

TECHNICAL SHEET

Rice: Herbicide (Butaforce) for weed control

Role of the pesticide (Boschetto, 2013)

Herbicides are products that belong to the family of pesticides, substances developed to control or destroy organisms deemed undesirable (Government of Quebec, 2002a). Whether they are natural or man-made (synthetic molecules), the absorption and metabolism of herbicides by plants cause the death of these organisms (Agra-Ost, 2006).

Since their purpose is to destroy weeds, herbicides also present risks for the environment and human health (Government of Quebec, 2002b). It is therefore important to control their use and marketing.

Herbicide design (Boschetto, 2013)

Any mode of action of a herbicide is based on the existence of a chemical molecule that will be absorbed, metabolized and interact with the plant to lead to the desired effect (growth inhibition, plant death, etc.). The a priori knowledge of the desired effect is therefore essential for the choice of the active molecule of the herbicide. However, although it is the active molecule that interacts with the plant, several additives must be added for the desired characteristics to be obtained, particularly with regard to the absorption of the molecule by the plants (Agri-réseau, 2012). The nature of the additives have the function of "dressing" the active molecule, in order to make it more effectively absorbable by the examples according to the different modes of application (ground spray, aerial, etc.).

Industrial manufacturing of the herbicide (Boschetto, 2013)

Once the herbicide is theoretically designed, the industrial manufacture of the herbicide is a five-step process (BASF, 2012):

- ✓ Receipt and control of raw materials.
- ✓ Formulation of the herbicide into its marketing form (solid or liquid).
- ✓ Quality control of the formulated product.
- ✓ Packaging of the herbicide in its marketing package.
- ✓ Final control and marketing.

Characteristics of the technology

- Yield = 3,6t/ha
- Augmentation des revenus de 111%

Références bibliographiques

Agra-Ost (2006) : Herbicides Généralités. *In* Glea. Glea.net. http://www.glea.net/AGRAOST/doc/herbicides_Generalites_2006_Fpdf.pdf (Page consultée le 01/10/2012)

Agri-réseau (2012) : Herbicide distinct en vente pour usage dans l'Est du Canada seulement. *In* Agri-réseau. Grandes Cultures : <http://www.agrireseau.qc.ca/grandescultures/documents/DistinctHerb.corn.F.label.pdf> (Page consultée le 01/11/2012).

BASF The Chemical company (2012) : BASF à Graveline. *In* basf.fr. Qui sommes-nous. http://www.basf.fr/ecp2/France/fr_FR/content/About_us/Basf_France/Local_Sites/Gravelines (Page consultée le 01/11/2012).

Guillaume Boschetto (2013) : Evaluation de la pertinence de l'utilisation des herbicides en lien avec le Développement Durable ; Maîtrise en Environnement, Université de Sherbrooke ; 76p.

Gouvernement du Québec (2002a) : Les pesticides. *In* Portail Québec. Ministère du développement durable de l'environnement de la faune et des parcs. <http://www.mddep.gouv.qc.ca/pesticides/inter.htm> (Page consultée le 01/10/2012).

Gouvernement du Québec (2002b) : La réglementation sur les permis et les certificats en bref. *In* www.gouv.qc.ca. MDDEP. <http://www.mddep.gouv.qc.ca/pesticides/permis/index.htm> (Page consultée le 10/28/2012).

Sites web consultés

https://www.usherbrooke.ca/environnement/fileadmin/sites/environnement/documents/Esais_2013/Boschetto_G_2013-03-15.pdf ; 22/11/2021 at 10h42
<https://www.agrireseau.net/agroenvironnement/documents/slv09-137.pdf> ; 22/11/2021 at 10h57
https://www.equiterre.org/sites/fichiers/ficheinformationglyphosate_2018.pdf ; 22/11/2021 at 11h17

Other references

National Center of Specialization on Mangrove Rice ; Host Institution: ROKUPR Agricultural Research Center (RARC) ; NSC MEMBER INSTITUTIONS : The ROKUPR Agricultural Research Center (RARC) is one of the eight centres of the Sierra Leone; Agricultural Research Institute (SLARI) ; Host country: Sierra Leone ; Coordinator: Dr Matthew L.S. GBOKU ; Email: m.gboku@slari.gov.sl ; Telephone: +232 78 529 642