

Feiffer LMS-Profi kit:

An inspector calls

The accurate monitoring of grain loss is a cornerstone to good combine harvester operation. Feiffer has produced a kit that should interest dealers, as it can be used with any brand or size of machine

Inspector Loss is on his way. One man can carry and use Feiffer's Loss Monitoring System.



The LMS kit has two remotely operated tray release units (in case, left), a battery-powered separator (top) and three collecting trays.

Accurately measuring loss – as opposed to scratching about in the stubble and taking an educated guess – is a big step towards good combine set-up. One way to do it is to use something along the lines of Feiffer Consult's Grain Tablet, which we looked at in last month's issue. Along with its companion app and optional automatic tray placement system, we found that it works pretty well.

While a Grain Tablet or similar may be fine for farms with one combine, dealers or specialists have a slightly different situation when it comes to setting up a new machine or quantifying unexpectedly high losses from an existing one – as not many combines come with even a basic collection tray kit. In these cases, a lot of faff can be avoided if the extent and location of loss can be found in one or two passes ... which is where Feiffer's new LMS-Profi system comes in. LMS stands for Loss Measuring System – who would have guessed it? The complete kit contains various bits: two tray-release units each based around a battery-powered, remotely operated electromagnet; a key fob trigger to operate the electromagnets; three collector trays; electronic scales and a battery-powered separator. All but the trays and separator slip into a decent plastic case.

Fitting the trays to a combine doesn't take long. A magnetic tray release unit goes on the back of the header, off to one side of the feed elevator. A second tray release goes under the feed elevator's trunking, again attached by bracket and a permanent magnet.

PLUS AND MINUS

- Quickly fitted to any combine
- Measures losses across the full working or swath width
- A smartphone app uses a range of data to quantify and present loss in different ways
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- Collection trays are breakable
- Permanent magnets used to attach tray droppers should be stronger
- Chaff can collect on the separator's internal screen (equipment now modified, says the maker)

Depending on the combine, finding space between the trunking's stiffeners for the large collection tray can be a problem; Feiffer says an adaptor to counter this is on its way. In use, a separate electromagnet on the tray release units is armed by flicking a switch; then a collecting tray is positioned on each. Once the combine is at normal working speed in a representative area of crop, the trays are released remotely using the key fob, falling into the stubble ready to collect material as the machine goes over them. The third tray is placed manually behind the header as the combine passes. If needs be, collection can be centred on the swath by siting one or more release units towards the rear of the combine. The whole operation can be carried out safely by one person and allows measurement across the combine's full working width – watch it in action at bit.ly/lmsprofi.



Steps to measurement, left to right: Pour chaff and grain from the trays into the battery-driven separator; use it to winnow chaff; and then weigh the remaining grain. Fan speed is adjustable to suit the crop. The unit's handle and screen have now been changed to make them more user-friendly.



With samples collected, the next step is to get rid of chaff in the trays. After discarding the bigger bits of straw the rest goes into the kit's separator. This sizeable unit has a motor, fan and screen and is powered by rechargeable or replaceable batteries. The fan makes a good job of winnowing, with the small drawback that some chaff can be sucked back through the fan's air intakes and so end up on the wrong side of the screen. Feiffer says this will be sorted by making the screen removable, along with a re-jig of the handle so the unit is easier to hold.

Assessment of loss comes via Feiffer's LMS smartphone app. This is free and comes in iOS and Android flavours. On firing it up the user enters basic combine parameters like

A permanent magnet attaches one tray release unit to the back of the header (above) and another under the elevator trunking. A separate, switchable electromagnet on each release unit holds a collecting tray and is triggered remotely to drop it. The header bracket is to be made smaller.

header/elevator width and whether a straw chopper/spreader is in use. Next comes crop info. Twelve species are catered for – wheat, rye, winter barley, spring barley, triticale, oats, OSR, soya beans, peas, field beans and rice, the last presumably handy in a particularly wet autumn. You can also add the crop's 1000-grain weight if known. Last in is the actual weight of seed in each tray, and here the routine for finding it differs from the simpler Grain Tablet. Its collecting trays carry graduations, which are used to judge sample weight, whereas the bigger trays of the LMS don't – instead you simply use the kit's scales.

The app then digests all this data and presents the loss results in various ways, including cost/ha if you knew and had entered the expected selling price of the crop.



The release solenoids run off battery power, so you need to remember to switch them off after use.

Summary: Quick, easy attachment to any size or brand of combine should mean Feiffer's LMS kit appeals to dealers and service engineers. Remotely released collecting trays are fitted behind the header or at the rear of the machine, allowing one person to check losses across the machine's full working width (or just in the swath) safely while the combine is in normal work. A smartphone app then expresses measured loss in various ways. A complete LMS-Profi kit costs €1,990 before delivery and VAT, or a version with one tray release unit is offered at €1,290. There is no UK importer, so ordering is online from the maker.

Hubert Wilmer



Feiffer's LMS app quantifies loss after measurement. It's easy to use and accurate if fed good data. Future updates will apparently allow simultaneous loss calculation from multiple trays.