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Exit from pesticides: the paths of the law¹

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Introduction

To get out of chemical pesticides, law has a major role to play, in addition to the other sciences. Any public policy, to be implemented, must be transformed into legal rules. Unlike other social norms, the legal norm is recognised by institutions and guaranteed by the state system. However, law is not only regulation; economic norms (labels, contracts, taxes) are also part of it.

In terms of method, the lawyer reflects on the current texts and the major unwritten principles (like hierarchy of norms). He also looks at how the rules are applied, by judges and economic operators.

So, how can legal decisions help to get out of pesticides? We will provide an answer in two stages. First, it is a question of knowing how the law integrates health and socio-economic considerations into its system. The relationship between law and other sciences is a part of the matter. Then, inside the law itself, what are the norms that allow to reduce the pesticides? What combinations of instruments should be favoured ?

1. Law beyond its wall

As a first step of our analysis, we will explore how law welcomes and uses non-legal scientific knowledge and information when it comes to pesticides. We will present how law does react to knowledge backed by “hard sciences”, and then focus on other sources of knowledge such as social sciences.

1. 1. Turning science into legal force

The purpose of the evaluation procedure of pesticides is to give legal force to scientific knowledge. Should substances or products' placing on the market be greenlighted only based on the review of all scientific information available and the identification and understanding of risks?

In the absence of any evaluation process, jurists would not be able to assess the use of pesticides and their dangers. How do we know that pesticides are dangerous and should be removed from the market? Can we consider that one scientific research demonstrating the adverse effect of their use, on pollinators for instance, is enough to remove such a useful protection tool against harmful insects? How to ensure that this study is not fraudulent or

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controversial? In the case of pesticides, European law defines adverse effects and recognize scientific guidelines to evaluate them.

1. 1. 1. Agreeing on the risk

Jurists often define Law as a “fiction”. Law qualifies (defines) an object and then designs the rules that shall apply to this particular object. One can then consider that an object does not exist as long as this object is not defined by Law. As a consequence, endocrine disruptors were not taken into account over the chemical substances’ evaluation process prior to their definition by Law. Currently the same logic applies to SDHI (succinate dehydrogenase inhibitor)².

Definition is therefore a crucial step in the redaction of Law to ensure that all parties agree on the nature of the considered object, prior to agreeing on the rules that shall regulate this object. In international and European act, such as the pesticide use directive or the regulation on the placing on the market, definitions are usually set out at the very beginning of the regulation, in the 2nd and 3rd article. The place of the definition in all regulatory acts illustrate the decisive importance of definitions.

Legislators agreed on some terms and awarded them a meaning. However, defining is not neutral. It has a bias and does recognize some aspects more than others. Discussions to define what an endocrine disruptor is have been lasting for almost 10 years at European level, and as per many specialists, the adopted definition remains controversial.

Now that the need for a preliminary legal definition of a substance adverse effect has been made clear, the question of the measurement of this effect is to be addressed.

1. 1. 2. How to measure danger?

When it comes to complicated toxicological or biological purposes, jurists are facing a major pain point. Jurists are not scientists. They are not qualified to properly understand the research proving that a particular molecule is toxic. Besides, jurists are not able to distinguish “good” from “bad” sciences. They can be blinded by conclusions or results that are not reviewed by experts of the field.

To ensure the unharmed nature of crop protection products, Law recognizes some specific testing protocols. Hence, we know that the outcomes of the test will be “scientifically correct”. Social scientists such as Jean-Noël Jouzel have brought to light that once again, the choice of protocol has its own bias. In Europe, protocols tend to favor the analysis of toxicology over epidemiology. Consequently, scientific studies showing low-dose effects or focusing on the cocktails effects of pesticides can be awarded less credit.

One might have heard about the controversy relating to carcinogenicity of the glyphosate. The IARC (International Agency for Research on Cancer) recognized glyphosate as probably harmful for the human health, however, European institutions (EFSA and ECHA) disagree with this observation, for multiple reasons. One of them relates to the difference in methodology. The literature that they reviewed did not rely on the same protocols to recognize adverse effects. The scope of the studies used by the IARC was much larger than

² SDHI are fungicide blocking the respiration of fungus cells.

the one used by European agencies. Therefore, both methodologies led to different evaluation of the danger.

Nevertheless, the existence of an evaluation procedure is the prerequisite to enable jurists to assess the dangerousness of a substance for the environment or health. As long as the evaluation process does not reveal the dangers of a product, the legal existence of this danger cannot be established. An illustration is notably the assessment of SDHI-related dangerousness. SDHI are antifungal products blocking the cells respiration process, that might be harmful for human health. However, this specific biological aspect is not part of the criteria to be evaluated. As a jurist, it is difficult to assess whether the method used to demonstrate the potential harmful effect of SDHI is appropriate and scientifically demonstrating this effect.

Despite the above explained asymmetries, the current legal framework ensures that the decision of putting or removing pesticide on the market is not arbitrary but relies on science and facts. For instance, a third party does contribute to balance the holes in the regulation: the judge. Judges are regularly requested to assess whether decisions on pesticides are legal. Their scope of intervention is broad and encompasses cases relating to the placing on the market as well as the use of pesticide or the analysis of specific restrictions.

In their rulings, judges might also use scientific knowledge to build their decision. In term of methods, Judges are freer than evaluation institutions: they can rely on experts appointed at their request and can use any scientific source of information – unlike institutions such as the EU Commission – to build a legal decision. Therefore, way before the French legislator, French judges recognized the connection between exposure to pesticides and diseases such as Parkinson or Alzheimer, based on scientific research.

1. 2. Taking social sciences into account

We explored how Law awards legal force to hard sciences within the process of placing on the market. What about social sciences? What is their role when it comes to pesticides?

First of all, one should know that Law usually balances interests in competition. For instance, business restrictions or restrictions to property are possible as long as they are proportionate and useful to protect other interests such health or environment. From this perspective, social sciences are obviously taken into consideration, and support the assessment of the consequences of a decision while helping to adjust the decision if required. In the case of pesticides, the precaution principle is balanced by the imperative to protect crops. Hence, the necessity for product safety will be balanced with its efficiency as herbicide or insecticide. In this interest balancing process, social sciences are indirectly taking into account.

The availability of products, their utility to the farmers and their cost are documented. In the case of neonicotinoids, which were banned in France, the estimated damage to the sugar industry due to potential pest led to the temporary lifting of the ban.

Economics and sociology, in particular, are major sources of support when it comes to remove useful products from the market, such as glyphosate. The French case provides an obvious example : prior to implement the removal of glyphosate-based products from the domestic market, the French government ordered an economic study on the consequences of this decision for the farmers. One of them led to the conclusion that an extra-cost – however

without substantial effect on incomes – of €10 to €80/ha/year was to be expected for the field crop segment³.

Social sciences are also taken into consideration by judges in their ruling. In France, the legislator prohibited the production, storage or transportation of plant protection products that were not authorized in Europe for environmental reasons. Hence, exports of these products from France will become illegal starting in 2022. However, constitutional judges were asked to assess the legal nature of this restriction and considered the business restriction as fair (Cons. Cons. 31 janvier 2020, 2019-823 QPC) and proportionate. In this case, the proportionate nature of impacts of the business restriction does rely on the fact that only a few substances were subject to the ban and that the economic players had enough time (three years) to prepare their business compliance to the new regulation.

By comparison to “hard” sciences, social sciences are mostly indirectly taken into account when it comes to decision on pesticides. However social sciences can play another role within law-making processes. Economics and other social sciences support public decisions and orientate decision-makers to when arbitrating which legal instruments are the most suitable and appropriate to their objectives. Shall we implement taxes, bans or incentive schemes to foster practices or use of products?

2. Within the walls of the law

After having seen how the law integrates data from other sciences, we will analyse its internal functioning. Firstly, which branches of law are involved in accelerating the exit from pesticides? Indeed, the legal system is like a tree made up of multiple branches : agricultural law, climate law, market law... Secondly, we will ask : within these different kinds of law, which « species » of normative instruments are the most relevant?

2. 1. Legal branches

In order to reduce the products, public policies tend to go through pesticide law. This is quite natural! One solution is to tighten the conditions for placing products on the market, or to regulate their use more strictly. Just one example : we could imagine extending the comparative assessment procedures between conventional products and their alternatives for marketing authorisations. This analysis could be based on a number of criteria : effectiveness, harmfulness, economic cost, or the availability of equipment, etc.

Another way is through the law of the Common Agricultural Policy. The greening of the CAP is already reflected in the conditionality of aid payments. Criteria linked to untreated areas and the adoption of low-input practices could be added for aid under the first and second pillars. For example, in catchment areas with drinking water issues, specific agri-ecological measures could be based on the abandonment of pesticides.

Moreover, water law is currently the main lever for reducing the use of pesticides. Indeed, it makes it possible to obtain the support of the actors attached to the preservation of this common heritage. Water quality justifies measures to protect watercourses, but also drinking water catchment areas. In these areas, action programmes have been set up : many of them deal with pesticides. More recently, quantitative water management has been used. In some

³ Carpentier A., Fadhuile A., Roignant M., Blanck M., Reboud X., Jacquet F., Huyghe C., *Alternatives au glyphosate en grandes cultures. Evaluation économique*. 2020, INRAE.

areas (like Deux-Sèvres, Vienne in France), it has been decided collectively to make access to water conditional on agroecological commitments by irrigators. To be able to continue to take water, they must obtain results, especially in terms of pesticide use.

I will end this inventory with the law of biodiversity. It is central to the issue of pesticides. First, this law contains defensive measures to protect the wildlife. In France, a pollinator plan has been adopted recently ; it provides for reforming the rules on the use of products during the flowering period, with a systematic risk assessment and treatment schedules. More positive measures exist also, this time to diversify plant cover: this could be an incentive or an obligation to plant hedges, trees, fallow land or flower strips, obviously untreated! We could continue the demonstration with many other legal branches. But now, we would like to discuss the various possible normative techniques.

2. 2. Species of legal instruments

These normative techniques can be top-down: coming from the public authorities to impose themselves on the actors. They can also be bottom-up: created by the actors themselves and spread. The tendency is to pit the instruments against each other, isolating the strategies : for example, prohibiting or taxing a practice. However, the instruments must be considered together. We need to understand how they fit together. At this stage, I have identified three types of interesting combinations.

2. 2. 1. Incompatible instruments?

First, there are strategies that are not easily compatible. It is the question of regulating and paying at the same time. As soon as a practice is prohibited, it can no longer be contracted. This is why certain payments are linked to the fact that the change in practice is voluntary. A payment implies additionality to existing standards. However, there's one nuance: some regulatory measures are subject to compensation for the damage suffered by the players, but this remains exceptional.

On the other hand, it doesn't seem possible to subsidise and remunerate at the same time. This is the whole problem of combining certain types of funding: for example, agri-ecological measures and payments for environmental services.

We would also say that certain ecological practices, according to international law, can only be compensated for their additional costs. The WTO agreements refuse to pay a fair price for them. The European Union has so far followed this position.

2. 2. 2. Complementary instruments

Another combination is that of complementary instruments. The idea : certain instruments used alone are not effective; they need to be combined with other measures. We will take three assumptions.

The first is risk insurance. This is an important tool, but it can lead farmers to take more risks, and therefore to increase the use of products. In this case, insurance must be coupled with appropriate regulatory measures on land use ; for example, a ban on turning over grassland, or limiting the quantity of treatment.

The second hypothesis is the reform of agricultural advice to favour alternatives. This is essential, but it must be accompanied by an insurance mechanism to cover the new risks for advisors and users. One can not go without the other.

Third hypothesis : subsidise and regulate use. It is useful to provide economic assistance to exit a practice, if we know it will be banned. These measures must be linked over time. We now have proof that subsidizing without exit prospect is expensive and ineffective. This is the difference between the withdrawal of neonicotinoids, which has already been decided, and the withdrawal of glyphosate (which is still being postponed)!

Fourth hypothesis : if pesticides are taxed in one country, it is necessary to regulate trade in products from other countries. Harmonising standards is a condition for our companies to remain competitive.

2. 2. 3. Additional instruments

The last combination is that of additional instruments. They can be used on their own, but when combined, they make public policies more effective. I will cite two possible examples.

Firstly, we can subsidise and certify. This involves making public aid conditional on a system of individual or collective certification. This encourages a systemic approach and action programmes in the territories. The same reasoning can be applied to aid for the consumption of labelled products : for example, a food voucher is given to buy products recognised as pesticide-free. It is possible to extend the rule to public procurement : we would create positive discrimination criteria for productions committed to a certified approach.

Another association could be to tax and subsidise (or tax free!). Here, the assumption is that taxation would make pesticides more expensive and that the proceeds of the tax would be allocated to alternative practices. The idea is to erase the additional cost of the tax by redistributing it to new uses that become less expensive (organic farming, biocontrol, etc.).

This presentation is far from exhaustive. There are many other possible combinations, surely more complex. For once, the objective is to offer public decision-makers a global strategy that involves all the levers, all the players and all the levels of organisation.