FRENCH NATIONAL BOVINE TUBERCULOSIS ACTION PLAN

2017-2022

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MINISTÈRE
DE L'AGRICULTURE
ET DE
L'ALIMENTATION

This national bovine tuberculosis control plan has been developed in conjunction with all stakeholders in prevention, surveillance and control of the disease in France. As such, CNOPSAV* (French national council for the orientation of animal and plant sanitary policy) on animal health, along with ADILVA, FNC, ONCFS and Races de France, have validated the plan and are committed to promoting and applying the actions for which it provides. Its stated goal is eradication.

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* The members of CNOPSAV are: ALLICE, APCA, ACTA, CNOV, Coop de France, Coordination Rurale, Confédération Paysanne, FFCB, FNSEA, FSVF, GDS France, SNGTV, SIMV, SNIA and CNPA.

France was officially declared free of bovine tuberculosis in 2001. However, the disease still exists on our national territory and in the mid-2000s, there was an unexpected increase in the number of outbreaks on livestock farms, particularly in the Côte-d'Or (eastern France) and southwestern France.

Two national action plans were rolled out in 2010 and 2012. They ultimately enabled France to retain its disease-free status but problems remain with regard to successful eradication of the disease and ensuring that the intense involvement of the various stakeholders is maintained over the long term.

Specifically, it can be seen to be imperative to step up efforts to enhance the quality of screening and to develop biosecurity to counter the various risk factors identified at the present time (pasturage adjacent to or sharing a watering point with an infected farm, sales of infected livestock, wild fauna, etc.). These efforts go hand in hand with appropriate financial measures.

It is in this context that this third national bovine tuberculosis control plan lists the actions identified as having priority. Additionally, it provides an opportunity to promote the actions taken in France when reviewing the European regulations in connection with the animal health law (regulation 2016/429).

GENERAL BACKGROUND

The issues for the sector

Bovine tuberculosis (bTB) is an infectious zoonotic disease of which the main pathogen is a bacterium, *Mycobacterium bovis*. It mainly affects cattle, with a secondary target in various domesticated and wild mammals. The disease develops slowly and may have a complex cycle involving multiple hosts. It is included in the list of diseases published by the World Organisation for Animal Health (OIE) and is subject to safeguards on movements of vulnerable livestock and reproductive materials (sperm, eggs, embryos). bTB is classified as a Category 1 health hazard in France[1].

The core issue with regard to control of bTB around the world is first and foremost one of public health, the aim being to reduce the risk of human infection. An international roadmap for the priorities related to zoonotic tuberculosis for 2020 and 2025 was published in 2017 by the WHO, OIE, FAO and the International Union Against Tuberculosis and Lung Disease[2]. In France this zoonotic disease has become, and remains, extremely rare in human subjects due to the fact that exposure to bovine sources is now very low (low prevalence on livestock farms, milk pasteurisation, rarity of infective contact with infected animals, etc.).

In France, the dominant factor today is the economic impact of the disease on the actors involved in the cattle farming industry. Acquisition of official disease-free status in 2001 has facilitated and is in fact a condition for trade in livestock and animal products both in Europe and internationally. Retention of that status is a key parameter for the competitiveness of French cattle farming. Management of bTB currently costs nearly €22.3 million every year, €18.6m of which is borne by central government and €3.7m by farmers[3].

Disease-free status under threat

Without going so far – up to now - as to question the officially bTB-free status of France, the disease is unfortunately persistent or has re-emerged in a number of regions (Côte d'Or in eastern France, the southwest, Camargue in southern France, Corsica, the Ardennes in northern France and Normandy). In 2010, a national action plan was rolled out and revised in 2012 following the recommendations of a European audit (by the FVO):

- surveillance on farms has been significantly reinforced in affected regions ;
- innovative screening and diagnostic tools have been developed ;
- the constraints on livestock farms have been loosened when permitted by EU regulations where their equivalent sanitary effectiveness has been demonstrated, the aim being to increase the acceptability of the control measures (management of suspected cases adjusted to match level of risk, total culling made non-systematic, and so on).

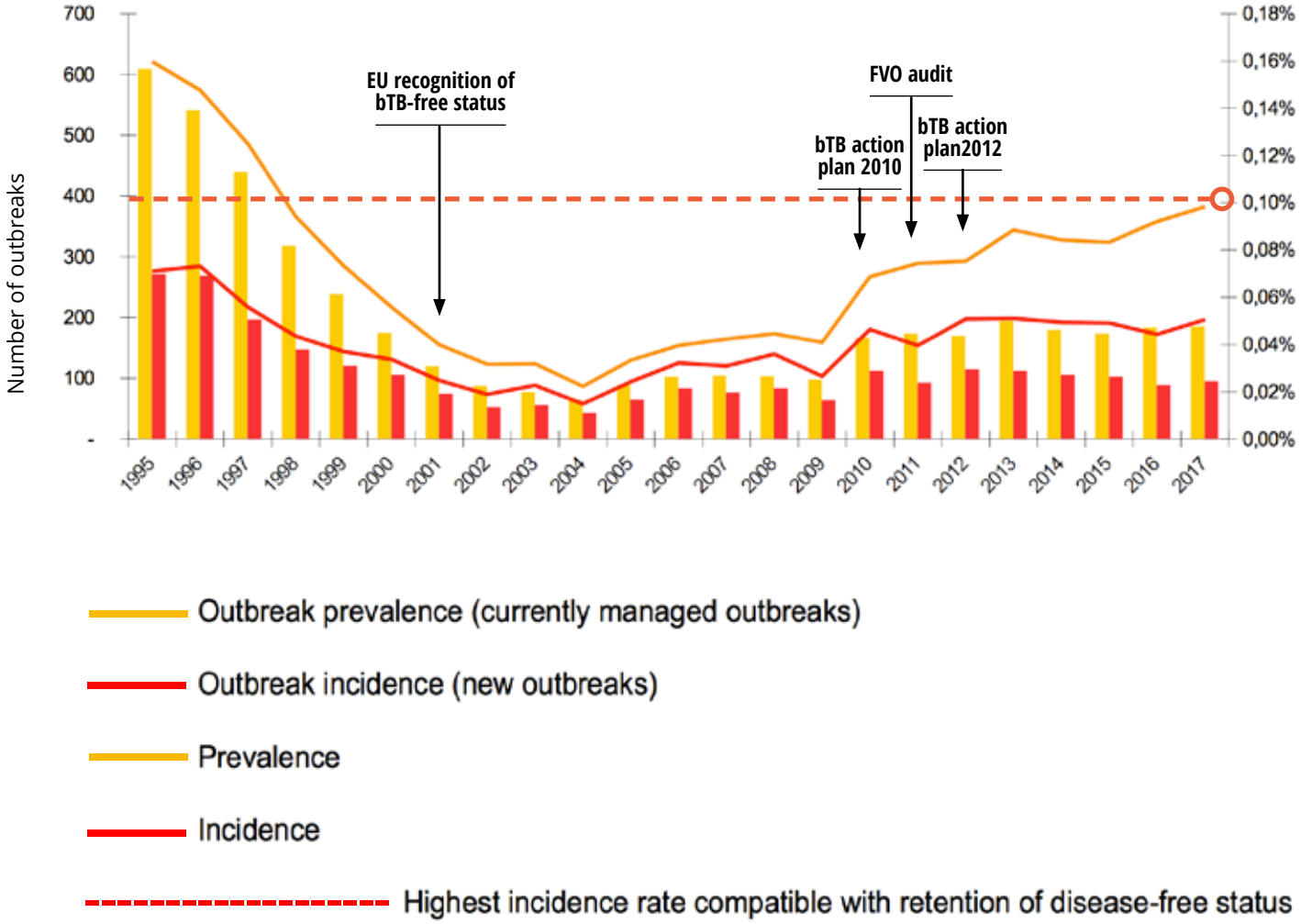
The number of herds infected each year has levelled out and most are now detected at an early stage, i.e. on the farm rather than at the slaughterhouse (30% of outbreaks were discovered at slaughter in 2017 compared with 75% in 2000). Nevertheless, the situation in some regions remains worrying, especially in Nouvelle-Aquitaine in the southwest, an area where a rising percentage of France's outbreaks are found (up to 86% in 2017).

1 https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000027831750&categorieLien=id
2 http://www.who.int/tb/publications/2017/zoonotic_TB/en/
3 Viviane Hénaux, David Ngwa-Mbot, Sophie Memeteau, Anne Touratier, Anne Bronner, Didier Calavas. "Première estimation des coûts vétérinaires et de laboratoire de la surveillance et de la lutte vis-à-vis des maladies réglementées chez les ruminants en France en 2014" [An initial estimate of the veterinary and laboratory costs of surveillance and control of regulated diseases in ruminants in France in 2014]. Bulletin épidémiologique, santé animale et alimentation, no. 79, July 2017 http://bulletinepidemiologique.mag.anses.fr/sites/default/files/M-048_2017-08-11_cout-surv-MR_final.pdf

In addition to the complex epidemiology of bTB and the limited effectiveness of the diagnostic tools, a number of explanations can be put forward, the main ones being :

- continuing difficulties in implementing on-farm screening compliant with regulatory requirements, leading to delays in detecting outbreaks in some cases ;
- inadequate and sometimes complicated implementation of biosecurity measures to protect farms against the various known risk factors (pasturage adjacent to or sharing a watering point with an infected farm; presence of the disease in wild fauna and the environment near infected farms, and so on) ;
- a lack of human and material resources dedicated to leadership, guidance, control and implementation of surveillance, prevention and control programmes.

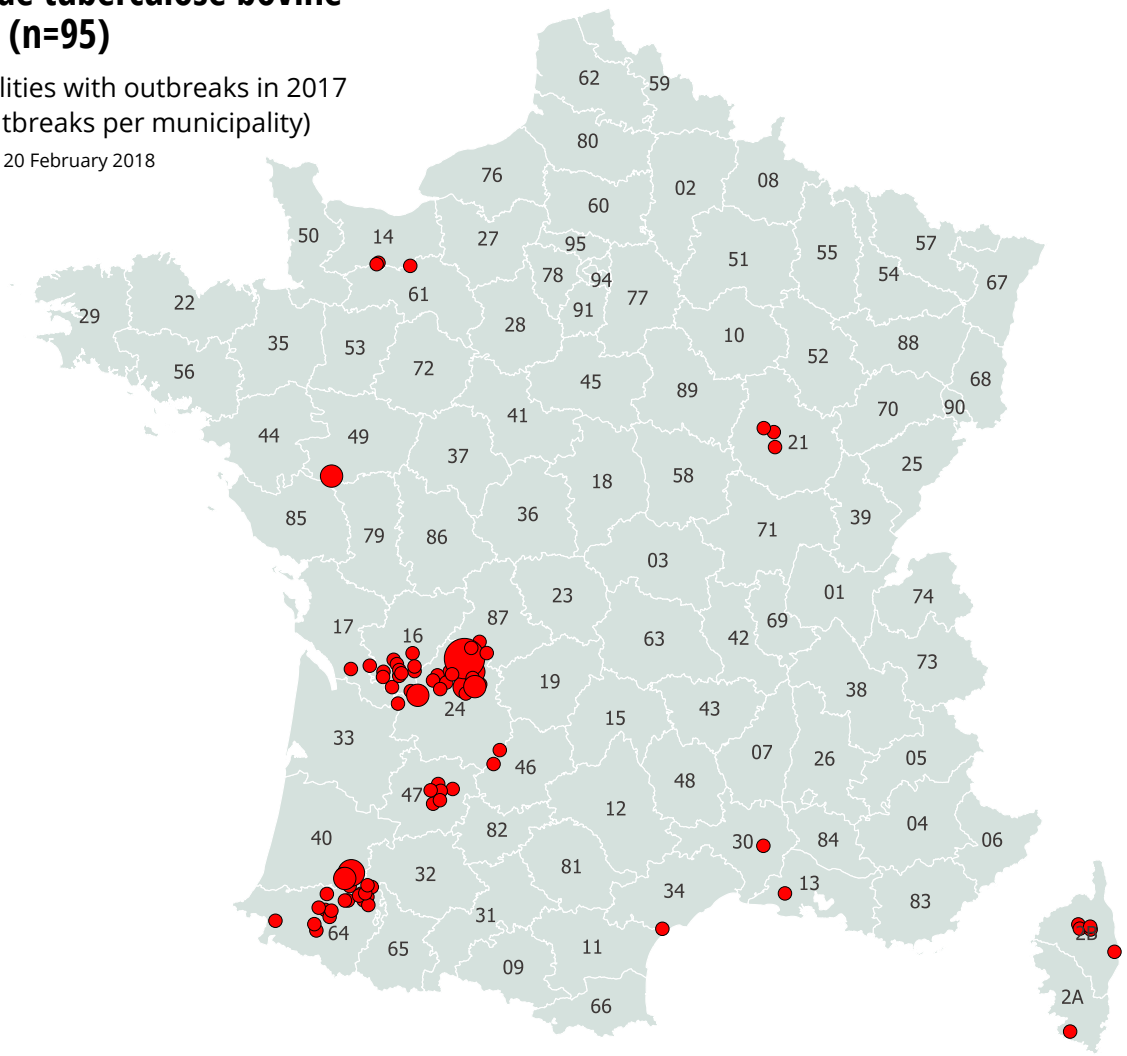
Changing levels of annual incidence and prevalence of bovine tuberculosis in France since 1995 and principal significant events



Foyers de tuberculose bovine in 2017 (n=95)

Municipalities with outbreaks in 2017
(1 to 8 outbreaks per municipality)

Last updated 20 February 2018



The need for reaffirmation of a proactive health strategy

Previous plans for the control of bovine tuberculosis have revealed the necessity of control measures to match differing epidemiological and livestock farming contexts at cost levels acceptable for all stakeholders.

This third national bovine tuberculosis control plan for the period 2017-2022 **supports the objective of ultimate eradication by reinforcing the surveillance, biosecurity, control and management measures and adapting them to differing regional contexts**.

The plan grew out of collective consideration of the issues beginning in 2015 in conjunction with stakeholders, central government departments for livestock farming and the environment in addition to discussions in CNOPSAV (French national council for the orientation of animal and plant sanitary policy).

The need for all actors to take responsibility – example of on-farm screening

If tuberculosis is to be controlled effectively certain **preconditions** need to be met, most notably by the following :

- livestock farmers, who **must ensure effective livestock restraint** to allow screening to be carried out as necessary for disease control and as defined by regulations ;
- veterinarians, who must carry out the procedures with which they have been tasked or for which they are officially approved or mandated, **in compliance with the instructions in force** ;
- central government, by providing the resources necessary for the **management** of the programme and **oversight** of the enforcement of the regulations.

OBJECTIVES AND ACTIONS

OBJECTIVE 1
To adapt the ways and means to the challenge of bTB eradication

The process for decision-making and expert evaluation must be reaffirmed by restating the position of the various actors and organisations and by bringing dedicated human resources at every level: in France's General Food Directorate and decentralised agencies, the French platform for epidemiological surveillance in animal health (ESA) and ANSES (French Agency for Food, Environmental and Occupational Health & Safety) in its activities for risk evaluation, reference and expert assessment. Since early 2017 additional human resources have been deployed, including five full-time posts (FTE) in government administration at national and regional levels, along with 15 FTEs in the territorial *départements* most affected in the Nouvelle-Aquitaine region.

ACTION n° 1 : Monitoring the implementation of the action plan in CNOPSAV and more technically oriented collective bodies (biosecurity working groups, the monitoring group for surveillance of bovine tuberculosis and Sylvatub in the ESA platform, among others) with a view to revising or ranking planned actions to match actual outcomes.

ACTION n° 2 : Financial support for research projects potentially contributing to improving the procedures for screening for bovine tuberculosis and controlling the disease on farms and in wild fauna.

ACTION n° 3 : Definition of a programme of submissions to ANSES over the next three years aimed at evaluating the steps taken.

ACTION n° 4 : Reinforcement and mobilisation of human resources in central government departments, the ESA platform and partner organisations in order to implement this action plan and conduct disease control activities at the national, regional and département levels.

ACTION n° 5 : Support for managers and actors on the ground through training programmes directed at maintaining high levels of knowledge and awareness of the methods for surveillance, control and prevention of the disease.

ACTION n° 6 : Development and updating of communication materials on the steps taken, the aim being to give all stakeholders the information they need for critical analysis of the situation (ANSES/General Food Directorate annual epidemiological bulletin, ESA platform website, Ministry of Agriculture website, etc.).

ACTION n° 7 : Finalisation of the implementation, in conjunction with the Ministry of Health, of a protocol for communication and, where applicable, care of cases of human exposure.

OBJECTIVE 2
To make surveillance more effective

Early screening is essential for bTB prevention. It allows to reduce the massive consequences of management of an outbreak and possible secondary infections.

Surveillance of domestic livestock is based on a systematic check for lesions at the slaughterhouse during the post-mortem inspection, combined with livestock screening using an intradermal tuberculin test (ITT) in livestock farming areas and for movements presenting a risk. Surveillance for the disease in wild fauna has been provided by the SYLVATUB programme since 2011 for three target species – deer, wild boar and badgers – involving an initial examination of wild game and autopsies on animals found dead. This programme is backed by

scheduled surveillance procedures in certain geographical areas at risk, targeting the above three species.

Some conclusions reached in the evaluation based on the OASIS method carried out in 2011[4] are still valid, such as those pointing to the limitations of the screening tools and the lack of acceptability of the protocols for management of suspected cases imposed by EU regulations. The diagnostic tools are limited in sensitivity and specificity, limitations magnified firstly by poor practical application and secondly by the low prevalence of the disease, resulting in fact in a not-insignificant number of detections of suspected cases due to forbe positive.

Use will be made of the French platform for epidemiological surveillance in animal health (ESA) to improve the effectiveness and efficiency of surveillance and, if necessary, to carry out a further evaluation of the programme using the OASIS method.

Beginning in 2017, in southwestern France a more demanding screening programme was imposed in conjunction with both technical and financial support.

The reason for this was that discussions with those concerned on the ground in the area revealed difficulties in executing the single intradermal tuberculin test (SIT) in accordance with current instructions, an observation supported by the excessively low percentage of non-negative tests of this kind compared with the expected level for this technique, which offers high sensitivity but limited specificity.

Where the comparative intradermal tuberculin test (CITT) is concerned, this offers two advantages: firstly, it enhances the specificity of the test without seriously compromising its sensitivity, thus reducing the number of false positives, thereby improving the acceptability of screening for cattle farmers and, secondly, its use requires greater care than SIT (given that execution of the test and interpretation of the result must be conducted objectively using a cutimeter) plus very effective restraint of the animal for what is a demanding veterinary procedure.

The result has been a doubling of the percentage of declarations of non-negative results in geographical areas where SIT has been abandoned and replaced by CITT.

This outcome has led to an extension of the use of CITT in order to ensure more effective detection of suspected cases of the disease. An exceptional programme of financial support from central government amounting to over €3 million for the 2017-2018 season was rolled out.

ACTION n° 8 : A re-evaluation and adjustment of surveillance protocols (geographical areas, livestock categories, frequency, type of testing) in order to optimise the performance of the programme with regard to domestic species on livestock farms as well as at slaughterhouses and in wild fauna.

ACTION n° 9 : Changes to the EU regulatory framework in order to provide equivalent, if not better sanitary safeguards for commerce, notably by allowing use of the bovine gamma interferon assay to facilitate management of suspected cases.

ACTION n° 10 : Modernisation of data collection and analysis within the ESA platform framework.

ACTION n° 11 : Improvement of the epidemiological survey programme and its monitoring in order to make it more efficient and allow its lessons to be put to good use.

ACTION n° 12 : Revision of the screening funding system for enhanced fairness.

OBJECTIVE 3
To develop biosecurity measures on cattle farms

Today, biosecurity on livestock farms is a tool impossible to ignore in the wake of recent epizootics (HPAI, Bluetongue) and now provides a response to the strategy of the European Union: “prevention is better than cure” (European regulation 2016/429).

A recent study highlights the main risk factors for farms with outbreaks of bTB in France in the years 2012-2014: points of contact on pasturage with a neighbouring holding infected with bTB (e.g. fencing making such contact possible, a shared watering point) and significant distance between

4 Sébastien Gorecki, Didier Calavas, Alexandre Fediaevsky, Fabrice Chevalier, Pascal Hendrikx. “Évaluation du dispositif national de surveillance épidémiologique de la tuberculose bovine en France à l’aide de la méthode OASIS” [An evaluation of the national bovine tuberculosis surveillance programme in France using the OASIS method], Bulletin épidémiologique, santé animale et alimentation no. 51, June 2012

farm livestock housing and feed storage and populated areas, possibly allowing a greater presence of wild fauna.
A strategy of gradual improvement of the control of such risk factors will be developed in partnership with stakeholders and scientific experts. If those efforts are not to be undermined, it will also be necessary to control activities linked to wild fauna.

ACTION n° 13 : A national working group will draw up a guide to good practice to match bTB risk factors on cattle farms, based on current knowledge and field experience.

ACTION n° 14 : Promotion of the adoption of biosecurity measures through communication actions, initial or continuous training, and even financial support.

ACTION n° 15 : Identification of cattle farm biosecurity measures it would be appropriate to impose by regulation where applicable.

ACTION n° 16 : Evaluation of the efficacy of the biosecurity measures implemented and monitoring their observance on the ground.

OBJECTIVE 4
To obtain a high level of certainty for disease clearance in infected areas

Bovine tuberculosis is known to be a disease that develops slowly and silently at the beginning of the infection. The mycobacterium is also capable of surviving in certain favourable ecosystems. In addition, wild fauna and the environment can act as bridge hosts for the infection of farms. Cattle are the main reservoir for bTB, which means that the disease can be maintained in that species if no action is taken. In some European areas with specific conditions relating to ecology, game hunting and epidemiology (density, baiting, etc.) it has been demonstrated that wild boar and badgers have become reservoirs for the disease.

In France, the forest of Brotonne (Seine-Maritime) is the only case in which wild fauna has been identified as a reservoir for tuberculosis (submission to ANSES 2010-SA-0154). Elsewhere, recurrent detection of tuberculosis in wild fauna occurs only in areas where domestic livestock farms are infected and with the same strains, leading to the supposition that wild animals have a role as sentinel, or even intermediate hosts for the disease.

In order to avoid the creation of true disease reservoirs, ANSES has recommended in areas where outbreaks are regularly detected on farms and in badgers – and exclusively in such contexts – that the latter should be culled to a radius of one or even two kilometres. Alongside this, ANSES recommends application of a buffer zone out to approximately 5km in which badgers are subject to heightened surveillance in order to verify that the disease has not been spread as a consequence of the disruption caused. Lastly, reinforcement of biosecurity measures on livestock farms is key to breaking the epidemiological cycle involving wild fauna (cf. Objective #3). No additional slaughter of badgers or destruction of their setts is recommended in areas where there is no tuberculosis in wild fauna.

Now that infection on farms is addressed more and more frequently using selective slaughter since its reauthorisation in 2014, clearance of outbreaks must be carried out with very great care to ensure that each holding is able to resume its activities in favourable epidemiological circumstances.

ACTION n° 17 : Evaluation of the conditions in which the derogated disease clearance protocol based on a partial cull is able to guarantee both sanitary effectiveness and acceptability for farmers.

ACTION n° 18 : Proposal of guidelines for cleansing, disinfection and livestock depopulation on sanitary grounds.

ACTION n° 19 : Consolidation of the outbreak compensation scheme.

ACTION n° 20 : Application of integrated disease control where tuberculosis is also present in wild fauna and the environment, based on an evaluation of the efficacy of past programmes in France and in our European neighbouring countries.

ACTION n° 21 : Implementation of good game hunting practice compatible with bTB risk (e.g. handling of by-products) and ensuring adherence to it.

ACTION n° 22 : Support for research directed at development of tools for medical prophylaxis (vaccination) intended for wild fauna[5].

5 .The lead-times intrinsic to such research will produce tools available for use only several years in the future.

French General Directorate for Food
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