

RECOVERING AGRI-FOOD RESIDUES: WHO BENEFITS?



Science question of the month: Turning complex topics into simple, effective answers.

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TURNING WASTE INTO RAW MATERIAL

While most people are familiar with recycling and composting at home, the concept of recovering agri-food and industrial residues is less well known. Yet these are very timely solutions that are squarely in line with the circular economy. At the core of these solutions lies the recovery of fermentable residues.



FERMENTA... WHAT?

Fermentable residues are basically any materials that can support the growth of microorganisms and bacteria through the process of fermentation. It's the same principle as composting table scraps at home. In the agri-industrial sector, this can be anything from vegetable leaves and stems after harvest to sludge from pulp and paper mills, spent grains from brewers, or wastewater from cheese factories.



AND WHAT ARE THEY USED FOR?

Lots of things! These residues are real hidden treasures. Through fermentation, they can be reused and transformed into high value-added products such as biopesticides, bioplastics, and biofuels. Yet even today, many Québec companies still pay to get rid of their residues.

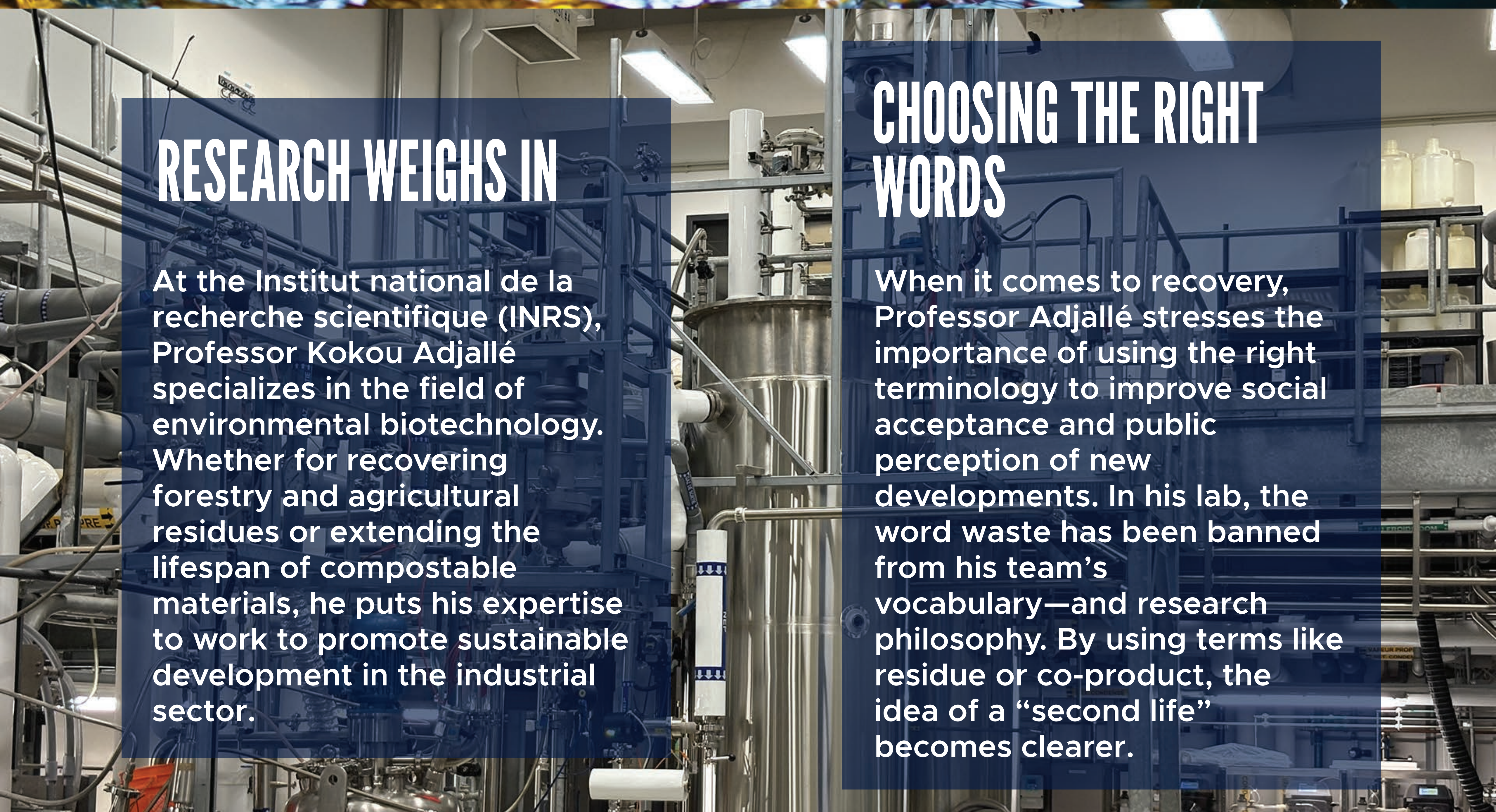


RESEARCH WEIGHS IN

At the Institut national de la recherche scientifique (INRS), Professor Kokou Adjallé specializes in the field of environmental biotechnology. Whether for recovering forestry and agricultural residues or extending the lifespan of compostable materials, he puts his expertise to work to promote sustainable development in the industrial sector.

CHOOSING THE RIGHT WORDS

When it comes to recovery, Professor Adjallé stresses the importance of using the right terminology to improve social acceptance and public perception of new developments. In his lab, the word waste has been banned from his team's vocabulary—and research philosophy. By using terms like residue or co-product, the idea of a “second life” becomes clearer.



MAPPING DATA TO RECYCLE SMARTER

To build better links between industry and the research community, Professor Adjallé and his team have created a map of fermentable residues in Québec. To extend the lifespan of materials that are usually discarded, we need to know where to find them. This interactive map lists the types, quantities, composition, availability, and, most importantly, the potential uses of these residues across the province. It's a way to keep organic matter in circulation for longer.



SO, WHO BENEFITS?

Government agencies, start-ups, entrepreneurs, university researchers, and college students are just some of those who can use this interactive map and the residues it tracks. The project team and the pilot facilities of the INRS Environmental Biotechnology Laboratory (LBE) are there to support these initiatives. Professor Adjallé reminds us that it is critical for society to recognize that the end of a production chain doesn't have to mean the end of a material's usefulness—with the right mix of willpower, creativity, and research-based data.

