WEED CONTROL ON TRACKS

UIC INTERNATIONAL WORKSHOP : WHAT FUTURE FOR HERBICIDES?

SNCF RÉSEAU

ROMAIN ROBERT
24-25 MAY 2016
GENERAL SITUATION

+ 30,000 km of lines
+ 50,000 km main track
+ 12,000 km of service track
+ 95,000 ha to maintain
GENERAL SITUATION

5 types of climate
• Mountain
• Mediterranean
• Ocean
• Semi-continental
• Semi-ocean
GENERAL SITUATION

Temperatures and precipitation very variable…
… involving wide diversity of vegetation…
…and therefore severe technical constraints.

Average seasonal temperatures (1981-2010)

Annual average number of days with precipitation above 1 mm

Source : Météo France
RESOURCES

Chemical treatment of tracks and pathways: €18M per year

- Own resources: 6 national vegetation-clearing trains, 25 local trains, 22 trucks

National trains
+ Main lines
+ Direct injection
+ Up to 70 km/h
+ No handling of products
+ Pump for additive
+ Traceability
+ Currently being fitted with GPS

Regional trains
+ Branch lines
+ Direct injection
+ Up to 30 km/h
+ No handling of products
+ Traceability
+ Fitted with GPS

Trucks
+ Direct injection
+ Up to 5-6 km/h
+ No handling of products
+ Traceability
+ Fitted with GPS
RESOURCES

Products
- A single curative, total, systemic compound: glyphosate
- 3 types of products depending on the season: preventive / mixed / curative
- No alternation possible with glyphosate: further treatment possible with selective products in cases of difficulty
- Rotation of train scheduling

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**SNCF - TOTAL HERBICIDE PURCHASES 2015**
*(active components purchased in kg)*

<table>
<thead>
<tr>
<th>Selective herbicides with glyphosate (or aminotriazole) formula</th>
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<tbody>
<tr>
<td>2,4-D (DT)</td>
<td>1,120</td>
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<tr>
<td>2,4-MCPA</td>
<td>5,821</td>
</tr>
<tr>
<td>DICHLOORPROP-P (DT)</td>
<td>3,347</td>
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**Total preventive herbicides**

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<tbody>
<tr>
<td>OXYFLUORFEN</td>
<td>7,379</td>
</tr>
<tr>
<td>PENDIMETHALIN</td>
<td>4,305</td>
</tr>
<tr>
<td>DFF</td>
<td>2,047</td>
</tr>
<tr>
<td>FLAZASULFURON</td>
<td>144</td>
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**Total curative systemic herbicides**

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<tbody>
<tr>
<td>GLYPHOSATE</td>
<td>36,112</td>
</tr>
<tr>
<td>AMINOTRIAZOLE*</td>
<td>29,917</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>90,192</strong></td>
</tr>
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*Aminotriazole: final year of use, active component banned from 1 January 2016.*
REGULATIONS

Protection of water

- Water course: No-treatment zone.
- Area for groundwater ressources

471 km of rail network (line) are affected by the No-Treatment Zone (NTZ) regulations

394 km Abstraction of drinking water treatment forbidden (+10% in 2015)

Rural Code

- Operator and Decision-maker Certificates (5 years)
- Authorised products: for railway use
- Wind <19 km/h
- No rain or no rain forecast immediately after treatment
- Compliant storage
- No-access period
- Personal Protective Equipment
- Protection for sensitive sites

Average wind speed in France (km/h)

18
21,2
26,2
29,5
31,3
REGULATIONS

DEVELOPMENTS

Use of des pesticides in Non-Agricultural Zones: planned collapse of market

Unfavourable development of regulation:

- **Public bodies:** ban in January 2017 on use pesticide products (except for products of biological control, AB low-risk products) for control of vegetation in green spaces, forests, roads or areas open to or accessible by the public for recreational purposes.
  - SNCF Réseau exempt.

- Private use: open sale banned from January 2017 – ban on use from January 2019.

Chemicals for which substitution is planned (regulations 1107-2009)

- Regulation 2015-408: 3 chemicals which are present in 3 products used by SNCF Réseau.
- Comparative evaluation: substitution by other products or by non-chemical methods does not present any major economic or practical difficulties.
OUTLOOK

• **Reduction of consumption**
  - choice of products (less active ingredient, adaptation of dosage following rail trials)
  - modernisation of equipment.

• **Operator training**
  - internal training (environmental protection, health, use of equipment and herbicides) in addition to Certiphyto: **1270 hours** over two years.

• **In the company approval process**: application as a service delivery guaranteeing professionalism.

• **Partnership agreement signed with ministries** (2007 with renewal in 2013) under Ecophyto.
OUTLOOK

Over 30 years SNCF has cut its consumption by 75% (400T to 100T)
OUTLOOK

BUT...
THANK YOU FOR YOUR ATTENTION