optimize our energy consumption. It will be extended to all distilleries and dehydrators within 3 years.

CRISTAL UNION, THE FIRST SUGAR PRODUCER TO COMMIT TO THE FRET21 APPROACH

Cristal Union and its commercial entity Cristalco are strongly committed to the Fret 21 initiative, which aims to accelerate the decarbonization of their downstream supply chain. This commitment approved by ADEME has an ambitious objective: 7% reduction in greenhouse gas emissions from the transport of the Group's finished products over the period 2023-2026, i.e. a saving of 3,000 tonnes of GHGs, the equivalent of 13 million kilometers by plane!

The actions taken equally cover the optimization of truck loading and types of transport used as much as engaging in responsible procurement where service providers are selected because they themselves are committed to reducing their environmental impact.



Amongst our flagship projects: working with our transport partners to encourage them to use alternatives to fossil fuels and to completely reorganize certain routes, replacing road deliveries with other modes of transport, rail or maritime. For example, a weekly rail service will connect the site at Sillery in the Marne with a dedicated platform near Vichy, from which containers will be delivered by road over the last few kilometers serving nearby customers. In the same spirit, our sugar delivery channels to Spain have been diversified to use rail and maritime routes.

BY 2050

55%

IS THE QUANTITY OF BEET PULP IT TAKES TO MAKE OUR SUGAR PRODUCTION FACTORIES SELF-SUFFICIENT IN ENERGY

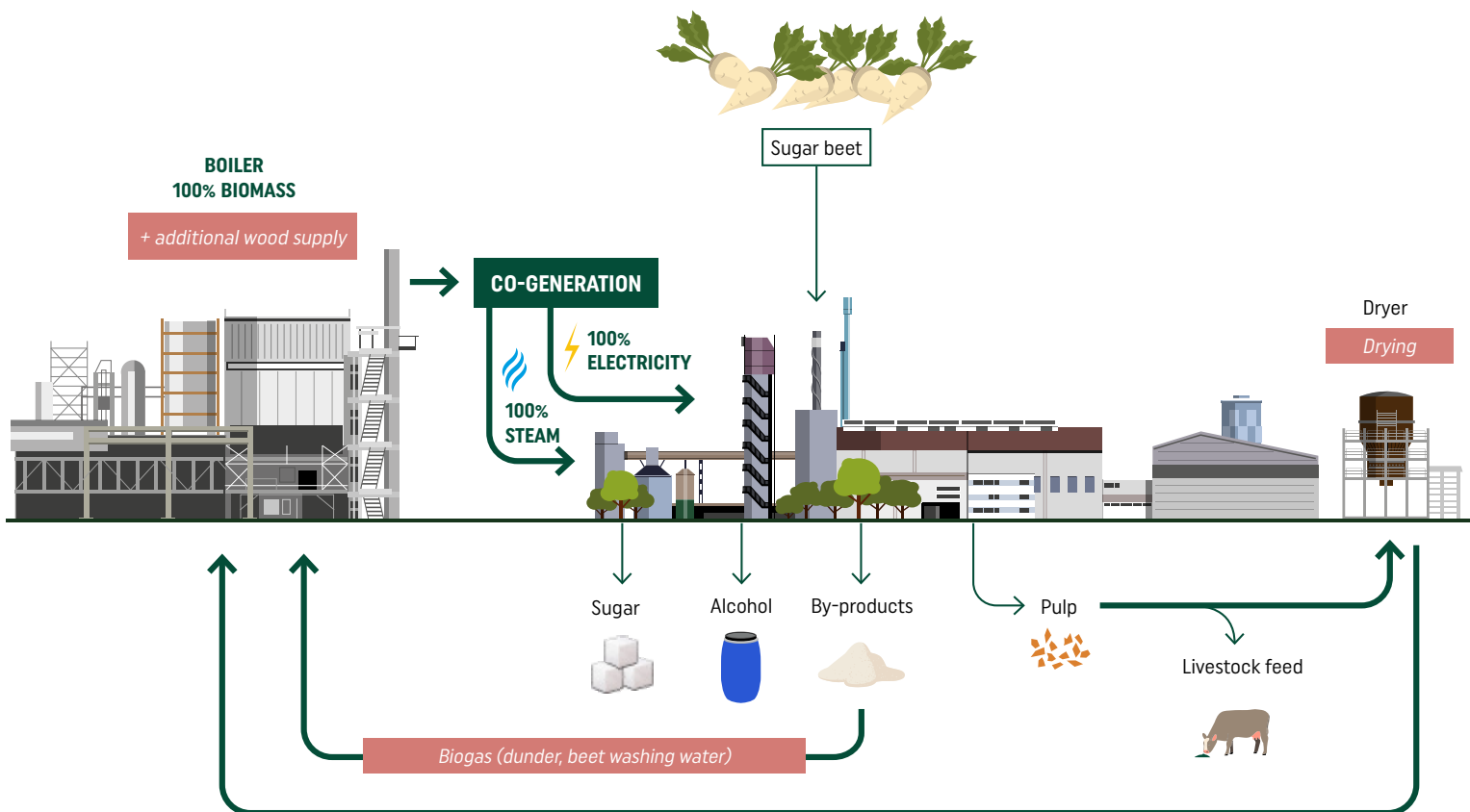
SUGAR FACTORIES THAT ARE ENERGY SELF-SUFFICIENT

In order to go even further, Cristal Union is reorganizing its energy mix with the aim of having energy self-sufficient sugar factories by 2050! The objective is to produce the energy necessary for the operation of the sites using the by-products from processing the beet, such as pulp, to self-supply the sites with energy.

At its sites such as Arcis-sur-Aube and Bazancourt, operating in a coupled sugar production-distillery line, it would take 55% pulp to be self-sufficient in energy during the sugar growing season. The remaining portion of pulp would remain available for animal feed and other uses including methanization.

ARCIS-SUR-AUBE

A PILOT SITE THAT COULD BE ENERGY SELF-SUFFICIENT BY 2030



Credit: champagne-creation.fr



3

**OFFER PRODUCTS THAT
MEET THE HIGHEST
REQUIREMENTS**

OUR COMMITMENT

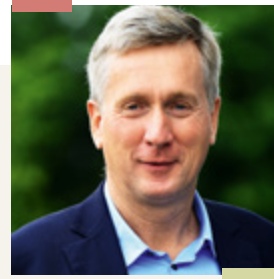
“ PROVIDE OUR CUSTOMERS WITH THE GUARANTEE OF RESPONSIBLE PURCHASING AND PRODUCTS THAT FULLY MEET NEW EXPECTATIONS! ”

LIMITING THE ENVIRONMENTAL FOOTPRINT OF OUR SUGAR AND ALCOHOL PRODUCTS, A PRIORITY

By supplying products which have a lower environmental impact, we can reassure our customers that the products we supply are low in CO₂ emissions. Our goal is clear: establish a virtuous dynamic that minimizes the environmental footprint of our sugar and alcohol products and, in turn, allows our customers to reduce that of their products (scope 3).

PRIOR LIFE-CYCLE ANALYSIS OF OUR PRODUCTS (LCA)

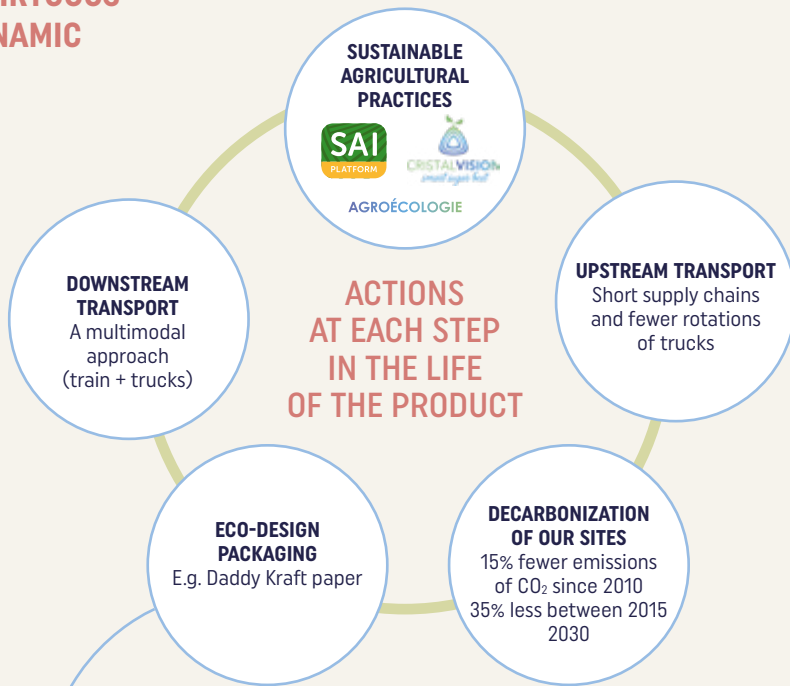
Life-cycle analyses of our products carried out in partnership with ADEME have enabled us to determine very accurately which stages of the process of transforming beet into sugar and alcohol could be particularly likely to emit greenhouse gases and so be able to implement specific actions which reduce emissions at all levels.



STANISLAS BOUCHARD,
Managing Director of Cristalco and Deputy Managing Director of Cristal Union

“ FACED WITH CLIMATE AND SOCIAL CHALLENGES, WE ALL HAVE A ROLE TO PLAY, EACH ON THEIR OWN SCALE. TOGETHER, AS FARMERS, TRANSPORTERS, MANUFACTURERS, BUYERS, CSR MANAGERS AND CONSUMERS, WE CAN MAKE AGRICULTURAL PRACTICES EVEN MORE SUSTAINABLE. IT IS THROUGH A JOINT EFFORT THAT WE WILL HAVE A POSITIVE AND CONCRETE IMPACT. ”

A VIRTUOUS DYNAMIC



SUGAR PRODUCED RESPONSIBLY, THAT'S ESSENTIAL. ECO-DESIGN PACKAGING, THAT'S EVEN BETTER!

OUR DADDY SOFT PACKS ARE NOW MADE FROM KRAFT PAPER



16% less packaging and 70% less plastic
The equivalent of 10 million fewer plastic bottles per year
Recyclable kraft paper packs

KRAFT PAPER ALSO FOR MANUFACTURERS



Packaging made from renewable and sustainable materials

INNOVATE TO MEET THE EXPECTATIONS OF OUR CUSTOMERS

AMPLIFY® THE FIRST LOW-CARBON SUGAR AND AGROECOLOGICAL ALCOHOL PRODUCTS IN EUROPE!

A TURNKEY SOLUTION FOR OUR B2B CUSTOMERS, WHICH COMES IN 3 FORMATS. THIS PROVIDES:

- **sugar and alcohol with a reduced environmental impact** up to 40% reduction in CO₂ emissions compared to standard products on the European market
- **ever more sustainable agricultural practices**, such as agroecology.



The top organic fair trade beet sugar product sold through organic specialty sales channels.



Very pure superfine alcohol, including a very high quality neutral formulation which preserves 100% of the taste and olfactory properties of products. These premium alcohol products are sold under several names e.g. "Superfine Premium", "HQO High Quality Organoleptic Alcohol" or "Ultra Pure" for wheat alcohol.



A range of regenerated ethyl alcohol products for industrial use (chemicals, windshield washers, inks) made from 100% recycled raw materials and residual alcohols.

▲ EcoCycol®

(source: ESRG European Solvent Recycler Group)
To produce EcoCycol®, we emit 50% fewer greenhouse gas emissions than we emit when producing traditional alcohol.

BIOFUELS: A GREEN SOLUTION



Cristal Union produces bioethanol from beet or wine residues, for example. Bioethanol is then used in the production of **Superethanol E85** (8% ethanol) and **Unleaded 95-E10** (10% ethanol). In addition to these products, Cristalco markets bioethanol made from maize and sugar cane.

The carbon footprint of these biofuels is 60-95% lower than fossil fuels. The Group is thus actively contributing to the European renewable and sustainable energy production policy for decarbonized transportation.

CERTIFICATIONS AND QUALITY LABELS, PROOF OF QUALITY AND TRANSPARENCY

Quality, customer satisfaction, environment, safety, organic origin, ethical, sustainable procurement, etc. We demonstrate our commitment to regulatory compliance and continuous improvement.

MANAGEMENT SYSTEMS



CERTIFIED PRODUCTS



Bioethanol



Alcohol



Alcohol, sugar, pulp, alfalfa, sugar substrates



Cane sugar



Beet sugar



Sugar



Alcohol



Molasses, sugar, alcohol, pulp, alfalfa, biomass



Beet sugar



Sugar and alcohol

DEMANDING CONTINUOUS IMPROVEMENT PROGRAMS



CSR ASSESSMENTS



BEING A RESPONSIBLE SUPPLIER: A STRONG COMMITMENT TO OUR CUSTOMERS

Ensuring modes of production and sustainable, ethical and responsible products are at the heart of our DNA. This is the very foundation of our cooperative model and of the commitment we make to our customers.

More than 80 audits are organized each year by independent third parties at our sites and in the fields farmed by our cooperative members. They are supplemented by numerous audits carried out by our customers.



All Cristal Union sites are certified SMETA (Sedex Members Ethical Trade Audit).

This certification, stating that our Group is a responsible supplier, is renewed every 3 years following extensive audits at our sites which are evaluated against 4 criteria: working conditions, health and safety, environment, legal compliance and good business practices.



Cristal Union has been a signatory since 2016 of the United Nations Global Compact. This UN program acknowledges the commitment companies have made to comply with ten main fundamental principles including: respect for the protection of human rights, non-discrimination in employment and occupations, greater environmental responsibility, or the fight against corruption.



A CODE OF CONDUCT THAT IS CENTRAL TO OUR VALUES

The 2022 Cristal Union Code of Conduct is available on our website.

This document summarizes the Group's values and rules that all Cristal Union employees undertake to respect within the context of their duties: fighting against any form of discrimination, compliance with international rules of business ethics, etc.

The code of conduct is accompanied by the establishment of an internal alert system allowing any employee who witnesses a situation contrary to the Group's ethical rules to benefit from a confidential alert channel.

NON-FINANCIAL INDICATORS

	INDICATORS	UNIT	SCOPE*	REPORTING PERIOD
GOVERNANCE	Number of sites	Number	4	Calendar year
	Number of statutory meetings of the Board of Directors and General Assembly	Number	4	Calendar year
INDICATORS INDICATORS	Permanent workforce	Number	1	Calendar year
	Seniority of permanent staff	Years	1	Calendar year
	Percentage of women on the Management Committee	%	1	Calendar year
	Percentage of women in permanent staff	%	1	Calendar year
	Internal mobility	Number	1	Calendar year
	Level of absenteeism	%	1	Calendar year
	Coverage of employees by social security	%	4	Calendar year
	Employment rate of workers with disabilities	%	1	Calendar year
	Percentage of permanent workforce having received training	%	1	Calendar year
	Percentage of payroll devoted to training	%	1	Calendar year
	Total number of employees who underwent safety training or an awareness course	%	1	Calendar year
	Percentage of employees having carried out an annual interview	%	1	Calendar year
	Number of collective agreements signed	Number	1	Calendar year
	Rate of frequency of lost-time accidents	Ratio	4	Calendar year
	Overall Severity Rate	Ratio	4	Calendar year
	Share of Group buyers trained in the SAPIN II Law	%	1	Calendar year

2015	2020	2021	2022	COMMENT
14	13	13	13	Only production sites are considered.
-	-	-	9	
2,068	1,699	1,572	1,551	Number of people with permanent contracts registered as of December 31.
15.34	14.22	13.72	13.3	All Socio-Professional Categories combined.
16.6	20	20	30	
20.5	20.25	21.12	21.28	
53	40	20	16	Number of people who have benefited from internal mobility (change of site). In 2015: the indicator includes the Mobility Plan for the Sermaize site.
3.2	5.51	4.71	4.84	Calculation: Total absences on working days/total theoretical working days. Included in the total days of absence are those due to a work accident, leave for family events, sick leave and sick leave for work-related illnesses, maternity and paternity leave and other absences (authorized paid and unpaid absences, unpaid leave, strikes, disciplinary layoffs, training leave, leave for examinations, union training). Total base headcount.
100	100	100	100	Seasonal jobs are included.
-	6.09	5.29	5.41	Mandatory Declaration of Employment of Workers with Disabilities (DOETH).
78	71	78	85	
3.57	3.03	3.38	3.55	
-	-	1,598	1,537	
92	99.2	99.1	99.3	
8	3	4	6	Only Group agreements concluded at CRISTAL UNION level are taken into account. Agreements concluded individually by industrial establishments are not included in this indicator.
9.49	5.09	5.6	5.8	Scope of permanent and fixed-term contracts, excluding temporary employees.
0.35	0.44	0.23	0.29	
-	-	-	95	

	INDICATORS	UNIT	SCOPE*	REPORTING PERIOD
AGRICULTURAL PERFORMANCE	Deployment of the CRISTAL VISION benchmark among our cooperative growers	%	1	Campaign
	Share of our CRISTAL VISION production certified Gold and Silver SAI	%	1	
	Share of organic crop coverage	%	1	Campaign
	Average sugar beet supply radius for industrial sites	km	1	Campaign
	Area in hectares of honey-producing crop coverage	ha	1	Campaign
	Share of sugar beet volumes benefiting from soil removal	%	1	Campaign
INDUSTRIAL PERFORMANCE	Share of the Group's purchasing turnover (excluding beet purchases) made from French suppliers	%	4	Calendar year
	GHG Emissions – Scope 1	t CO ₂ eq	4	Calendar year
	GHG Emissions – Scope 2	t CO ₂ eq	4	Calendar year
	Change in GHG emissions Scopes 1+2 compared to reference year 2019 used to define the SBTi roadmap	%	4	Calendar year
	GHG Emissions – Scope 3	t CO ₂ eq	4	Calendar year
	Change in GHG emissions Scope 3 compared to reference year 2019 used to define the SBTi roadmap	%	4	Calendar year
	Change in GHG emissions Scopes 1+2+3 compared to reference year 2019 used to define the SBTi roadmap	%	4	Calendar year
	Water withdrawal from industrial sites	m ³	4	Calendar year
	Volume of water distributed to planters through irrigation and spraying	m ³	4	Calendar year
	Quantity of waste produced	t	4	Calendar year
	Share of waste recovered	%	4	Calendar year
	Percentage of sites certified ISO 14001	%	4	Calendar year
	Percentage of sites certified ISO 50001	%	4	Calendar year
	Percentage of sites certified food safe (ISO 22000 or FSSC 22000)	%	4	Calendar year

***Scope:**

1. CRISTAL UNION estate (Paris-Bezannes, Arcis, Cristanol, Bazancourt, Sillery, Erstein, Fontaine-le-Dun, Sainte-Emilie, Corbeilles, Pithiviers, Bourdon and Toury - The Bourdon and Toury sites were closed during the 2020 financial year)
2. Scope corresponding to the sum of: CRISTAL UNION and DISLAUB
3. Scope corresponding to the sum of: CRISTAL UNION, DISLAUB, PRODEVA and SIDESUP
4. Scope corresponding to the sum of: CRISTAL UNION, DISLAUB, PRODEVA, SIDESUP and GOYARD
5. Perimeter corresponding to CRISTAL UNION and Cristalco

2015	2020	2021	2022	COMMENT
52	82	91.5	94	
-	77.7	76.8	76.8	
-	0.55	0.738	1.06	
28.5	31.4	32.3	32.7	
-	-	267	389	
50	68	72	78	The practice of soil removal is adjusted according to the sites and the climatic conditions affecting the harvest.
-	-	-	79.92	
-	-	-	709,236	GHG Protocol Format – Values audited in 2023 by an independent third party organization.
-	-	16,897	7,660	
-	-	-	17.2	
-	-	-	920,134	
-	-	-	18.6	
-	-	-	18	
5,087,817	3,965,214	3,252,419	3,619,214	Water withdrawals from surface water, groundwater and the distribution network are considered.
-	-	-	6,985,828	Sum of the quantities of water distributed to our planters: soil-rich water in sugar refinery resulting from beet washing, water decanted from sugar refinery, sugar refinery water stored in lagoons, distillery water, wine distillery water (Goyard and Dislaub), water from dehydration plant.
			14,500	Sum of hazardous and non-hazardous waste for the entire sugar factories and distilleries estate.
			73	
93	100	100	100	
100	100	100	100	
73	100	100	100	

OUR CONTRIBUTION TO THE OBJECTIVES OF SUSTAINABLE UN DEVELOPMENT



END HUNGER, ACHIEVE FOOD SECURITY, IMPROVE NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

- CRISTAL VISION Sustainability Benchmark *smart sugar beet* and agroecology support for cooperative members
- Experiments and agricultural R&D on 15,000 micro-plots
- Organic sugar production
- Agronomic partnerships: TERRALAB, PADV



ENSURE EQUAL ACCESS TO QUALITY EDUCATION FOR ALL AND PROMOTE LIFELONG LEARNING OPPORTUNITIES

- Cristal Académie internal training school
- Edutainment training
- Deployment of the SPOT field training software
- Agreements in favor of youth employment (work-study contracts, professional contracts, internships, etc.) and gender equality



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

- Collective agreement on gender equality in employment, recruitment, development, professional career development
- Code of Business Ethics



GUARANTEE ACCESS FOR ALL TO SUSTAINABLY MANAGED WATER SUPPLY AND SANITATION SERVICES

- 60% reduction in water drawn by our industrial sites in 2022 compared to 2010
- Circular economy by recovering water from sugar beets and reusing it in our industrial sites. Residual water at the end of the sugar beet season is offered to farmers for irrigation (nearly 7 million m³ in 2022)



GUARANTEE UNIVERSAL ACCESS TO RELIABLE, SUSTAINABLE AND MODERN ENERGY SERVICES AT AN AFFORDABLE COST

- Increased energy efficiency and increased share of renewable energy in our power generation systems
- Commitment to decarbonization
- Production of certified sustainable bioethanol



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

- Cristal Union is a cooperative company based on the "1 man 1 vote" principle
- Code of Business Ethics
- Safety Approach Global Safety Group (SECU)
- 23,000 full-time equivalent jobs supported by Cristal Union operations, its chain of suppliers and customers.



**BUILD RESILIENT INFRASTRUCTURE,
PROMOTE SUSTAINABLE
INDUSTRIALIZATION THAT BENEFITS
EVERYONE AND ENCOURAGE INNOVATION**

- Decarbonization policy and action plan validated by SBTi in 2022
- Eco-design of our products and packaging
- Circular economy, industrial ecology on the Bazancourt Pomacle platform
- Co-founding of an innovative start-up incubator and an association promoting CSR among regional leaders (Marne)



**ESTABLISH SUSTAINABLE CONSUMPTION
AND PRODUCTION PATTERNS**

- Commercial low carbon sugar and alcohol products and whose raw materials were cultivated using agroecological practices
- Circular economy, ecology/industrial synergy
- Supplier charter, purchasing charter
- Audit of our suppliers according to CSR criteria



**TAKE URGENT ACTION TO COMBAT
CLIMATE CHANGE AND ITS
REPERCUSSIONS**

- Reduction of our emissions since 2010
- Group decarbonization roadmap validated by SBTi (Scope 1, 2, 3)
- Eco-design of our products and packaging
- Strategy for the decarbonization of our logistics chain and commitment to the Fret21 system



**PRESERVE AND RESTORE TERRESTRIAL
ECOSYSTEMS, ENSURING THAT THEY
ARE USED IN A SUSTAINABLE MANNER,
SUSTAINABLY MANAGE FORESTS, FIGHT
AGAINST DESERTIFICATION, HALT
AND REVERSE THE PROCESS OF SOIL
DEGRADATION AND PUT AN END TO THE
LOSS OF BIODIVERSITY**

- Supply of seeds for honey-producing fallow crops to our cooperative members
- CRISTAL VISION *smart sugar beet* sustainability benchmark
- Active member of PADV in favor of agroecology
- Development of organic farming

SUSTAINABLE DEVELOPMENT GOALS

CRISTAL UNION

WWW.CRISTAL-UNION.FR

