SMSVAGA

patented

SMSVAGA INDIKATOR PORTAL

User manual

The portal shows what is happening at your apiary while you are not there: how much the colony is bringing in, what the weather is doing, whether the device is alive and whether the hive is still where you left it.

The manual goes through every screen in turn and explains what each figure means. The illustrations are screenshots of the real portal; the numbers in them come from one particular scale and yours will differ.

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portal.smsvaga.com

OPTICAL d.o.o. · Kruševac · smsvaga.com

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1. What the SMSVaga Indikator portal is

SMSVaga Indikator is a scale that sits under the hive and sends its measurements on its own, over the mobile network. The portal at portal.smsvaga.com is where those measurements are read from a computer.

Everything the portal shows comes from the scales — nothing is entered by hand. Only a handful of settings are yours: the scale name, the TARE, the cut-off hours, the alert limits and the movement protection.

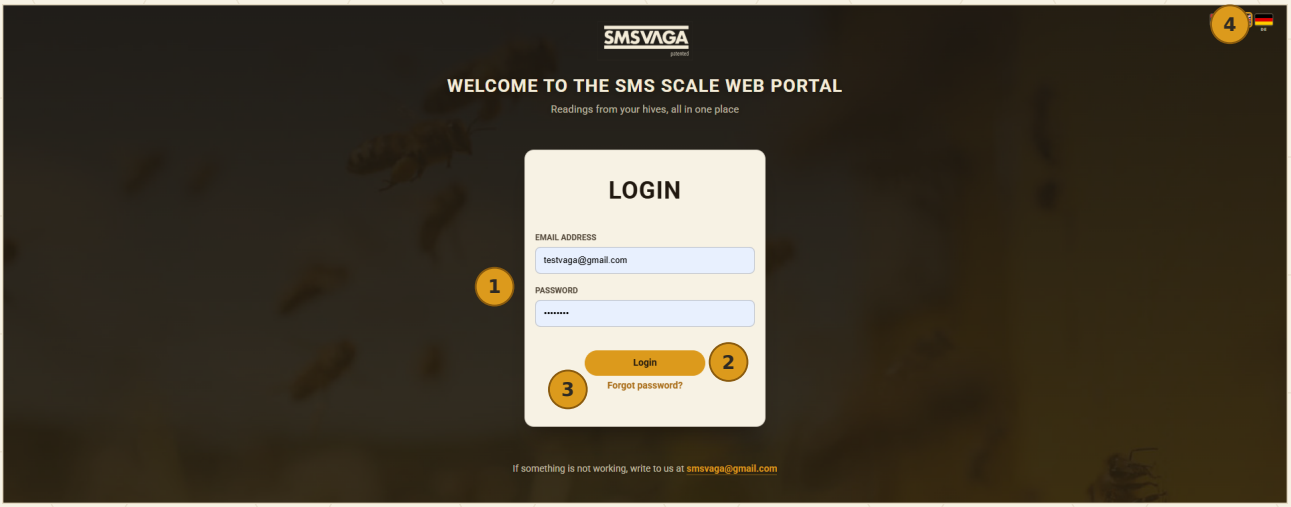
The same account and the same data apply in the mobile app. What you change here is visible there, and the other way round.

> The portal does not command the scale directly. The scale calls the server at its own pace, and instructions wait for its next report. That is why a change you send may take a few minutes to take effect.

2. Signing in

Open portal.smsvaga.com and enter the email address and password of your SMSVaga Indikator account. These are the same details you use in the mobile app.

The sign-in page



1. The email address and password of your account.
2. Sign in — enters the portal.
3. Forgotten password — sends a message with a link for setting a new one.
4. Language of the sign-in page: Serbian, English and German.

Forgotten password — the link below the password field. You enter your email and a message arrives with a link for setting a new one.

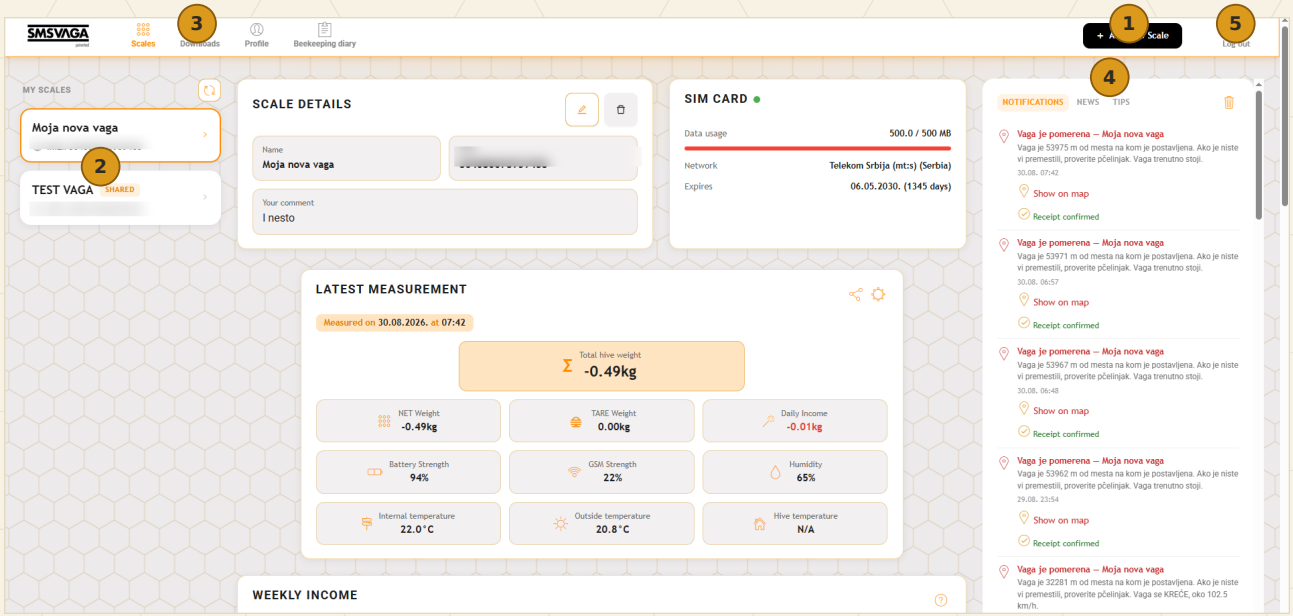
No account yet — you create the account yourself when activating the scale you received, through the app on your phone. If you still have trouble, get in touch with us.

Language — changed after signing in, under Profile → Language. The choice is remembered with the account. English and German are also available on the sign-in page.

3. The home page

After you sign in, the portal opens the home page. It is divided into three parts and everything is in one place — there is no entering and leaving individual scales.

The home page



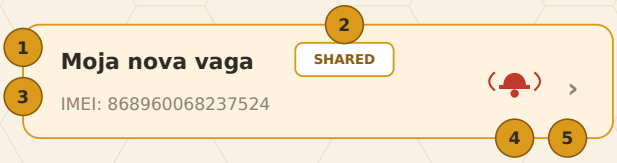
1. Add new scale — adds a scale to your account.
2. The list of scales. The selected one is framed; clicking another changes the whole display on the right.
3. The top bar: Scales, Downloads, Profile and Beekeeping diary.
4. Alerts for the selected scale, with the News and Tips tabs.
5. Sign out — ends your session on the portal.

> On a narrower screen, below roughly 1800 points of width, the alerts column moves below the data instead of standing beside it. The data are the same, only laid out differently.

4. The list of scales

Every scale has its own card. On it are the name, the IMEI number and, when something is wrong, a bell.

A scale card in the list



1. The scale name. Changed with the pencil in the Scale details box.
2. The SHARED mark — a scale someone has given you access to, since only the owner changes its settings.
3. IMEI — the fifteen-digit number of the device. The scale is identified by it, and it is what we ask for when you report a fault.
4. The alert bell. It stays until you confirm receipt of the alert, and also for as long as the alert lasts.
5. The arrow — opens the measurements and data of that scale.

Bell colour	What it means	How urgent
Red	The scale has been moved — it has left the spot it was locked to	At once. An hour makes the difference.
Orange	A sudden loss of weight	Today. It may be theft, but also swarming, a super falling over, or extraction.
No bell	No alerts	—

The bell disappears only when you press Receipt confirmed in the alert. Confirming means “I have seen it” — it does not mean the problem is solved.

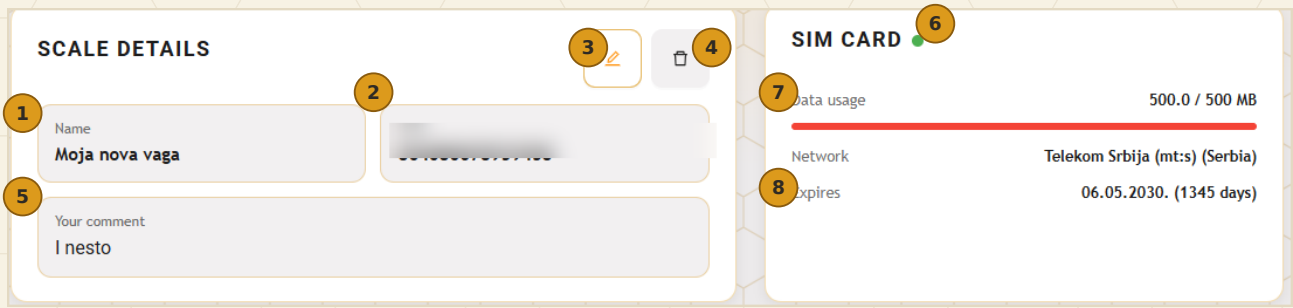
Add new scale — the button in the top bar. You type in the fifteen-digit IMEI printed on the device.

Scale not found — the IMEI was copied wrongly, the scale is already on someone's account, or it is not set up to send data to the portal. Read the message you get. If it happens again, get in touch with us.

Refresh — the circular arrow at the top of the list reloads the measurements of all your scales.

5. Scale details and the SIM card

Scale details and the SIM card

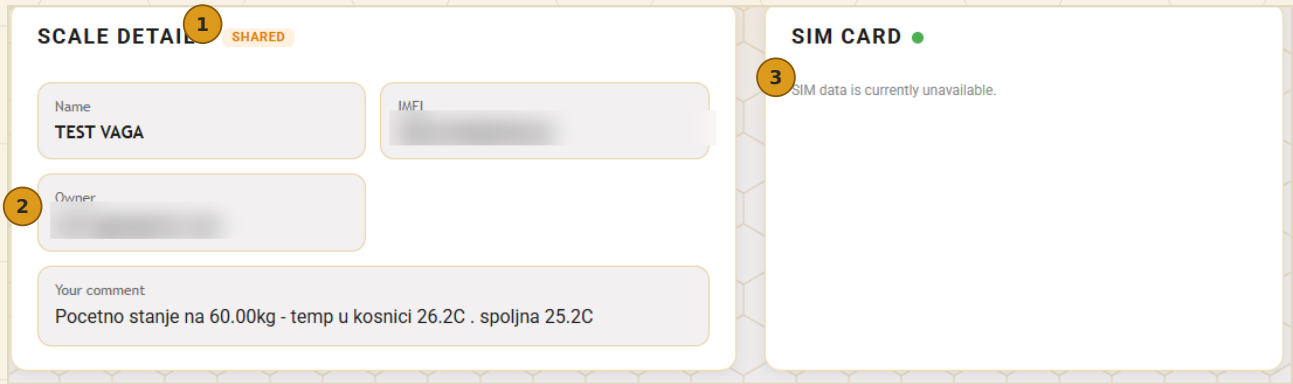


1. The scale name — your own name for it.
2. The IMEI of the device.
3. The pencil — opens the Name and Comment for editing. A shared scale does not have it.
4. The bin — removes the scale from your account. The measurements remain and the scale can be added again.
5. Comment — your own note about the scale.
6. The dot beside the SIM card: green when the scale has reported in the last three hours, amber when it has been silent for three to nine hours, red when it has been silent for longer than nine hours.
7. Data usage, with a bar showing how much of the allowance has been used.
8. How long the subscription is paid up for and how many days are left.

On a scale someone has shared with you there is also Owner — the email of the account it was shared from.

> When the SIM subscription expires, the scale stops sending measurements even though it is sound and fully charged. That is why the number of days is worth a look before the main flow begins.

A shared scale



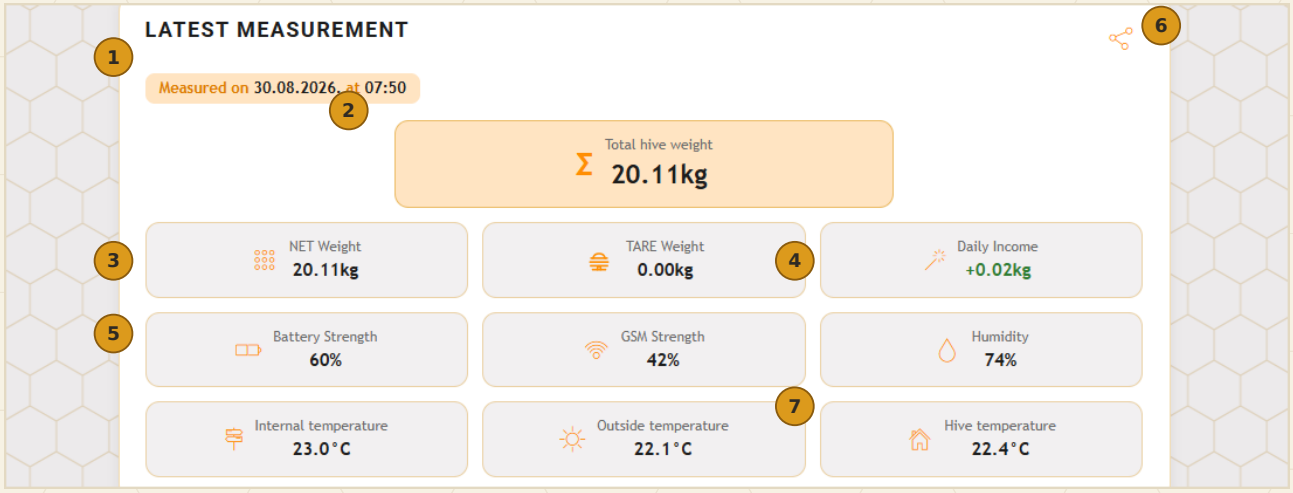
1. The SHARED mark beside the title.
2. Owner — the account the scale was shared from.
3. On a shared scale the SIM card details are not available either.

A shared scale has no pencil, no bin and no gear: the name, the comment and all the settings are changed by the owner alone. The measurements are shown in full.

Theft protection (SIM) — a 3rd-generation scale remembers its SIM card. Enter a phone number and turn protection on; if someone swaps the card, the scale texts that number, and an alarm with the buttons “I changed the card” and “It wasn’t me” appears on the portal and in the app. With the latest scale software.

6. Latest measurement

Latest measurement



1. When the measurement was taken — not when you opened the page.
2. The total weight of the hive: everything the scale carries, equipment included.
3. NET weight — the total weight of the hive less the TARE.
4. Daily income — how much has come in from the reference hour until now.
5. The state of the device: battery and GSM signal, as percentages.
6. Share — makes an image of this box, for sending in a message or to a group on social media.
7. A sensor the scale does not have reads N/A.

A sensor the scale does not have is not removed from the display — its tile reads N/A.

Figure	What it means
Total weight	The hive with its supers, frames, bees and honey — everything on the scale.
NET weight	The total weight less the TARE. If no TARE is set, it equals the total weight of the hive.
TARE weight	The weight of the hive ready for the flow, bees included. You set it yourself. More on this in chapter 8.
Daily income	What has come in from the reference hour until now, with the jumps caused by your work taken out.
Battery strength	The state of charge. Below 20% it is time to prepare a replacement or to recharge the battery.
GSM strength	The quality of the connection at the moment of sending. A weak signal means missed measurements.
Hive temperature	The sensor inside the hive, if there is one.
Outside temperature	The air around the hive, if there is a sensor.
Internal temperature	The temperature of the electronics itself. It serves as a check where there are no external sensors.

Humidity	The humidity of the air, if the scale has that sensor.

7. How the daily income is calculated

This is the most frequent question, so it is worth explaining exactly. The scale measures the total weight, and the income is not calculated as the plain difference between the first and the last weight of the day.

Sudden changes are taken out of the calculation. If the difference between two consecutive measurements is too large to be the work of bees, that jump is skipped.

The reason is practical: when you add a super, the weight jumps by several kilograms at once — and that is not yield but timber. When you extract, it falls — and that is not consumption but your own work. What remains is what the bees have really brought in.

The day is counted from the reference hour, six in the morning by default. The hour is changed in the scale settings.

Why is the income negative — the colony is using more that day than it is bringing in — the flow has stopped, it is cold, or it is raining. This is normal and is to be expected outside the flow.

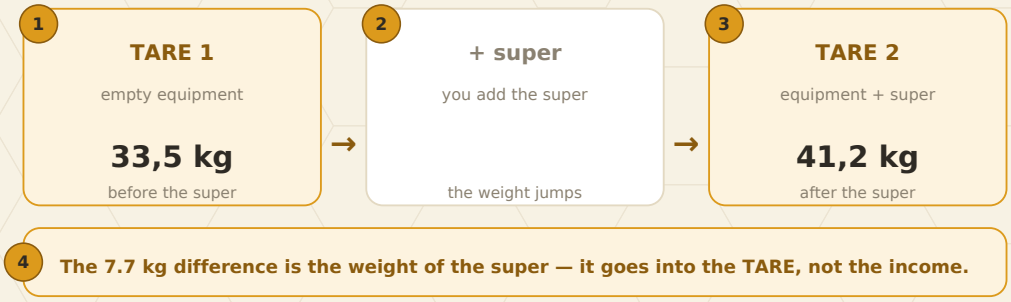
Why is the income not the same as the difference in weight — because the jumps caused by your work have been taken out of the calculation. That is deliberate.

8. TARE — TARE1 and TARE2

The TARE is the weight of the empty equipment: the bottom board, the supers, the frames with comb, the lid. Once the scale knows it, it can show the NET weight — how much of that mass belongs to the bees.

The procedure has two steps precisely because of adding a super:

Taring in two steps



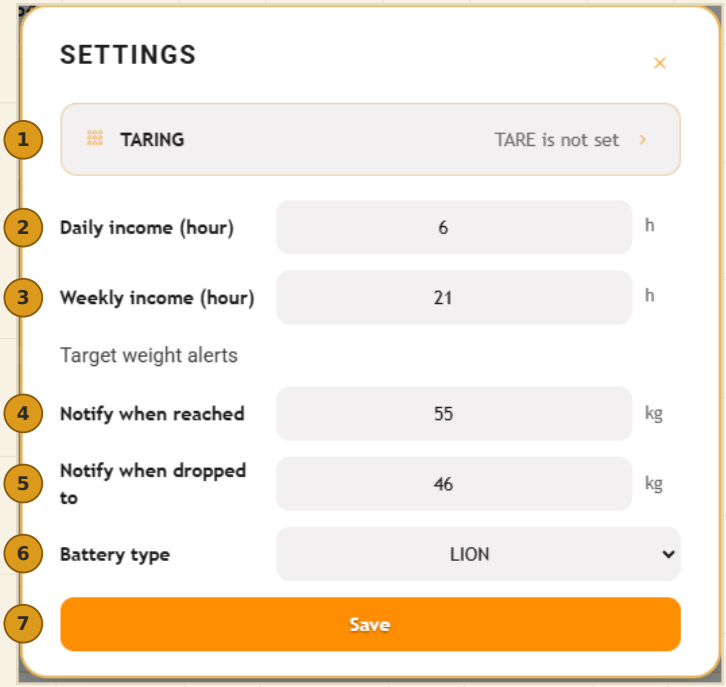
1. You press TARE1 BEFORE putting on a new super. The scale remembers the current weight.
2. You put the super on. The total weight jumps by the weight of the timber and the comb.
3. You press TARE2 AFTER that. The scale weighs again.
4. The difference between the two weighings is the weight of the equipment and goes into the TARE, not into the income.

> A TARE must be set for adding supers through TARE1 and TARE2 to work. Do TARE2 at the beginning of the following hour, so that the scale can register the difference in weight in the measurement that arrives.

9. Scale settings

The gear at the top of the Latest measurement box opens the settings. Everything changed here applies to that scale only.

The scale settings window



1. Taring — TARE, TARE1 and TARE2, described in the previous chapter.
2. The hour from which the daily income is counted.
3. The hour of the weekly summary.
4. Alert when the hive reaches a given weight.
5. Alert when the hive falls below a given lower weight.
6. The type of battery: LION or GEL.
7. Save — without this your changes are not kept on the portal.

Daily income hour — the hour from which the day is counted. Six in the morning by default.

Weekly income hour — the same, for the weekly summary. Nine in the evening by default.

Alert when it reaches — when the NET weight passes the number of kilograms you set, an alert arrives. Useful for following how a super is filling.

Alert when it falls to — an alert when the weight drops below the limit — for watching the stores through the winter.

Battery type — LION or GEL. The scale reports a voltage, and the percentage depends on the type, so the wrong choice gives the wrong battery percentage.

Taring — TARE, TARE1 and TARE2, described in the previous chapter.

> A shared scale has no gear. The server accepts settings from the owner only.

10. Auxiliary scales

Some scales work together with additional sensors — auxiliary scales. Their box sits below Latest measurement and hides itself if there are none.

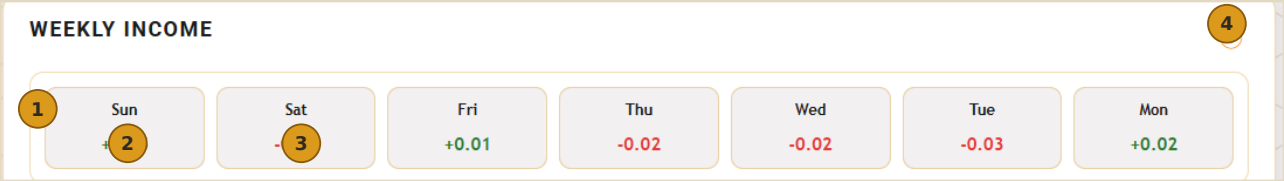
What is shown — the weight, internal temperature, light level and battery of each sensor, with the time it last reported.

Alert — a sensor that raises an alert is given a red mark and a coloured row.

11. Weekly income

The yield by days stands in a row of tiles: the name of the day and how much came in or was used that day. Each day is a period of twenty-four hours beginning at the hour set in the settings.

Weekly income



1. The tiles run backwards: the first on the left is the most recent period, then older ones in turn.
2. A green number is a day on which the colony brought in more than it used.
3. A red number is a day on which it used more than it brought in.
4. The question mark explains how the income is calculated.

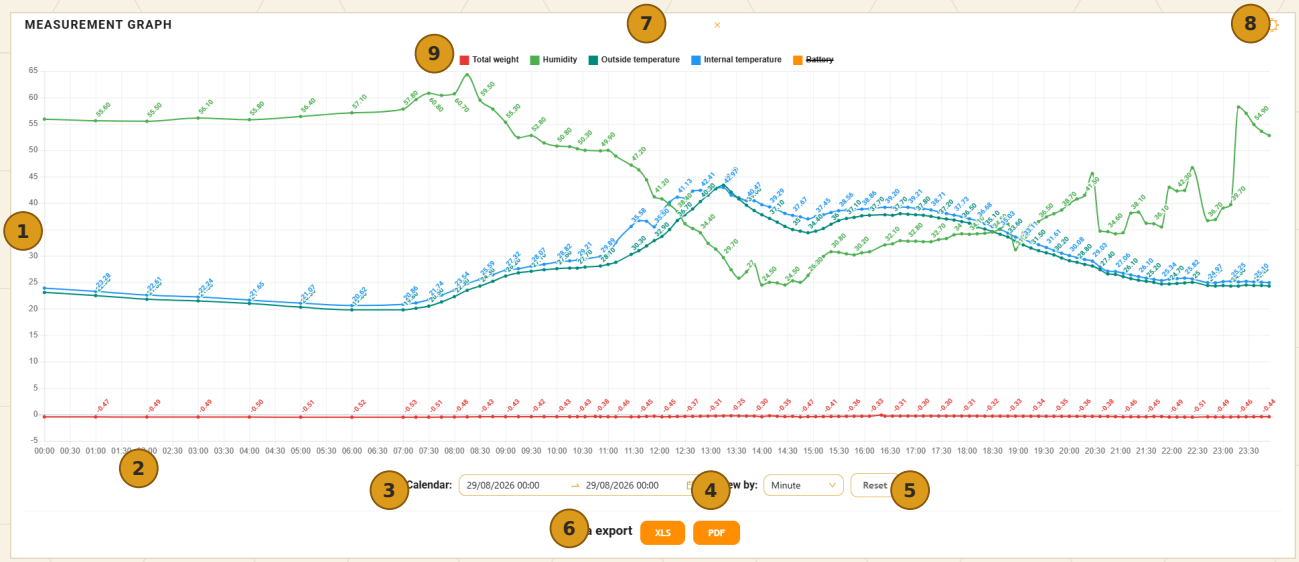
The row of tiles shows at a glance whether the flow is holding or has stopped, without going into the graph.

Weekly summary — above the chart there is a short review of the previous week, written every Monday: intake or consumption, brood temperature, gaps in the measurements and the state of the scale. “Listen” reads it aloud, and “Earlier weeks” keeps the last twelve.

12. The measurement graph

The graph shows how the weight, the temperatures, the humidity and the other figures have changed over the chosen period.

The measurement graph



1. The vertical axis (Y) — the value. The same axis carries kilograms, degrees and percentages alike.
2. The horizontal axis (X) — time, over the chosen range.
3. The calendar — from which date and hour to which.
4. View — grouping by year, month, day, hour or minute.
5. Reset — returns to the last seven days, by the hour.
6. Export of the measurements from the displayed period, to Excel or PDF.
7. Full screen.
8. The gear — the lowest and highest value of the axis and whether numbers are shown beside the points.
9. The legend — the names of the figures with the colour of their line. Clicking a name removes the line.

The names above the graph are switches as well: clicking a name removes that line from the display. The choice is remembered for that scale, so it opens the same way next time.

The date range and the chosen grouping are also remembered per scale. Refreshing the page does not send you back to the starting state.

View	When to use it
Minute	A short period, for following a single event close up.
Hour	The usual choice. The daily rhythm is visible: foraging by day, quiet at night.
Day	Several weeks at once — the course of the flow.
Month	A whole season.
Year	Comparing years, if you have that many measurements.

> If the scale sends both by email and over the internet, a choice of source appears above the graph as well. Scales with only one source do not have that choice.

13. Exporting measurements

Below the graph there are three buttons. All three export the measurements from the chosen date range — the one currently on the graph.

XLS — an Excel table, for further calculation or for keeping.

PDF — a table ready for printing.

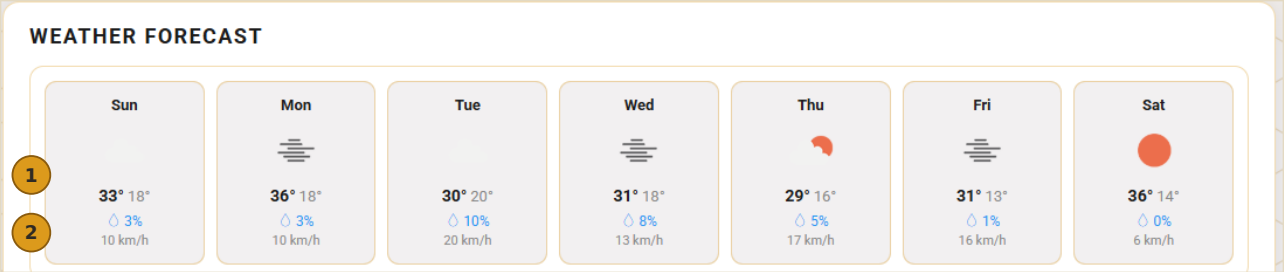
CSV — all measurements in the selected period, taken from the server, as .csv; opens in Excel and other programs.

If there are no measurements in the chosen period, the buttons are inactive.

14. Weather forecast and map

Below the graph stands the forecast for seven days ahead — the highest and lowest temperature, the chance of rain and the wind. At the bottom of the page is a map with the position of the scale.

The seven-day weather forecast

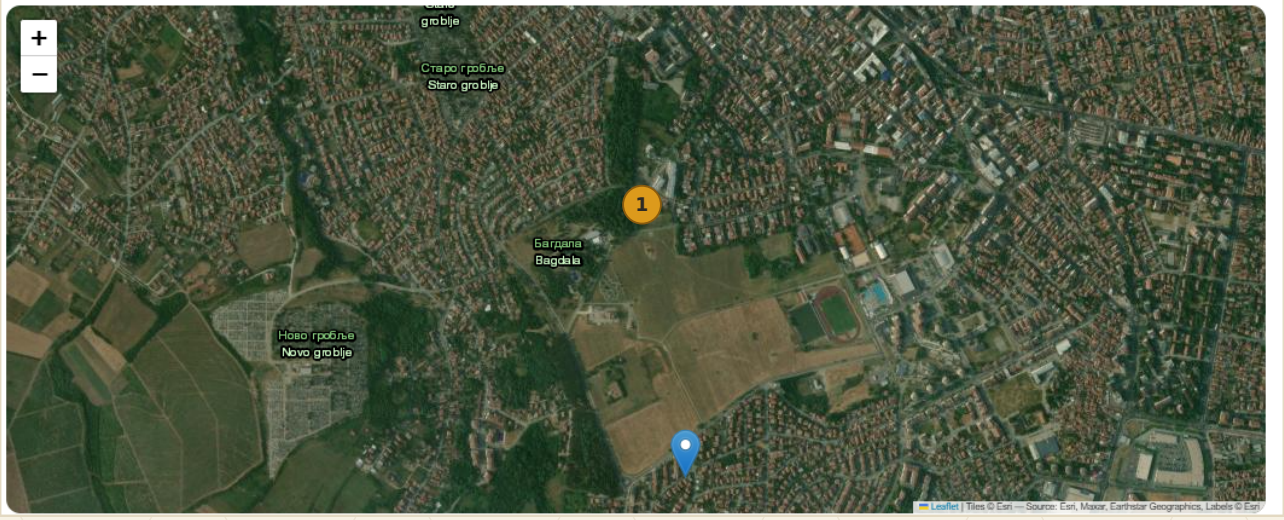


1. The highest and lowest temperature for that day.
2. The chance of rain and the wind speed.

The forecast helps you look ahead: whether the next two days are worth anything for the flow, and when it makes sense to open the hives.

The map shows where the scale is. It is also the basis for the movement protection in the next chapter.

The map with the position of the scale



1. The marker shows where the scale is. The forecast is taken for that point as well.

15. Movement protection

A scale with a built-in position receiver can remember the spot it stands on and report if it moves away from it. The box stands between the forecast and the map.

Movement protection

1. The switch — turns the protection on and off. The same state is shown in the app.
2. Alarm radius — how far it may move before it reports.
3. Deviation — how far it is from the remembered spot right now.
4. Checking — the scale is outside the circle and is counting confirmations. “1 / 2” means one of the two needed. This is the only moment at which you can still get there before the alarm.
5. Position quality and number of satellites — how reliable the reading is.
6. The spot is locked from the phone, because that is done at the apiary.

The scale checks its position at a set interval, every ten minutes by default. When it finds itself outside the circle it does not report at once — it waits for several consecutive confirmations, so that a single miss by the receiver does not raise an alarm. That is why 10 to 20 minutes pass between leaving the circle and the alert.

> Why the spot is not locked from the computer: that instruction means “the scale is NOW where it belongs” and erases the old spot. At a computer you are almost certainly not at the hives; and if the scale has just been stolen and is on the move, a press from your desk would declare the thief's van to be its home.

The portal refuses to turn on the protection of a scale that is not at its remembered spot, and tells you how far away it is. That way it cannot happen that it is armed with a spot you have already lifted it from.

Movement track. When a 4th-generation scale reports that it has been moved, it sends its position every five minutes for six hours. The “Show on map” window then shows the route as a red line and the last known point, and the “Download route (GPX)” button gives a file for Google Maps or the police. With the latest scale software.

16. When you move a scale

Moving requires the old spot to be forgotten, otherwise the scale will report a theft from its new location. The order matters:

1. **Turn the protection off** — and wait for the status to change to Off. The instruction travels with the scale's next report, so this takes up to twenty minutes or so. Move it earlier and an alarm arrives.
2. **Move the scale** — to its new spot.
3. **Lock the new spot** — from the mobile app, standing at the hive.
4. **Turn the protection on** — once the deviation has fallen to a few metres.

> An alarm that arrives during the move is not a fault — the scale is still armed with the old spot. Confirm receipt and carry on with the procedure.

17. Alerts, news and tips

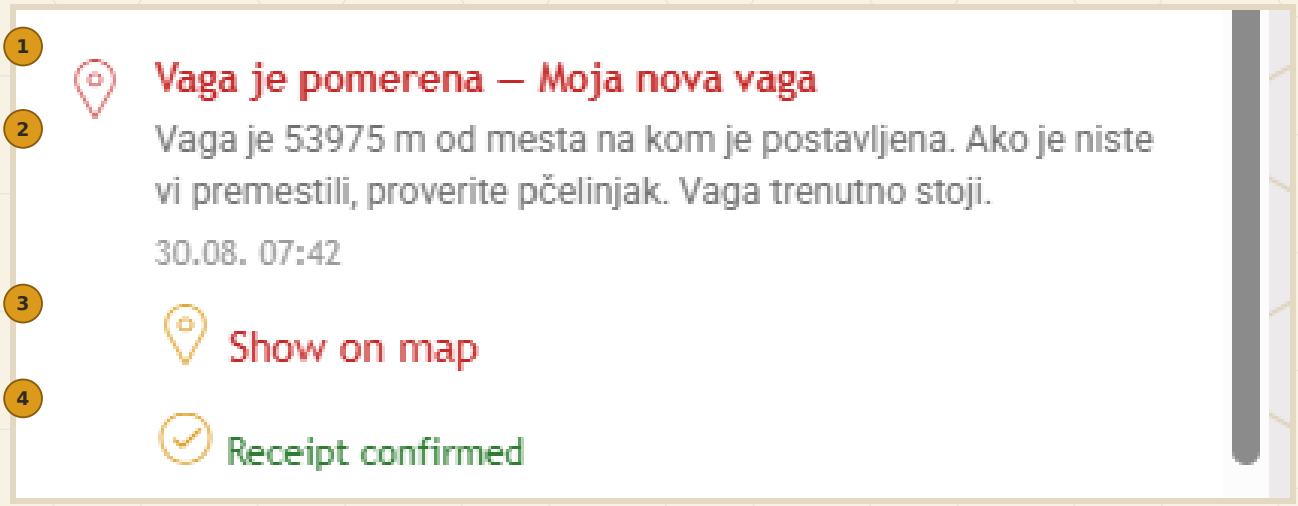
A column with three tabs stands at the side. The alerts concern the selected scale and cover the last three days.

The alerts column

1. Three tabs: Alerts, News and Tips.
2. The type of alert and the scale it concerns.

3. Show on map — opens a satellite image of the spot.
4. Receipt confirmed — removes the bell from the list of scales.
5. The bin — clears the list of alerts.

An alarm awaiting confirmation



1. The type of alert and the scale it concerns.
2. What exactly happened: how far away it is and whether it is moving.
3. Show on map — opens a satellite image of the spot.
4. Confirm receipt — until this is pressed, the bell stays beside the scale in the list.

The “Show on map” button opens a window with a view from the air. Three things are visible on it at once, and only together do they make sense:

The window with the place of the alarm

1. The type of alert and the exact time it was reported.
2. Where the scale was at that moment.

3. The coordinates and how far it is from the remembered spot.
4. A link to Google Maps, if you want directions to that point.

The coordinates in this window are frozen at the moment of the alarm. An alert from a month ago will still take you to where the scale was then.

The title of an alert is coloured according to its type, so that you can see at a glance what it is about before reading a single line. Types that have no colour of their own are set in ordinary black.

Colour	Type of alert
Red	The scale has been moved
Orange	A sudden loss of weight
Green	Worker bee — the daily weight summary
Dark blue	The SIM subscription has expired
Blue	The SIM subscription is expiring or the data allowance is running out
Black	The evening report

> Alerts delete themselves three days after they arrive. Copy out or export anything you want to keep before then.

Alert	When it arrives
The scale has been moved	The scale has moved away from its remembered spot.
A sudden loss of weight	The weight has dropped sharply — swarming, a super falling over, extraction or theft.
The evening report	Every evening: weights, yield, temperatures, battery and signal.
Weight reached	The NET weight has passed the limit you set.
Fallen below the limit	The weight has fallen below the limit you set.
Battery running low	The charge has dropped low — it is time to replace or recharge it.
Weak GSM signal	The connection is too weak for the delivery of measurements to be certain.

The bin at the top of the column — clears the list of alerts. Alarms awaiting confirmation are not confirmed by it.

News — the list of changes to the portal and the app, by version.

Tips — advice for beekeepers, month by month.

18. Downloads

The Downloads item in the top bar leads to a list of documents in PDF, in the language you have chosen.

Document	What it contains
Portal manual	This manual, for printing or for reading without an internet connection.
App manual	The mobile app, screen by screen.
Beekeeping diary manual	Records of apiaries, hives, inspections and treatments.
Device manual	Setting up the scale, SMS commands and settings on the device itself.
Specification	The technical data of the scale.
Battery	The manual for the battery and for charging it.

On the same page there is also a link to the privacy policy.

19. Your account

Under the Profile item are your details, the choice of language and the change of password.

Profile — name, address, town, postal code, country and telephone.

Language — changed at any time and remembered with the account.

Password — changed by entering the old one and the new one. The same password applies to the mobile app.

API access — a key for downloading measurements into other programs (Excel, Power BI, associations, institutes). The key is shown only once, right after it is created; a new key replaces the old one, and “Revoke key” disables it at once. Read-only.

Deleting the account — removes the account permanently. This cannot be undone.

20. The Beekeeping diary

The Beekeeping diary comes with the portal — records of apiaries, hives, inspections, treatments and yields. The link to it is in the top bar of the portal.

If you enter a scale's IMEI in the diary, it pulls the measurements from here in beside that hive, so the records and the measurements are in one place.

dnevnik.smsvaga.com — records of apiaries, hives, inspections, treatments and yields.

21. Frequently asked questions

Question	Answer
Why does the weight change even though I have done nothing?	The scale weighs the moisture in the timber and the dew as well. A swing of a few hundred grams through the day is usual.
Why is the income zero when the weight has risen?	The jump was too large to be the work of bees, so it was taken out of the calculation — see chapter 7.
Why is there no temperature?	That scale does not have the sensor, or the sensor is faulty. Only what the device actually sends is displayed.
Why is the deviation 8 m when the scale is standing still?	That is the imprecision of the position receiver. An alarm is raised only beyond the radius you set.
I changed a setting and nothing happened.	The scale takes the instruction on its next report. Wait for one or two reports.
I can see someone else's scale in the list.	That is a shared scale someone has given you access to. Its settings are changed by the owner.

22. Support

For anything that is unclear or not working as it should, write to us at smsvaga@gmail.com.

If the question concerns a particular scale, send its IMEI number as well — with it we can see straight away when it reported, with what signal, and what it sent.

> **problem.smsvaga.com** — here you can check the state of your scale yourself, at any time.