Les plantations de monoculture alimentent les incendies au milieu des vagues de chaleur

J. BARQUÍN L. CONCOSTRINA-ZUBIRI I. PÉREZ-SILOS G. HERNÁNDEZ-ROMERO A. VÉLEZ-MARTÍNET JM ÁLVAREZ-MARTÍNEZ Auteurs Info & Affiliations
LA SCIENCE
29 sept. 2022
Vol 377 , Numéro 6614
p. 1498

DOI : 10.1126/science.ade5

LETTERS

Edited by **Jennifer Sills**

Monoculture plantations fuel fires amid heat waves

This summer, Europe broke high temperature records across the continent (*1*) and experienced the largest widespread drought in 500 years (*2*). The extreme climatic conditions contributed to an increased number and extent of forest fires across Europe (*3*). Large forest fires are boosted not only by warmer and dryer conditions but also by the type and state of the vegetation (i.e., fuel models) (*4*). Many recent forest fires worldwide have been fueled by large areas of evergreen monoculture plantations, such as *Eucalyptus spp.* in Chile and Portugal in 2017 (*5*) and *Pinus spp.* in France this past summer (*6*). Given increasing temperatures and fire risks, the traditional practices for evergreen tree plantations are no longer a responsible forest management strategy.

Evergreen trees have been shown to serve as efficient fuel for fires. Specific plant traits, such as essential oils or enhanced terpene content in *Eucalyptus spp.* and *Pinus spp.* leaves, respectively, increase the trees' flammability (canopy ignition and the subsequent resprout or seed release help the species to outcompete others) (*7*). The higher evapotranspiration rates of evergreens compared with native forests translate to lower soil humidity and dryer conditions (*8*). In addition, monoculture plantations often suffer from poor or nonexistent design and forest management, which translates into high tree densities, species homogeneity, and increased continuity of fuel loads (*9*).

Evergreen monoculture plantations have increased worldwide over the past two centuries (*10*). In many cases, they are the selected species for large-scale reforestation for erosion control, carbon sequestration, or restoration of burned areas. Current environmental policies continue to favor these strategic responses, so additional monoculture plantations are likely [e.g., (*11*)]. However, given the fire risks they pose and the increasing probabilities of heatwaves, the lack of innovative design and management strategies for these evergreen monocultures is creating the perfect conditions for larger and more devastating forest fires worldwide.

Scientists, public administrations, and the forestry industry must reconsider tree planting design, strategies, and management actions when dealing with evergreen monoculture plantations. Otherwise, we might be just casting more wood on the bonfire.

J. Barquín*, L. Concostrina-Zubiri, I. Pérez-Silos, G. Hernández-Romero, A. Vélez-Martín, J. M. Álvarez-Martínez
IHCantabria–Instituto de Hidráulica Ambiental de la Universidad de Cantabria, 39011 Santander, Spain.
*Corresponding author. Email: barquinj@unican.es

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10.1126/science.ade5923

A low-carbon future for China's tech industry

The information and communications technology (ICT) industry, which includes telephone and computer networks and devices, has the potential to reduce emissions and increase efficiency in other industries by using internet platforms to connect equipment, production lines, factories, suppliers, products, and customers

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