

Electronic inspection reports in the Netherlands. Efficient and uniform data transfer of performed inspections to the owner of the sprayer and the supervising organization.

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Summary

Uniform good readable test-reports, easy collecting of the data of all performed tests, creating reliable statistics and saving labor for both the supervising organization and the workshops what perform inspections of sprayers are the key elements in the web-based application SKL has developed. Since the start in 2003 the system evolves to a user-friendly, complete and reliable application for both the workshops and SKL as supervising organization. Since 2008 all information between the workshops and SKL goes via the application.

Introduction

In the Netherlands SKL is responsible for the organization of the inspection of sprayers. The inspections are done by a network of recognized workshops. In these workshops the inspections are performed by certified test-operators. The test-operators evaluate the sprayers of the farmers according to a uniform test protocol. The results of the tests are filled in on a uniform test-report. If a sprayer is approved, a sticker with a unique number is placed on the machine. This number is also mentioned on the test-report. The farmer will get a complete filled in and signed test-report after the inspection.

Past situation

From the start of the inspection scheme in the Netherlands SKL supplied the workshops with blank inspection forms. The test-operators filled in the results of the inspections on the inspection report and handed it over to the owner of the sprayer. A copy of each inspection report was send to SKL. SKL entered the data of the test-reports in a central database.

This system had some disadvantages:

- Double labor, all inspection reports must be filled in by hand by the inspector and the data was entered in a database again by the SKL organization.
- Not complete or unreadable inspection-reports. Not all inspectors filled in the inspection reports completely and not all inspectors had good hand writing skills.
- Extra costs for workshops: Purchase blank inspection reports and mail costs for sending the copies to SKL.

Objectives to create new solution.

In 2003 SKL has started with the development of an electronic version of the test-reports. The objectives were:

- More quality:
 - Uniform test-reports, no problems with different versions of test-reports.
 - All test-report are complete filled in, it is not longer possible that test-operators forget to fill-in some parts.
 - Good readable test-reports on A4 format, no more problems with unreadable handwritten test-reports on A3 format.

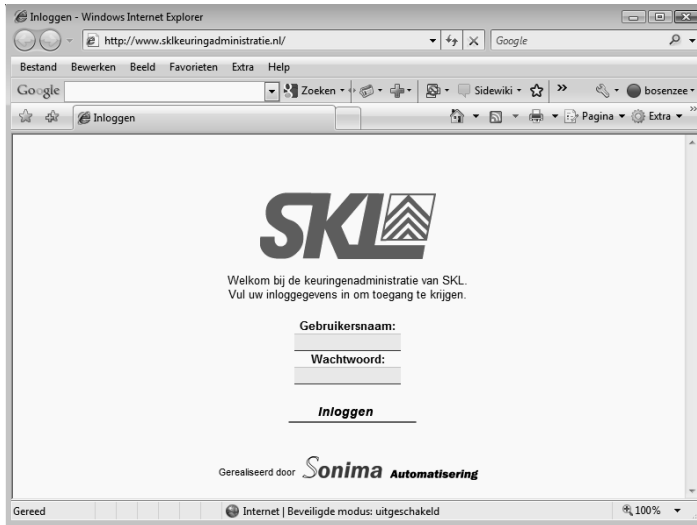
- More efficiency
 - Workshops.
 - Use of data (address owner, data of sprayers) from previous tests.
 - Build-in tools (nozzle library, calculator, etc) which makes it easier and faster for the test-operator.
 - All historical test-reports are always available.
 - All data from owners of sprayers is available to send invitations to their customers for the next inspection.
 - It must be possible to use the system both on-line and off-line on testing sites where no internet connection is available.
 - SKL
 - No labor needed for entering the data in the database.
 - Direct communication with test-stations.
 - Entering the database from every location.
 - Creating reliable, real-time statistics about number of inspected sprayers, needed repairs, etc.
 - One system for both the communication with the workshops and the internal administration.
- Safer data-storage
 - All data is stored in a central database which is hosted by a professional hosting company.

Developed system

With these objectives in mind a system was developed. The system exists of a central database where both SKL and the workshops have admission to. SKL has admission to all data and the workshops only have admission to their own data. The best solution was to develop a web-based solution. With this solution there are no problems with distribution of software to the workshops, no problems with different versions and no problems with data-transfer. For the use on test-sites where no internet connection available is and the use of the web-based application not possible is, an off-line version is developed. Workshop can download this off-line application from the SKL website on their own computer. With this application they can create test-reports and print it out for the farmers. When they have an internet connection it is possible to transfer the data to the central database.

Workshops enter the application via the SKL website, after entering their username and password they enter in their own area.





In this environment the workshops have the following possibilities:

SKL Stichting Kwaliteitseisen Landbouwtechniek
Keuringenadministratie voor Opleiding keurmeesters PTC+ Ede (999)

Home Keuringen melden Nieuwe keuring Keuringen Stickers Mijn station Mobiel keuren Help Uittloggen

Welkom

Nieuw U bent

Announcing of inspections

Entering new inspection report

Overview all performed inspections

Overview labels, ordering labels

Overview data test-operators, testing equipment, standards, etc

Download off-line application

Download manual

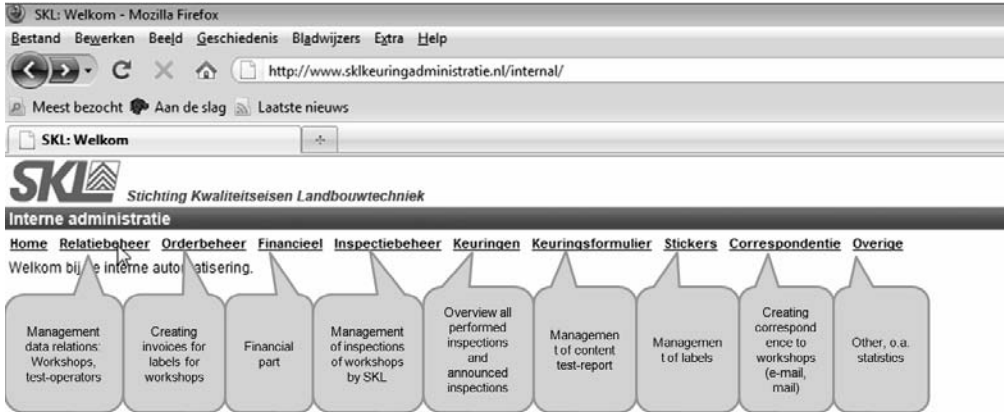
Opleiding keurmeesters PTC+ Ede
 Postbus 32
 6710AA EDE
Gecertificeerd voor het keuren van:
 - Boomgaardspuiten
 - Motorvatspuit-keuring
 - Veldspuiten

Welkom op uw gedeelte van de elektronische SKL keuringsadministratie. Hier kunt u de volledige administratie rondom de uitvoering van de keuringen uitvoeren.

Recent zijn een aantal wijzigingen uitgevoerd.

- U heeft via 'Mijn station' inzage in de bij uw station geregistreerde keurmeesters en testapparatuur. Verder kunt u hier de meest actuele werkvoorschriften bekijken.
- Via 'Help' kunt u een handleiding voor deze applicatie bekijken
- Het scherm 'Nieuwe keuringen' is aangepast, hier het nummer van de vorige keuring invullen om een nieuwe keuring in te voeren.

SKL as supervising organization has the following possibilities:



Conclusion

The system is operational since 2005 and is obligatory to use for the workshops since 2008. All workshops and test-operators are positive. They save on administrative time and costs and have a better view on the inspections they performed. The owners of sprayers get a clearly readable and completely filled in inspection report on A4 format.

The results for SKL are also positive because of:

- Savings on labor
- A better overview on results of inspections
- Improved quality of testing reports

A demonstration system is available on: www.sprayer-inspections.com, ask SKL for a user name and password.

Acknowledgements

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Sprayer-Testing - Electronic analysis of the test reports

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Inspection with electronic measuring devices

Preparation of Test Report automatically.

Optional Software for Analysis.

Current State in Bavaria.

Possible Alternative Option:

- Herbst Electronic Analysis Software on a central computer.
- Data transfer from the test computer to the central computer at the end of the work via internet.
- Different access rights to the data for the different users: checkpoint, official agency, Federal State, BBA.