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Lux research announces top 5 notable technologies in Food and Agriculture in 2021

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Alternative ingredients and digital technologies will be indispensable technologies for responding to disruptions in the food and agriculture fields.

Lux Research

FORESIGHT 2021

5 Most Impactful Technologies for the Food and Agriculture Industry

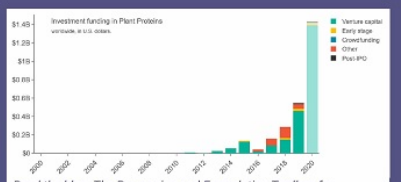
1 BIOINFORMATICS

Having developed and risen to prominence largely focused on medical and pharma applications, bioinformatics is now crossing over into agrifood and health.

Watch the webinar: Driving Value Through Bioinformatics

2 ALTERNATIVE PROTEINS

Concerns about health and sustainability are pushing to diversify diets away from meat and fish, leading to changes ranging from land use to ingredient supply chains.



Read the blog: The Processing and Formulation Toolbox for Plant-based Products

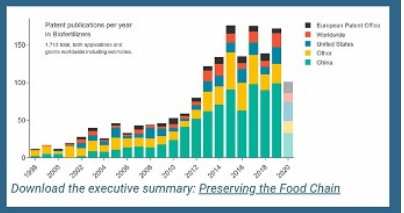
3 PRECISION AGRICULTURE

Digital tools are continuing to revolutionize agriculture, improving product yield and quality, and reducing environmental impact.

Download the executive summary: Business Model Innovation Underlies the Digital Transformation of the Agrichemical Industry

4 BIOFERTILIZERS

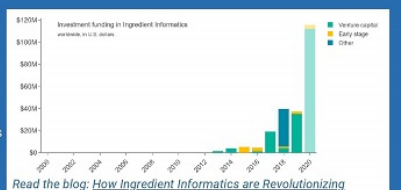
Biofertilizers and other microbial biostimulants use living microorganisms to improve nutrient use efficiency and agriculture sustainability.



Download the executive summary: Preserving the Food Chain

5 INGREDIENT INFORMATICS

Applying machine learning to recipes and ingredients can produce new product formulations more quickly, rapidly accelerating new food product launches.



Read the blog: How Ingredient Informatics are Revolutionizing the Way we Develop Foods

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Recently, in the food and agriculture sector, SMEs are increasingly expanding their market share while inducing diverse innovations through the use of digital technology and the development of new channels. Lux Research, a U.S. research firm specializing in advanced technology research, is focusing on Foresight 2021: Top Emerging Technologies to Watch (Foresight 2021: 2021) to support understanding of innovation trends in the food and agriculture fields. In "Advanced Technologies to Be", Lux announced the top 12 technologies as a comprehensive ranking of technologies to be noted in 2021 and the top 5 major technologies in the food and agriculture fields.

When identifying the technology of interest in this survey, Lux Research first analyzes innovation data using its proprietary data analytics platform, "Tech Signal," and interest in technology development is rapidly increasing. However, there are some technologies that have serious problems to be overcome in commercialization, such as regulations and business feasibility. Therefore, for the ranking by data analysis, an analyst who is an in-house technical expert made a final technical evaluation such as business feasibility, and created this comprehensive ranking and industry.

The top five technologies to watch in 2021 in the food and agriculture sector are:

1. **Bioinformatics** : Bioinformatics, which has been developed primarily for medical and pharmaceutical applications, is now expected to be increasingly used in food, agriculture and healthcare.

2. **Alternative Proteins** : Concerns about health care and sustainability are driving diversification of diets and are making a big difference from land use to raw material supply chains.

3. **Precision agriculture** : Digital technology continues to revolutionize agriculture, and precision agriculture technology contributes to increasing crop yields and improving quality while reducing the environmental burden.

4. **Biofertilizers** : Biofertilizers and other microbial biostimulants use live microorganisms to improve nutrient utilization efficiency and agricultural sustainability.

5. **Informatics** : Applying machine learning to recipes, ingredients and ingredients makes it possible to mix ingredients in new products more quickly and shorten the time required from food development to launch. Become.

Joshua Haslun, Ph.D., Senior Analyst at Lux Research, commented, "In addition, the utilization of digital technology will be indispensable in both the food and agriculture fields. Informatics is a key technology for shortening the product development cycle, and while it may still be relatively unfamiliar, precision agriculture technology is important as a complement to traditional pesticide development. It is getting higher. Substitutes for main raw materials are one of the movements seen in both agriculture and food fields, and biofertilizers and alternative proteins will attract more attention in the future. From its use in drug development, bioinformatics is expected to become a technology that will bring about major changes in the entire agrifood ecosystem in the future. summary of top 5 major technologies: download an infographic