

Using knowledge management to better identify research gaps and priorities on pesticide plants in West and Central Africa

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Taking its cue from the European ADAPPT and OPTIONS projects, CIRAD launched a research and development network on Pesticide Plants of Francophone Africa (PPAf) in 2015. It currently has 55 African members, generally affiliated to universities or to national research organizations, located in 10 countries in sub-Saharan Africa: Benin, Burkina Faso, Cameroon, Gabon, Ivory Coast, Mali, Niger, Democratic Republic of Congo, Senegal, Togo. The network has been completed with 15 correspondents located outside the African continent, mostly in France.

Prior to drawing up a project in response to a call, PPAf launched a census of pesticide plants in these countries which were studied. The 74 botanical taxa inventoried, of which 68 were identified at species level, belonged to 29 botanical families. Knowledge on the use of these plants, and on interactions with harmful organisms, has been compiled in a knowledge base. Whether for experimental purposes or for use by producers, the plants are employed in different forms (extracts, essential oils, etc.) against fungi (11 species identified), seed pests (122 interactions), insect pests (6 species) in stored foodstuffs (111 interactions), or insect pests (16 species) on field crops (61 interactions). Some insect species transmitting animal diseases were also inventoried.

This francophone network can be considered as a complement to the African Network of Research on Storage Insects founded in 2008, itself arising from the creation of the African Network on Bruchids described by Dr. I. Glitho in 2002. One of the originalities of the knowledge base is that, by computer processing, it enables the identification of knowledge gaps and thereby helps to define research priorities.

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