



**POWER THE NATURE**  
SOLUTIONS AGRO-ENVIRONNEMENTALES

## PRESS RELEASE

Paris, June 15, 2024

### **POWER THE NATURE proves the effectiveness of its biostimulant FERTIROC® in increasing yields and reducing the use of synthetic fertilizers in a publication from SWISS AGRONOMIC RESEARCH**

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Power the Nature announces the publication of a comprehensive scientific study in French and English in the Swiss agricultural research journal OFAG.

This is the culmination of a 3-year project carried out in collaboration with the Swiss agricultural research center, the AGROSCOPE institute in Nyon, whose problem was the following: "The foliar contribution of the biostimulant FertiRoc® improves productivity and nutrition of field crops under conditions of reduced nitrogen availability? »

The research project aimed to test the effect of the biostimulant FertiRoc® on the productivity of wheat and corn in open fields, subjected to different levels of nitrogen fertilization (N):

N=100% - N=77% - N=55% - N=33%.

At the end of 3 years of testing, the results are unequivocal and the biostimulant perfectly addressed the problem.

**The study highlights that FertiRoc® makes it possible to significantly increase yields, on both crops, and on all nitrogen fertilization gradients.**

It demonstrates that it makes it possible to improve the quality of harvested products, such as the protein level in wheat, and in particular it is observed that FertiRoc improves the transport of proteins and micronutrients to the grains by increasing the period of post-flowering absorption.

**The study highlights an equivalence of yield, on all modalities of the nitrogen fertilization gradient (33%, 55%, 77%, 100%), between:**

**yield [Nitrogen (dose X)] = yield [Nitrogen (dose X – 35 units) + FetiRoc]**

**It proves that FetiRoc makes it possible to significantly improve nitrogen efficiency, and in particular that it makes it possible to lift yields and reduce nitrogen inputs without penalizing yields.**



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**The publication is declared without conflict of interest, that is to say that Power The Nature as co-funder played no role in the design of the study, in the collection, analysis or analysis. interpretation of the data, nor in the writing of the manuscript or in the decision to publish the results.**

These field results are in perfect agreement with previous publications, namely the study in the “Journal of Plants Nutrition” which highlights the improvement in photosynthesis and nutrition, and the European certification which certifies the improvement in nitrogen efficiency allowed by the biostimulant, independently of the nutrient content.

FertiRoc® is an easy and directly applicable solution for all farmers which helps increase crop yields, increase the quality of harvested products, while reducing the use of synthetic fertilizers.

The FertiRoc practice results in a reduction in greenhouse gas emissions in the fields, and losses through volatilization and leaching of nutrients into the air and soil, and an improvement in the carbon footprint.

**The publication gives credibility to the interest of the FertiRoc practice in improving the agronomic, ecological and economic performance of farms.**



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## A PROPOS DU FERTIROC

FertiRoc is a 100% natural mineral biostimulant which significantly increases yields and reduces the use of synthetic fertilizers and fungicides.

It was developed by Power The Nature during four years of testing in collaboration with recognized public institutes such as the Swiss agricultural research institute AGROSCOPE, the GEMBLoux agronomic university in Liège.

The mode of action and effectiveness have been proven by partner institutes, detailed in two scientific studies, validated by peers, certified without conflicts of interest, and published in peer-reviewed journals.

FertiRoc is a “CE Biostimulant” approved and certified in compliance with European regulations for its effectiveness in improving nitrogen nutrition.

It is certified for use in organic farming, referenced on the “intrants.bio” website, FiBL certified and compliant with Demeter specifications. It also has national marketing authorization in Switzerland, France, and Belgium.

FertiRoc is a wettable powder with foliar penetration, it does not require specific equipment, and its application does not change current practices. It is a direct solution and easily applicable by all farmers to improve the agronomic and economic performance of crops and reduce the impact of agriculture on the environment.



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## A PROPOS DE POWER THE NATURE

We are father and son, farmers for 3 generations, we have always worked towards sustainable agriculture and to improve the technical and economic profitability of farms.

Today we are realizing our vision of agriculture with Power the Nature, an innovative company researching and developing agro-environmental solutions in line with the technical and economic issues of farmers.

Our solutions come from reflections in the fields, "on the ground", they come from proven know-how of the farming profession, and they are then studied in partnership with recognized institutes in the agricultural sector.

We work on sustainable alternatives to current agricultural methods, which effectively respond to environmental issues, but also and above all to those of farmers. We mobilize our know-how to increase the technical and economic profitability of farms, with directly and easily applicable solutions.

Located in Lausanne and Paris, all our solutions are validated in the field by farmers. We ensure production and our know-how guarantees their effectiveness. We collaborate with partners who share our commitments for the distribution and marketing of our solutions.



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## Effets d'un biostimulant foliaire à base de zéolite sur le blé d'automne et le maïs

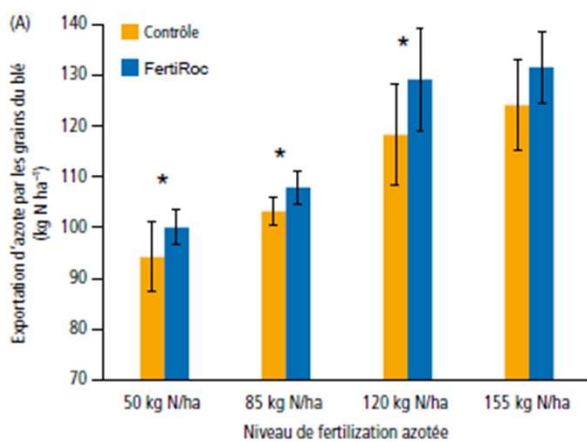


### Application foliaire du biostimulant à base de zéolite

Le biostimulant utilisé dans cette étude est le produit FertiRoc®, un biostimulant à base de zéolite naturelle (chabazite) mélangée à une proportion de carbonate de calcium tendre naturel. La composition est micronisée et travaillée extrêmement finement selon le savoir-faire de la société productrice Power the Nature SA (Lausanne-Suisse et Paris-France). Le produit FertiRoc® a été validé par un organisme certificateur et accepté comme

### Remerciements

Cette recherche a été co-financée par «Power the Nature» et fait partie de l'activité de recherche d'Agroscope dans le cadre du Programme d'activité 2022–2025. Les auteurs ne déclarent aucun conflit d'intérêt. Le bailleur de fonds «Power the Nature» n'a joué aucun rôle dans la conception de l'étude, dans la collecte, l'analyse ou l'interprétation des données, dans la rédaction du manuscrit ou dans la décision de publier les résultats.



Sur l'ensemble du gradient de fertilisation, on observe que l'indice de récolte du blé d'automne passe d'une valeur moyenne de 0,45 sans biostimulant à 0,48 après l'application du biostimulant FertiRoc®, ce qui correspond à une augmentation d'environ 6,3% (Fig. 4). Une

observées. Ces résultats suggèrent que c'est l'absorption en nutriment dans son ensemble qui peut être favorisée par le biostimulant à base de zéolite. À titre d'exemple,

du biostimulant. Ces résultats laissent ainsi entrevoir une perspective intéressante pour l'économie d'engrais en améliorant l'absorption grâce à l'effet du biostimulant.

### Conclusion

Dans l'ensemble, les résultats de ce premier essai en plein champ d'applications foliaires du produit FertiRoc® comme biostimulant à base de zéolite en combinaison avec différentes doses de fertilisation azotée sont prometteurs. Les données collectées pour l'année 2022 et 2023 sur la station de recherche d'Agroscope-Nyon ont montré une augmentation moyenne du rendement de grain en blé d'hiver (variété Arina) de 6,7% sur l'ensemble du gradient de fertilisation azotée (de 50 à 155 kg N ha<sup>-1</sup>) et du rendement de maïs (variété LG31226) de 7,2% pour les doses de fertilisation azo-

grains suite à l'application du biostimulant. Ces résultats indiquent une augmentation de l'efficacité d'utilisation de l'azote pour le blé et le maïs, surtout pour les niveaux de fertilisation azotés les plus bas. Ceci pourrait permettre de réduire la quantité de fertilisant azoté d'une culture ayant reçu un apport foliaire du biostimulant tout en maximisant l'exportation de N ce qui, de surcroît, aurait l'avantage de réduire les pertes environnementales d'azote. De futures études sont toutefois

