Crop Solutions

ECOTAIN® - SUSTAINABLE EXCELLENCE AT EVERY STEP

what is precious to you?
A response is needed to THE EMERGING THREAT OF GLOBAL HUNGER

It is estimated that about 795 million people will suffer from hunger in 2014–2016, which means just over one in every nine people. Contributing factors for this: continuous shrinking of arable land caused by erosion, salination, overgrazing or acidification. Furthermore, due to the expansion of cities and an ever higher demand on yields, it is necessary to find a holistic approach to optimize productivity on the available areas of arable land.

The megatrend «Nutrition» significantly impacts the market for specialty chemicals, where Clariant’s Crop Solutions can contribute to improving worldwide nutrition – by a well-thought-out combination of crop protection agents and development of better growth conditions to increase yields in a highly efficient and sustainable way.
Sustainable protection against more than 10 000 DIFFERENT DISEASES AND PESTS

Crop protection products primarily serve to secure the genetically determined potential yield of cultivated plants, by protecting them against harmful organisms such as viruses, bacteria, fungi, pests and weeds. Consequently, it does not provide a means to increase harvests, but to safeguard them and thus make a significant contribution to the yield and product quality of plant-based foods.

The global crop losses represent a very high risk to the world’s food supply. Estimates would suggest our global useable harvest would be only 32% of what we presently produce if we did not utilize crop protection products. Even with crop protection products, it’s estimated we produce only 68% of absolute potential, largely due to negative impact of pests, diseases and weeds.

Warmer climates will favor selected pests. Weeds, insects and fungi often proliferate at higher temperatures while in parallel milder winter temperatures favor over-wintering survival. Crop protection products will play an increasing role to mitigate pest losses in the future.

In summary, it can be stated that the proper use of crop protectants provides significant socio-economic and environmental benefits in terms of safe, healthy and affordable food. In addition, crop protection products contribute to securing agricultural earnings. By raising the efficient use of natural resources, such as soil and water, crop protection products contribute to sustainable land management.

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GLOBAL TOTAL LOSS DUE TO DISEASES, PESTS AND WEEDS

Without crop protection, up to 68% of crops could be lost.

With crop protection reduces the potential crop loss by approximately 53%.

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SOURCE: Erich-Christian Oerke, Horst-W. Delma (Institute of Crop Science and Resource Conservation, University of Bonn)
Crop protection additives and adjuvants: **ALL-ROUND TALENTS AS TRANSPORT AIDS**

Crop protection product performance is dependent on the ability of the active ingredient to be applied and/or transported to the site of action. While additives such as dispersants, emulsifiers, and solvents among others guarantee that small amounts of active ingredients are distributed uniformly over a large area, adjuvants significantly improve the placement and transport of the active ingredient on and in the plant for optimized performance.

Clariant is dedicated to the continued development of sustainable products that can be used in harmony with nature and people.
Harvesters
WITH A GREEN HEART

Additives and adjuvants fulfill a wide range of tasks.

FORMULATION AIDS (ADDITIVES) originate from the groups of solvents, carrier substances, emulsifiers or dispersing agents and are mainly responsible for the physical or chemical storage stability, handling, delivery, problem-free dilution as well as the stability of spray liquids.

DRIFT CONTROL AGENTS improve the fraction of the applied crop protectant that contacts it’s intended target by reducing spray drift while in parallel mitigating unwanted off-target application.

RETENTION AND WETTING AGENTS improve the spray application process and maximize the number of spray droplets on the leaf surface of the target plant. Without this type of adjuvant, droplets may simply bounce off, thus losing the crop protectant.

FOLIAR PENETRATION ENHANCERS This type of adjuvant supports active ingredient transport across inherent barriers in plants, maximizing the amount of active ingredient within the target plant.

There exist many other adjuvant types that function by allowing the active ingredients to exhibit their full biological potential.
Global trends, sustainability and our EcoTain® label – AN INCREASINGLY INTENSE RELATIONSHIP IS NEEDED

Clariant’s clear target is to develop sustainable products that spare the environment and safeguard the food supply by developing new solutions that are compatible with the requirements of environmental protection and occupational safety.

Sustainability is a central principle within the Clariant strategy. By defining the maxim «Add Value with Sustainability» as one of the five pillars of its corporate strategy, the group made official its lasting commitment to a sustainable business approach. In this way, the search for sustainable solutions starts right at the beginning of a product’s lifecycle, taking into account not only environmental aspects, but also labor conditions, human rights standards, and societal needs.
A comprehensive set of environmental, social and economic criteria was developed in cooperation with the Centre for Sustainable Consumption and Production (CSCP), a non-profit organization and internationally renowned »Think-Tank and Do-Tank«.

The result: A completely transparent and credible system with clearly defined, standardized, company-wide criteria to assess the sustainability of Clariant’s product portfolio.

The Clariant Portfolio Value Program System – A COMPANY-WIDE FLAGSHIP INITIATIVE

With the EcoTain® label and the Portfolio Value Program (PVP), Clariant sets the basis for systematically integrating sustainability into products and services – including the existing product portfolio as well as the development of new products and solutions. The program is based on a thorough analysis of sustainability trends and needs with 36 criteria at its heart for determining the sustainability performance of the product portfolio.

The 36 criteria in six categories judge the sustainability of a product on social, environmental, and economic aspects which represent the three pillars of sustainability: People, Planet, and Performance. In the development of the criteria, stakeholder priorities, trend research, and business relevance were considered.

The criteria were validated through a comprehensive testing process and reviewed by Clariant wide working groups as well as in internal and external stakeholder workshops. The final set of 36 criteria encompasses the full life cycle of a product or solution.

EcoTain®:
ONE LABEL AND ONE SYSTEM WITH THREE DIMENSIONS FOR ONE WORLD

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EcoTain® is Clariant’s own quality label for flagship products that illustrates sustainability excellence. A product that is awarded the EcoTain® label is evaluated on all 36 criteria. In at least one criterion it must be best-in-class. Concerning the other criteria, a minimum score has to be achieved. A product must show sustainability benefits or performance advantages in two life cycle phases, with no high-risk characteristics, before being assigned the EcoTain® label.

Together, the EcoTain® label and the Portfolio Value Program form a very important step towards a strong sustainability profile following Clariant’s holistic philosophy. The transparent criteria strengthen the trustworthiness of our sustainability efforts, and the label helps our customers already involved in sustainable initiatives to continue by using ingredients backed by documented, sustainable processes and technologies. This creates long-term value for our customers, provides maximum safety and optimal protection in terms of sustainability and efficiency.

»Our dedication to sustainability is rooted in a simple insight. While financial performance is important, it can only have true and lasting value when achieved in accord with the world around us – the planet we live on and the people we work with or who expect a better life from what we do.«

HAROLDF KOTTMANN
CEO CLARIANT
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