

**QUICK GUIDE**  
TO INSTALLATION

ENGLISH

**GUIDA RAPIDA**  
ALL'INSTALLAZIONE

ITALIANO

**GUÍA RÁPIDA**  
DE INSTALACIÓN

ESPAÑOL

## xNode

Soil

Soil Pro

Multilevel

xCam

Leaf

Tutorial



[xfarm.ag/tutorial](http://xfarm.ag/tutorial)





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## ENGLISH

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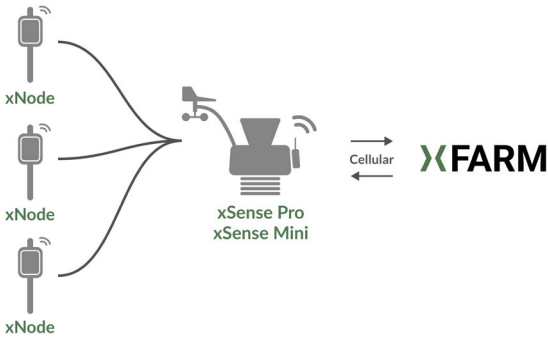
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# xNode LoRa

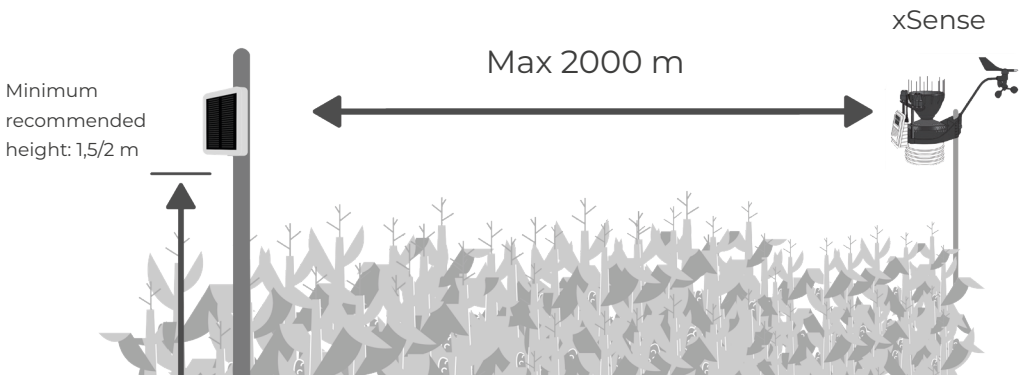
To connect the sensors to xSense



It uses LoRa modulation on 868 Mhz frequencies **and** requires xSense to function.

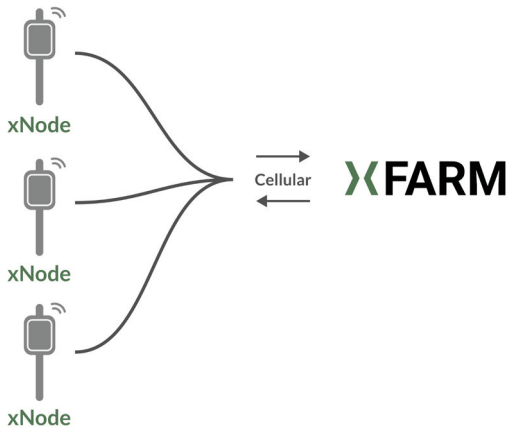
**The range of xNode LoRa can vary between 500 to over 2000 m,** depending on the conditions in which it is installed and the type of xSense used.

Maximum range is when xNode LoRa and xSense are in <span>«sight»</span> and there are no obstacles between them.



# xNode Cellular

To connect the sensors independently



It works on a cellular network and **can be used individually and independently.**

Each xNode Cellular contains a cellular module (2G, 3G, 4G) to send the data collected by the sensors to the xFarm platform.



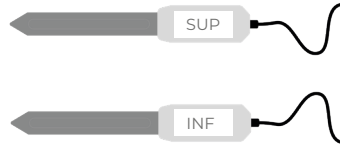
# xNode + SoilWatch 10

Sensors and field installation

SoilWatch 10 of surface

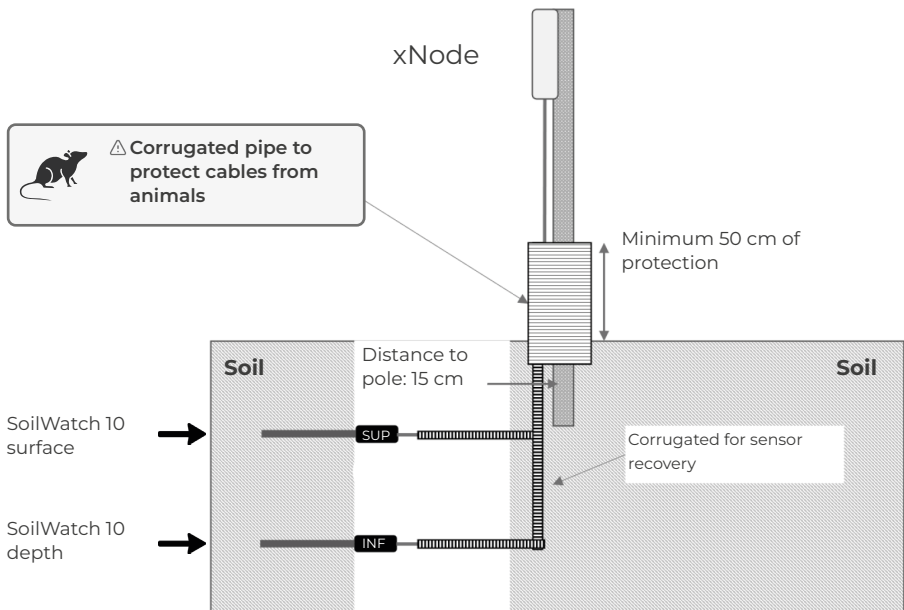


SoilWatch 10 surface + depth



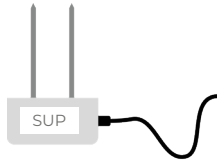
## Installation xNode + SoilWatch 10

In the case of xNode and SoilWatch 10 installation (surface or surface + depth) follow the diagram for field installation.

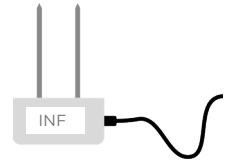
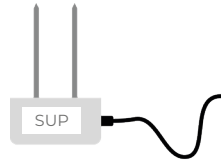


# xNode + Soil Pro (Teros 10, Teros 12)

xSoil Pro of surface

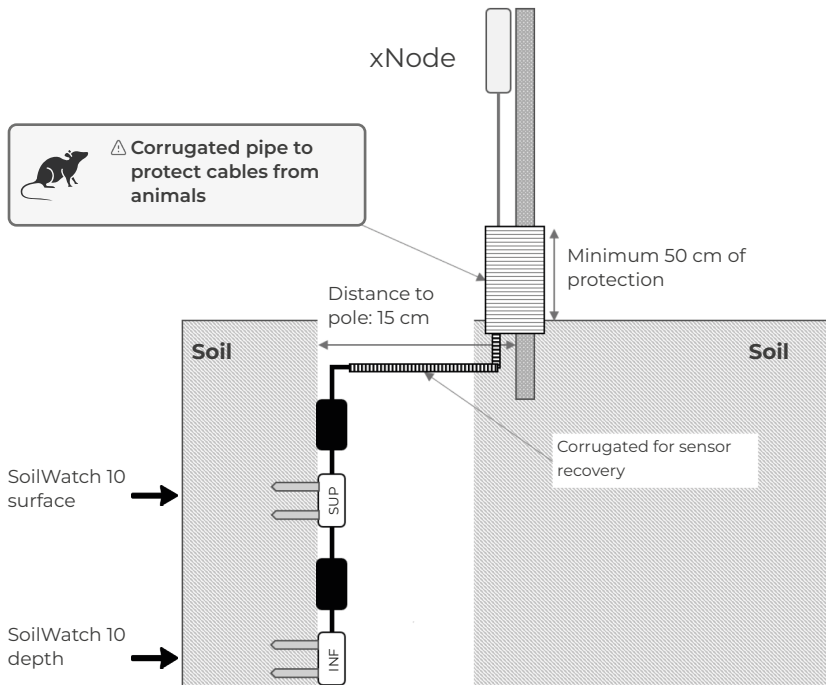


xSoil Pro surface + depth



## Installation xNode + Soil Pro

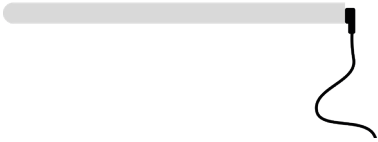
In the case of xNode and Soil Pro (Teros 10, Teros 12) installations (surface or surface + depth) follow the diagram for field installation.



# xNode + Multilevel Sentek

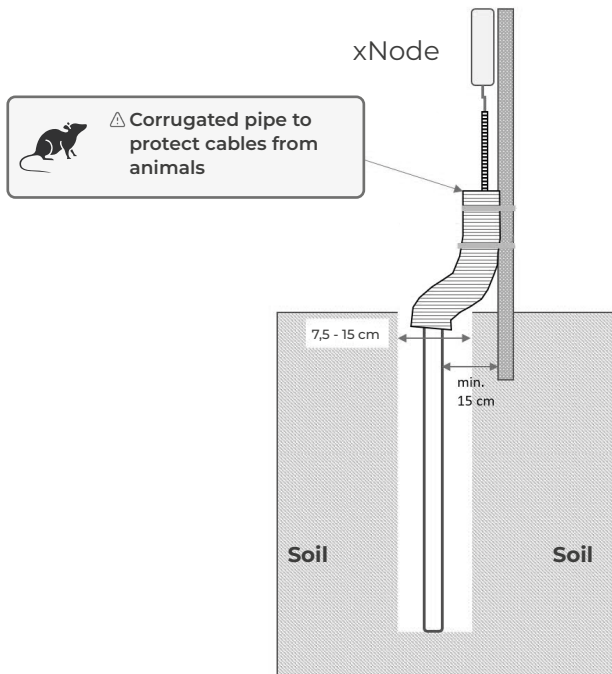
Sensors and field installation

Multilevel Sentek 30/60/90 cm



## Installation xNode + Multilevel Sentek

In the case of xNode and Multilevel installation, follow the diagram for field installation.





## Sensor Installation Depths

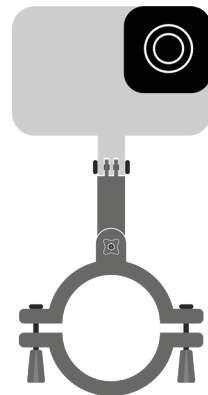
Crop	Dual Sensor [Underground/Exterior Irrigation]		Single Sensor [External Irrigation]	Single Sensor [Underground Irrigation]
	Sensor surface (cm)	Sensor depth (cm)	Depth (cm)	Depth (cm)
Maize	10	30	10	15
Tomato				
Citrus	15	35	15	20
Pomegranate				
Olive				
Kiwi				
Apple				
Pear				
Cherry				
Peach				
Plum				
Grape				

## xNode + xCam

### Sensors and field installation

In the case of xNode installation with xCam, simply attach it to the same pole using the vertical bracket, choosing the framing that best suits the crop.

After the first switch-on of xNode, the xCam will take a photo to determine the correct framing.

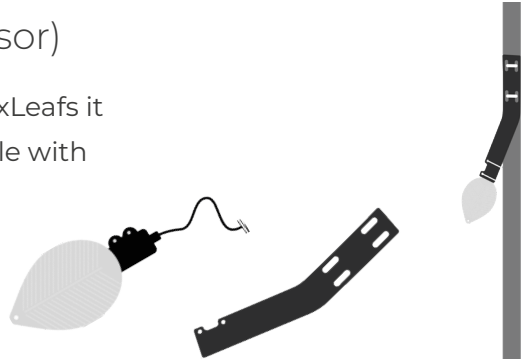


# xNode + xLeaf

## Sensors and field installation

### xLeaf (foliar wetting sensor)

In case of xNode installation with xLeaves it will be necessary to fix it to the pole with the bracket and clamps provided.



⚠ Install sensor and wire at a minimum of 1 metre from the ground with the tip pointing North and the raised part upwards.

### Cleaning and Maintenance

The sensor must be cleaned periodically using a cloth moistened with just water.

If the sensor is used in extremely sunny areas with unusually high radiation loads, the application of McNett UV protection is recommended.

To apply McNett UV Technology:

- Clean the sensor with water and a clean, soft cloth.
- Spray a soft cloth with UV Tech spray.
- Wipe both sides of the sensor surface with a damp cloth to apply protection

**Download the xFarm app** to create your account and connect the sensors



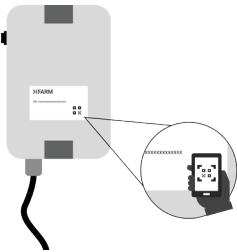
Search for XFARM in the **App Store** or **Google Play Store**



Or scan the **QR code** from your smartphone

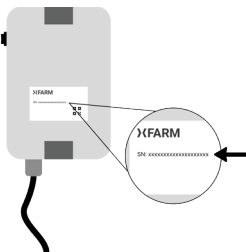


Before fixing xNode it will be necessary to place it in the xFarm App.  
There are 2 ways to do this:



### METHOD 1 - QR Code

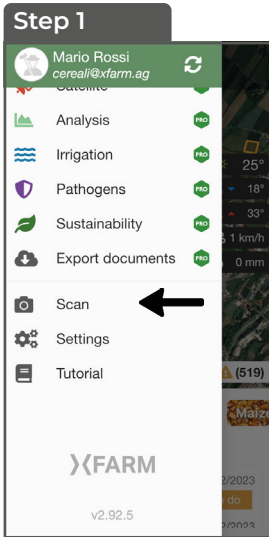
Scan the QR code on the back of the device.



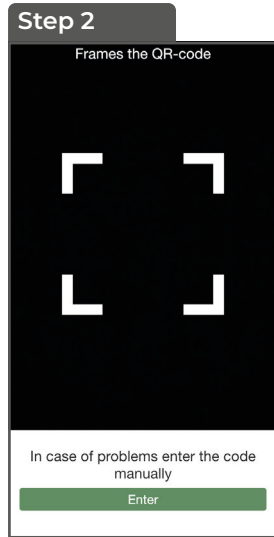
### METHOD 2 - Serial Number

Enter the serial number found on the back of the device manually in the app.

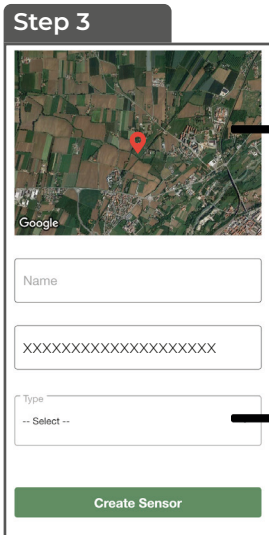
## 1) Scanning the QR code (recommended)



In the menu select **Scan**

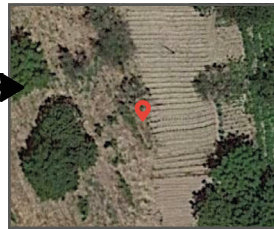


The camera will activate and recognise the QR code

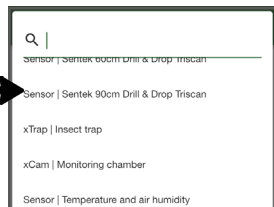


Complete all data and tap **Create Sensor**

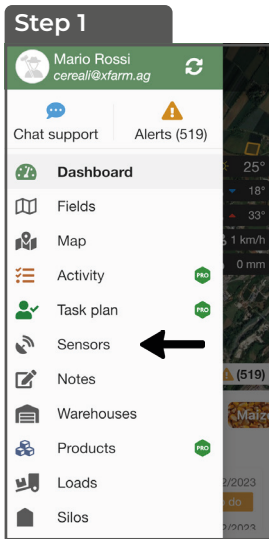
You can put the location of the sensor on the map



Select the type of sensor connected to xNode



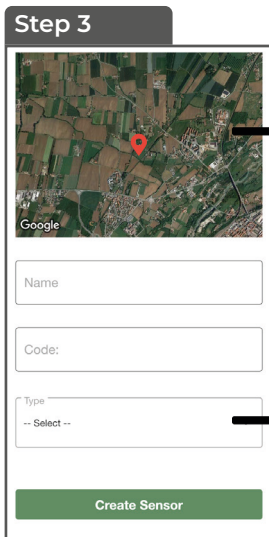
## 2) Writing the Serial Number by hand



In the menu select **Sensors**

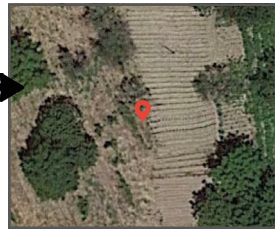


From the button select **New Sensor**

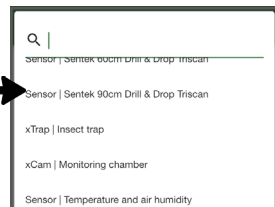


Complete all data and tap **Create Sensor**

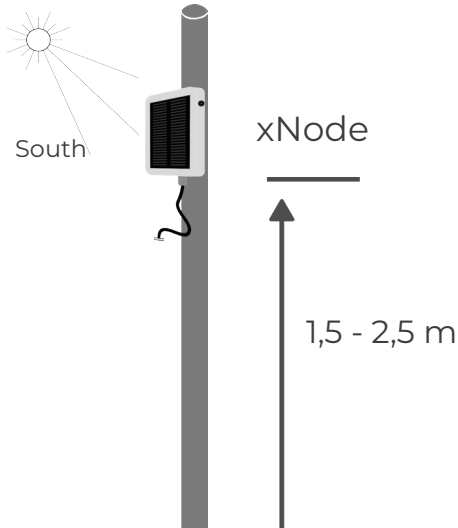
You can put the location of the sensor on the map



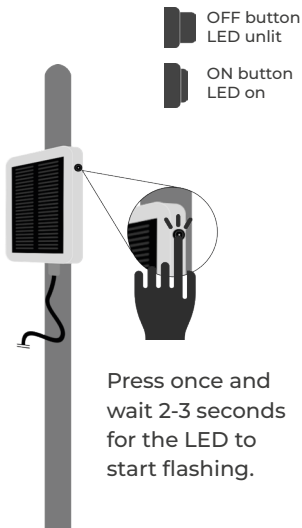
Select the type of sensor connected to xNode



## xNode Fixing and Commissioning



Fix the xNode at a height of no less than 1.5 metres, above the crops and with the photovoltaic panel facing south.



Complete the installation by switching on the xNode:

press the button on the side of the device so that it remains pressed.

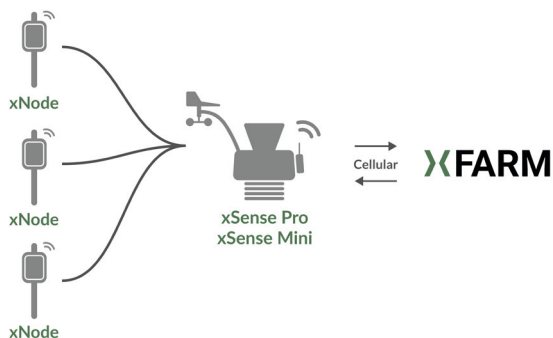
The LED light will remain on until it is connected to the network, then it will switch itself off.

If the connection fails, repeat the operation by switching the xNode off and on again after a few seconds.



# xNode LoRa

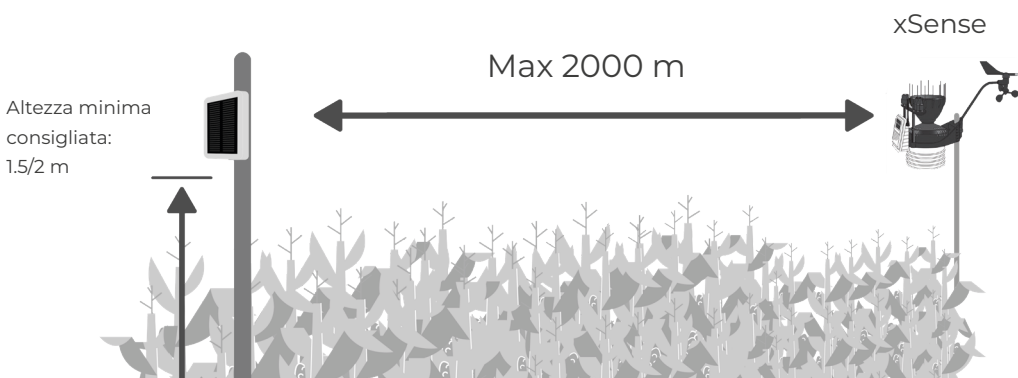
Per collegare i sensori a xSense



Usa la modulazione LoRa su frequenze 868 Mhz e **nessita di xSense per poter funzionare.**

**La portata di xNode LoRa può variare tra i 500 a oltre 2000 m**, a seconda delle condizioni in cui viene installato e dal tipo di xSense che si impiega.

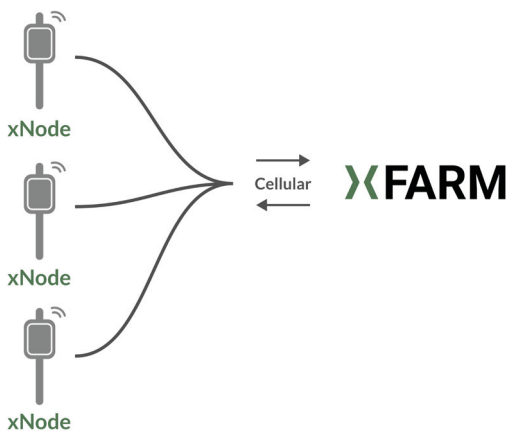
La portata massima si ha quando xNode LoRa e xSense sono a “vista” e non ci sono ostacoli tra di loro.





# xNode Cellular

Per collegare i sensori in modo indipendente



Funziona su rete cellulare e può essere usato singolarmente e in modo indipendente.

Ogni xNode Cellular contiene un modulo cellulare (2G, 3G, 4G) per poter inviare i dati raccolti dai sensori alla piattaforma xFarm



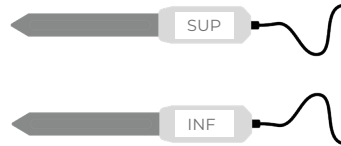
# xNode + SoilWatch 10

Sensori e installazione in campo

SoilWatch 10 di superficie

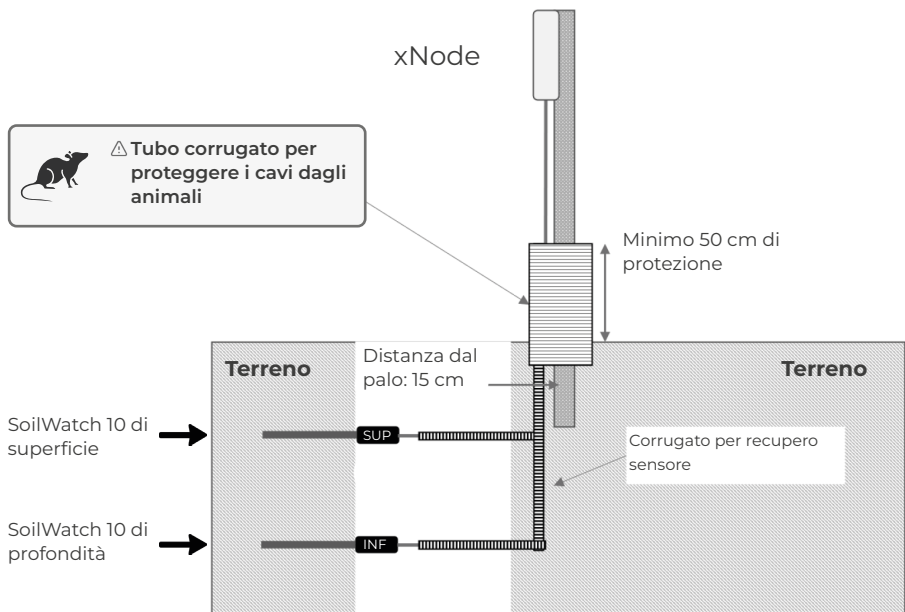


SoilWatch 10 di superficie + profondità



## Installazione xNode + SoilWatch 10

In casi di installazione xNode e SoilWatch 10 (di superficie o superficie + profondità) seguire lo schema per procedere all'installazione in campo

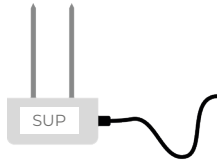


# xNode + Soil Pro (Teros 10, Teros 12)

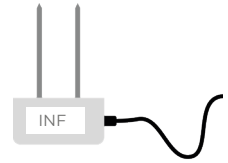
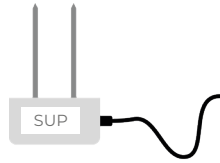
IT

Sensori e installazione in campo

xSoil Pro di superficie

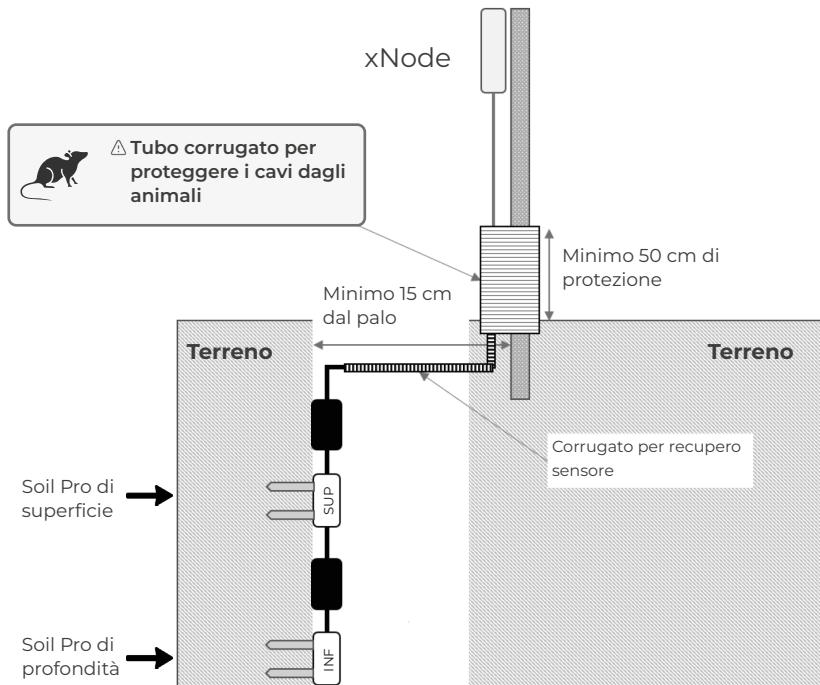


xSoil Pro di superficie + profondità



## Installazione xNode + Soil Pro

In caso di installazione xNode e Soil Pro (Teros 10, Teros 12) (di superficie o superficie + profondità) seguire lo schema per procedere all'installazione in campo



# xNode + Multilevel Sentek

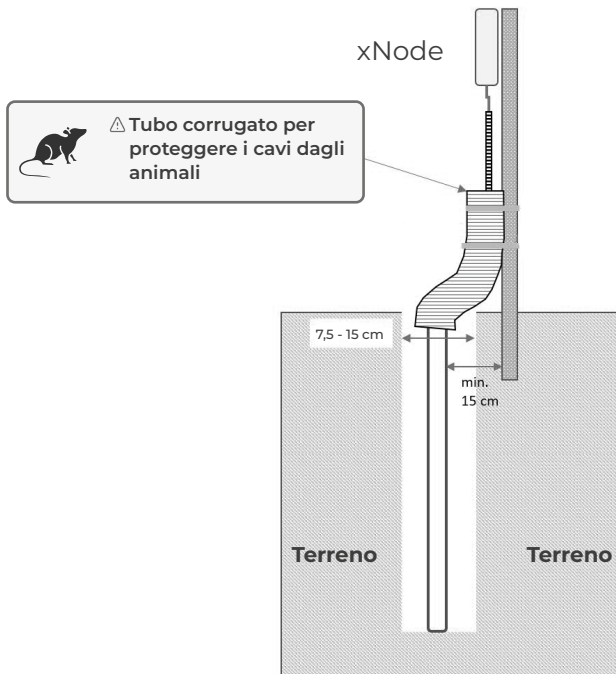
Sensori e installazione in campo

Multilevel Sentek 30/60/90 cm



## Installazione xNode + Multilevel Sentek

In caso di installazione xNode e Multilevel seguire lo schema per procedere all'installazione in campo



## Profondità di Installazione dei sensori

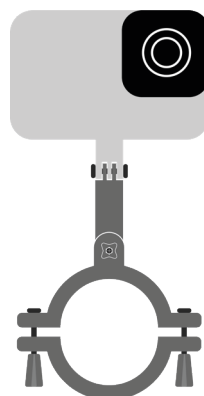
Coltura	Doppio Sensore [Irrigazione Interrata/Esterna]		Sensore Singolo [Irrigazione Esterna]	Sensore Singolo [Irrigazione Interrata]
	Sensore superiore (cm)	Sensore inferiore (cm)	Profondità (cm)	Profondità (cm)
Mais	10	30	10	15
Pomodoro				
Agrumi	15	35	15	20
Melograno				
Olivo				
Kiwi				
Melo				
Pero				
Ciliegio				
Pesco				
Susino				
Uva				

## xNode + xCam

Sensori e installazione in campo

In caso di installazione xNode con xCam basterà fissarla allo stesso palo utilizzando la staffa verticale scegliendo l'inquadratura che più si adatta alla coltura.

Dopo la prima accensione di xNode la xCam scatterà una foto che permetterà di determinare la correttezza dell'inquadratura.



# xNode + xLeaf

Sensori e installazione in campo

## xLeaf (sensore di bagnatura fogliare)

In caso di installazione xNode con xLeaf sarà necessario fissarlo al palo con il supporto e le fascette in dotazione.



⚠ Installare sensore e filo ad un minimo di 1 metro da terra con la punta verso NORD e la parte in rilievo verso l'alto.

### Pulizia e manutenzione

Il sensore deve essere pulito periodicamente usando un panno inumidito con solo acqua. Può capitare che rilevi umidità anche in periodi più secchi, anche in quel caso la causa potrebbe essere il sensore sporco.

Se si utilizza il sensore in zone estremamente soleggiate con carichi di radiazione insolitamente elevati è consigliata l'applicazione di protettivo McNett UV

Per applicare la tecnologia UV McNett:

- Pulire il sensore con acqua e un panno pulito e morbido.
- Spruzzare un panno morbido con spray UV Tech.
- Strofinare entrambi i lati della superficie del sensore con un panno umido per applicare la protezione.

Scarica l'app xFarm per creare il tuo account e connettere i sensori



Cerca XFARM sull'**App Store** o sul **Google Play Store**

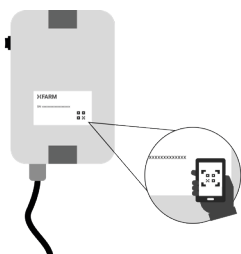


Oppure **scannerizza il codice QR** dal tuo smartphone



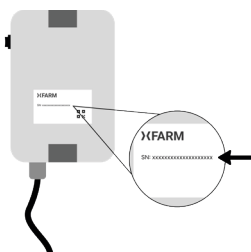
Prima di fissare xNode sarà necessario inserirlo in App xFarm.

Ci sono 2 modi per farlo:



### METODO 1 - QR Code

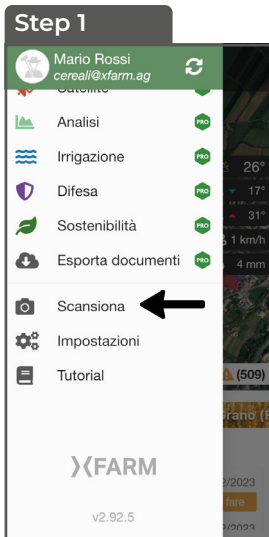
Scannerizza il codice QR che trovi sul retro del dispositivo.



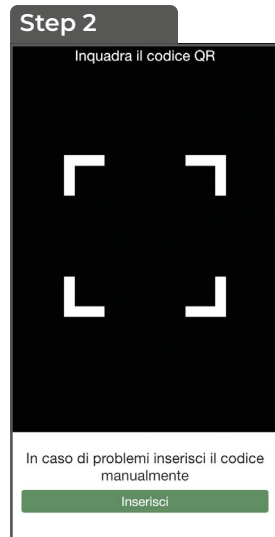
### METODO 2 - Numero di serie

Inserisci manualmente in app il numero di serie che trovi sul retro del dispositivo.

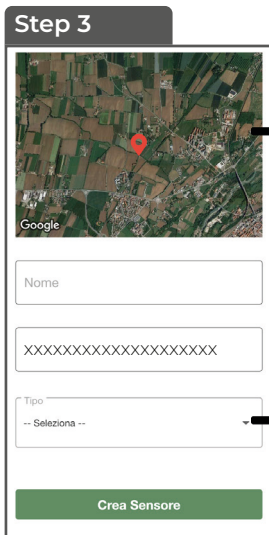
## 1) Scansionando il QR code (consigliato)



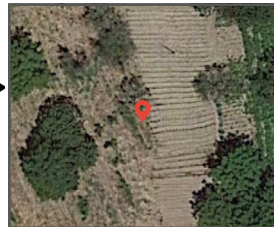
Nel menù seleziona **Scansiona**



Si attiverà la fotocamera che riconoscerà il codice QR



Puoi inserire sulla mappa la posizione del sensore



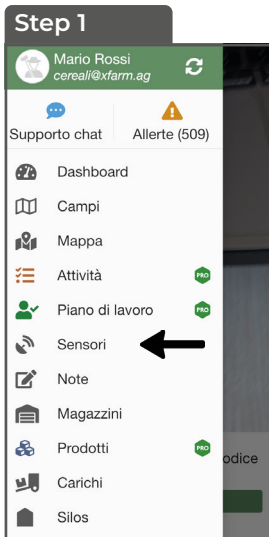
Selezionare il tipo di sensore collegato a xNode



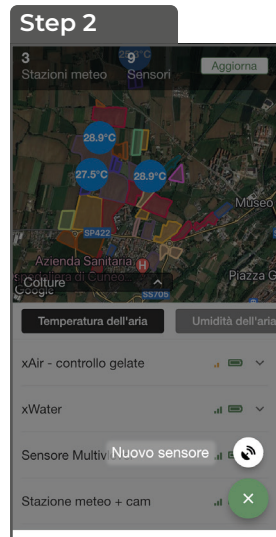
Completa tutti i dati e tocca **Crea sensore**



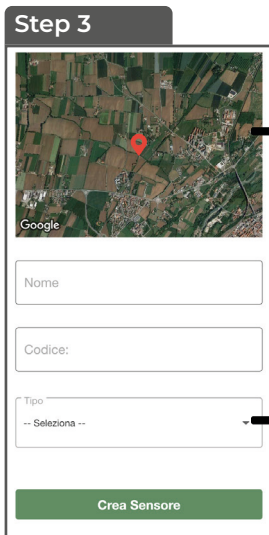
## 2) Scrivendo a mano il Numero di serie



Nel menù seleziona **Sensori**

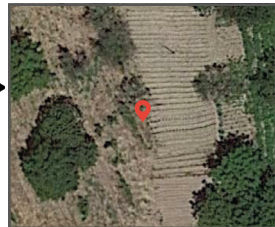


Dal bottone seleziona **Nuovo sensore**

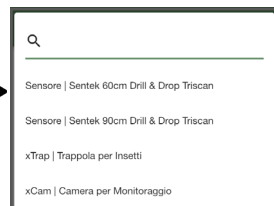


Completa tutti i dati e tocca **Crea sensore**

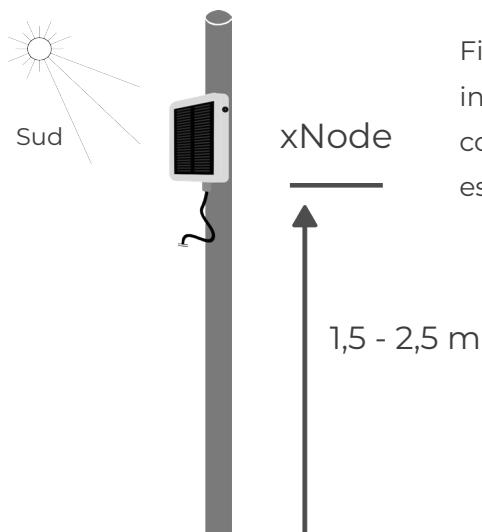
Puoi inserire sulla mappa la posizione del sensore



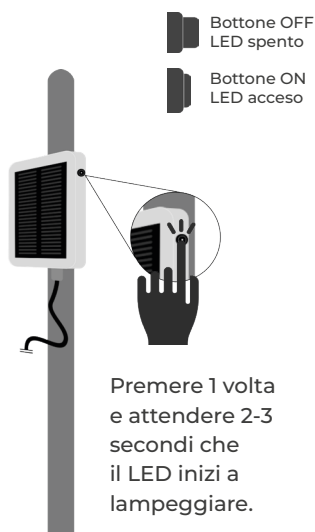
Selezionare il tipo di sensore collegato a xNode



## Fissaggio xNode e messa in funzione



Fissare l'xNode ad un'altezza non inferiore a 1,5 metri, al di sopra delle colture e con il pannello fotovoltaico esposto a sud.



Completare l'installazione accendendo l'xNode:

premere il bottone posto sul lato del dispositivo, in modo che rimanga premuto.

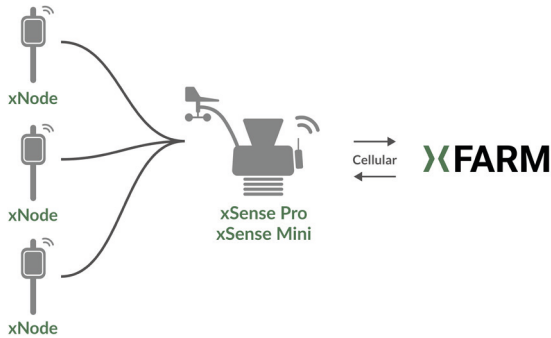
La luce LED rimarrà accesa finchè non sarà collegato alla rete, per poi spegnersi autonomamente.

**In caso di mancata connessione,** ripetere l'operazione spegnendo e riaccendendo dopo qualche secondo l'xNode.



# xNode LoRa

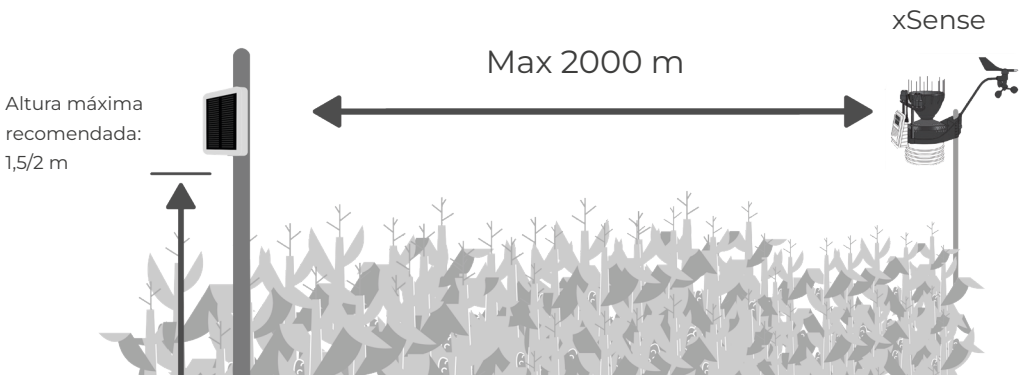
Para conectar sensores a xSense



Utiliza modulación LoRa en frecuencias de 868 Mhz y **necesita xSense para funcionar.**

**El alcance de xNode LoRa puede variar entre 500 y más de 2000 m, según las condiciones en las que se instale y el tipo de xSense que se utilice.**

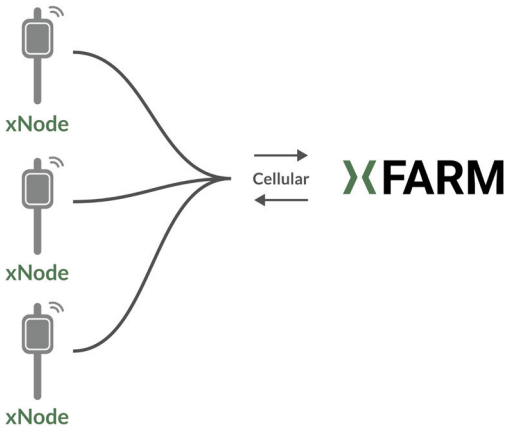
El alcance máximo se produce cuando xNode LoRa y xSense están “a la vista” y no hay obstáculos entre ellos.



# xNode Celular

ES

Para conectar sensores de forma independiente



Funciona en una red celular y se puede usar de forma individual e independiente.

Cada xNode Celular contiene un módulo celular (2G, 3G, 4G) para poder enviar los datos recogidos por los sensores a la plataforma xFarm



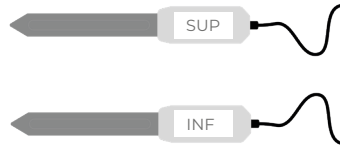
# xNode + SoilWatch 10

Sensores e instalación en campo

SoilWatch 10 de superficie

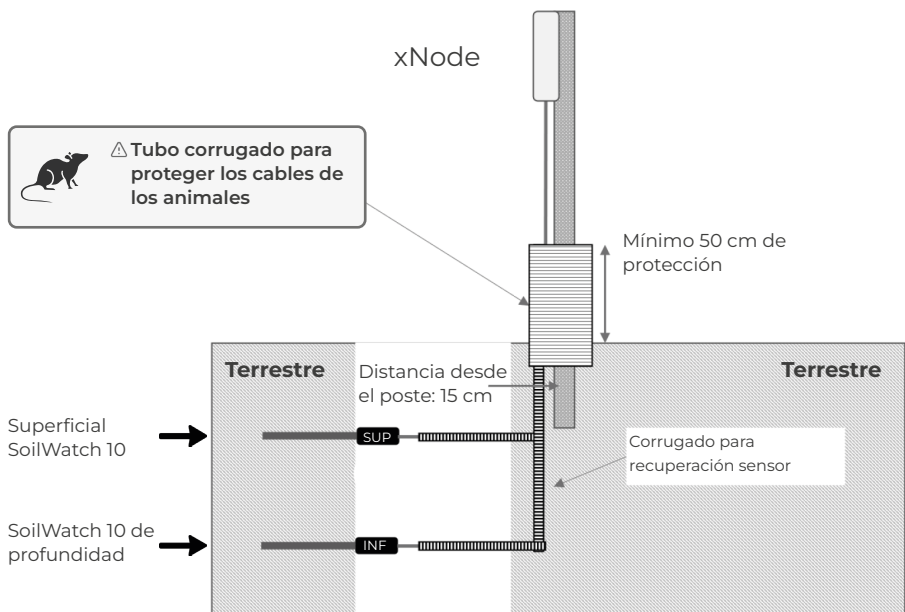


SoilWatch 10 de superficie + profundidad



## Instalación xNode + SoilWatch 10

En los casos de instalación xNode e SoilWatch 10 (de superficie o superficie + profundidad) seguir el esquema para proceder a la instalación en campo

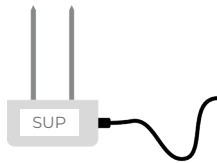


# xNode + Soil Pro (Teros 10, Teros 12)

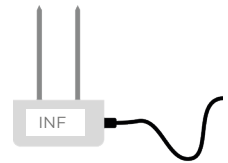
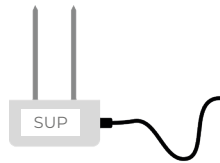
ES

Sensores e instalación en campo

xSoil Pro de superficie

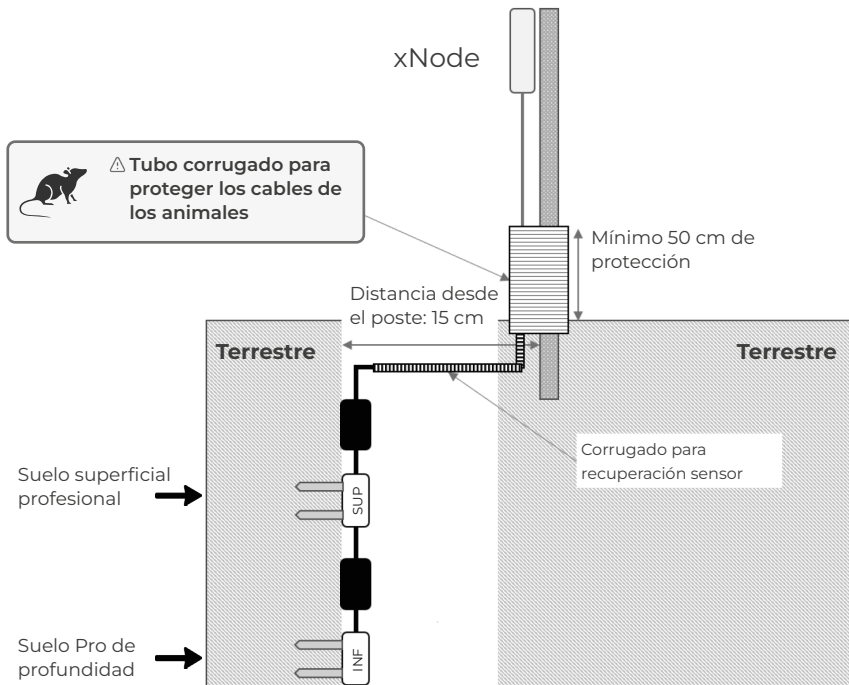


xSoil Pro de superficie + profundidad



## Instalación de xNode + Soil Pro

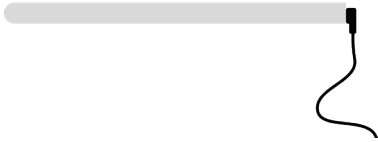
En caso de instalación de xNode y Soil Pro (Teros 10, Teros 12) (superficie o superficie + profundidad) seguir el esquema para proceder con la instalación en campo



# xNode + Multilevel Sentek

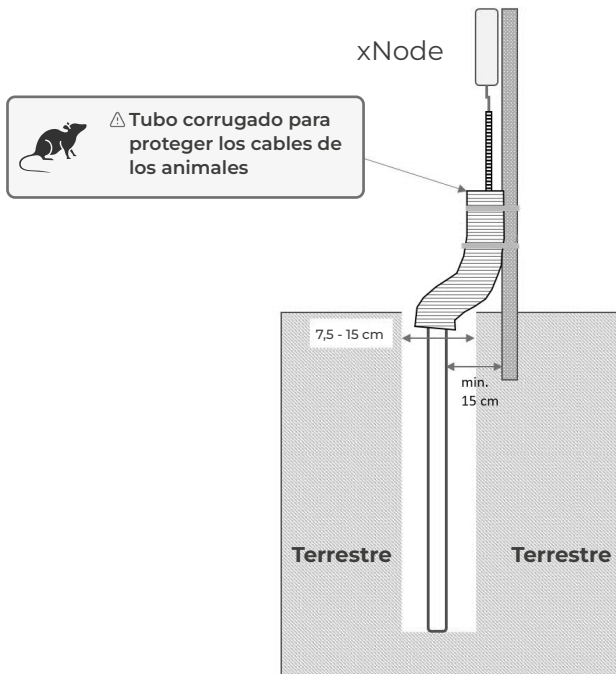
Sensores e instalación en campo

Multilevel Sentek 30/60/90 cm



## Instalación xNode + Multilevel Sentek

En caso de instalación de xNode y Multinivel seguir el esquema para procesos con la instalación en el campo.





## Profundidad de instalación de los sensores

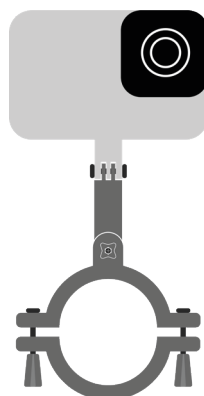
Cultura	Doble Sensor [Riego Subterráneo / Externo]		Sensor único [Irrigación externa]	Sensor único [riego subterráneo]
	Sensor parte superior (cm)	Sensor fondo (cm)	Profundidad (cm)	Profundidad (cm)
Maíz	10	30	10	15
Tomate				
Cítrico	15	35	15	20
Granada				
Oliva				
Kiwi				
Manzana				
Pera				
Cereza				
Melocotón				
Ciruela				
Uva				

## xNode + xCam

### Sensores e instalación en campo

En el caso de la instalación de xNode con xCam, basta con fijarlo al mismo poste mediante el soporte vertical y elegir el encuadre que mejor se adapte al cultivo.

Tras encender el xNode por primera vez, la xCam tomará una foto para determinar el encuadre correcto.

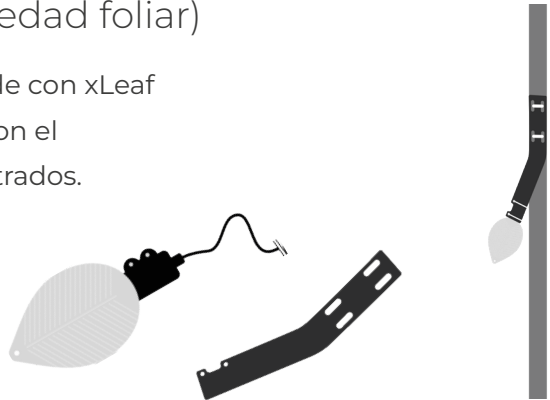


# xNode + xLeaf

## Sensores e instalación en campo

### xLeaf (sensor de humedad foliar)

En caso de instalación de xNode con xLeaf será necesario fijarlo al poste con el soporte y abrazaderas suministrados.



⚠ Instale el sensor y el cable a un mínimo de 1 metro del suelo con la punta hacia el NORTE y la parte elevada hacia arriba.

### Limpieza y mantenimiento

El sensor debe limpiarse periódicamente con un paño humedecido solo con agua. Puede ocurrir que detecte humedad incluso en periodos más secos, incluso en ese caso la causa podría ser un sensor sucio.

Si el sensor se usa en áreas extremadamente soleadas con cargas de radiación inusualmente altas, se recomienda la aplicación de protección UV McNett

Para aplicar la tecnología UV de McNett:

- Limpie el sensor con agua y un paño limpio y suave.
- Rocíe un paño suave con spray UV Tech.
- Limpie ambos lados de la superficie del sensor con un paño húmedo para aplicar la protección.

**Descargue la aplicación xFarm** para crear su cuenta y conectar los sensores



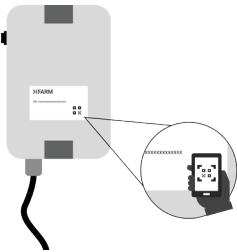
Busque XFARM en la **App Store** o en **Google Play Store**



O **escanee el código QR** desde su smartphone

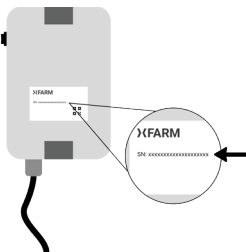


Antes de fijar el xNode, será necesario colocarlo en la aplicación xFarm.  
Hay dos maneras de hacerlo:



### **METODO 1 – código QR**

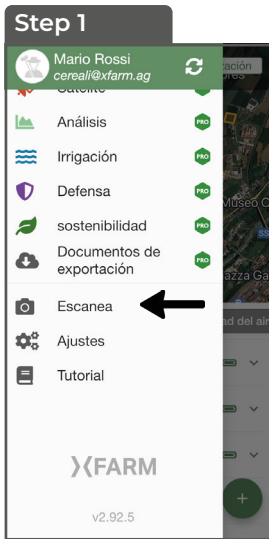
Escanee el código QR en la parte posterior del dispositivo.



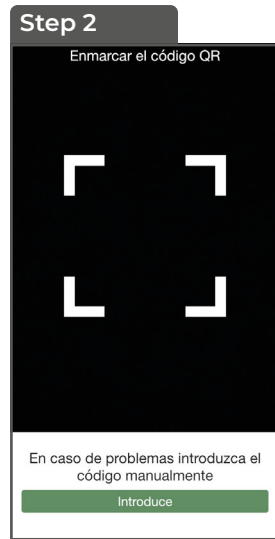
### **METODO 2 - Numero de serie**

Introduzca manualmente en la aplicación el número de serie que se encuentra en la parte posterior del dispositivo.

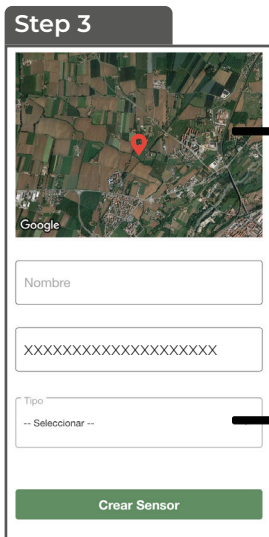
## 1) Escanear el código QR (recomendado)



En el menú, selecciona **Escanea**



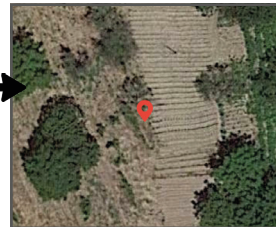
La cámara se activará y reconocerá el código QR



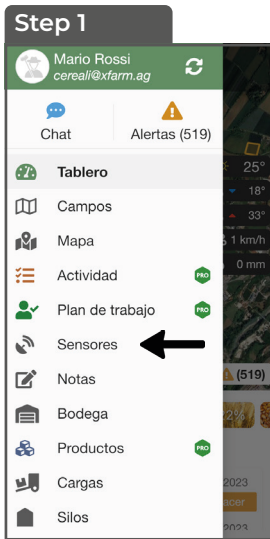
Puedes poner la ubicación del sensor en el mapa

Seleccione el tipo de sensor conectado al xNode

Complete todos los datos y pulse **Crear sensor**.



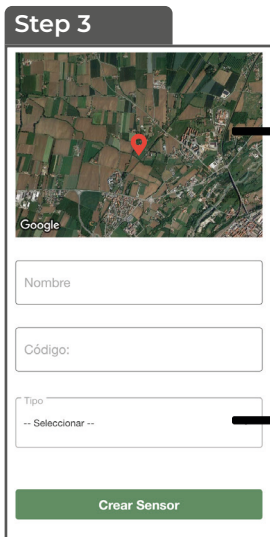
## 2) Escribir a mano el número de serie



En el menú seleccione **sensores**

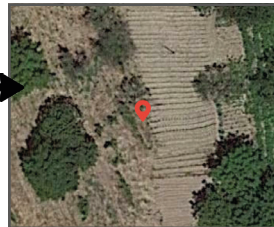


Desde el botón seleccione **Nuevo sensor**



Complete todos los datos y pulse **Crear sensor**.

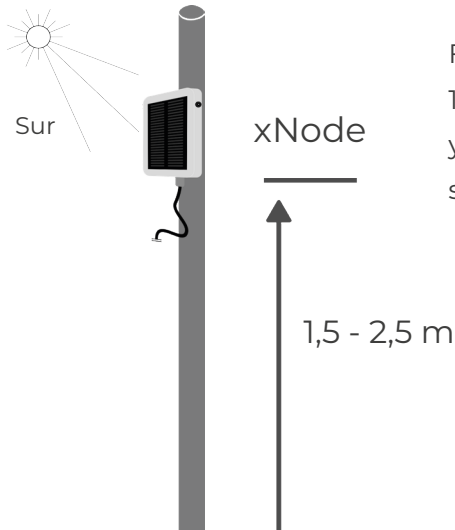
Puedes poner la ubicación del sensor en el mapa



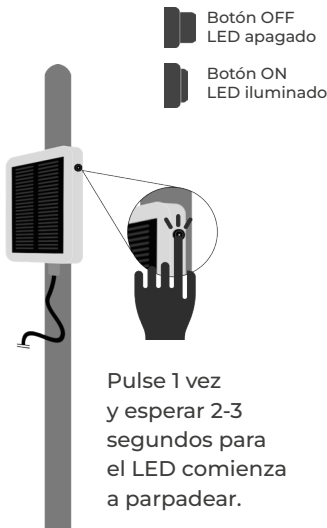
Seleccione el tipo de sensor conectado al xNode



## Fijación del xNode y puesta en marcha



Fija el xNode a una altura no inferior a 1,5 metros, por encima de los cultivos y con el panel fotovoltaico orientado al sur.



Complete la instalación encendiendo el xNode:

Pulse el botón situado en el lateral del aparato para que permanezca pulsado.

La luz LED permanecerá encendida hasta que se conecte a la red eléctrica, y luego se apagará.

**Si la conexión falla**, repita la operación apagando y encendiendo el xNode después de unos segundos.





Hereby, xFarm Technologies Italia S.r.l. declares that this device complies with the essential requirements and other relevant provisions of Directive 2014/53/EU.

The complete Declaration of Conformity is available at the headquarters of xFarm Technologies Italia S.r.l., Via Lanza 29, 15040 Valmacca (AL), Italy or at [www.xfarm.ag](http://www.xfarm.ag).



#### European Union - Disposal Information

This symbol on the product, on the batteries or on the packaging indicates that the product and the batteries it contains cannot be disposed of with household waste. It is the user's responsibility to identify an appropriate collection point for recycling batteries and electrical and electronic equipment.

Separate collection and recycling helps to preserve natural resources and prevent potential damage to the environment and health. Improper disposal can lead to the release of hazardous substances contained in batteries and electrical and electronic equipment. For further information on collection points for batteries and electrical and electronic equipment, please contact your local authority, your local household waste management service or the retailer of your product. This product can use alkaline or lithium batteries.

#### Wireless Radio:

Operating frequency: 868.0...868.6 MHz

Output power: 25 m

WRange: 1000...3000m (open field / obstacles)

#### Mobile Wireless Communication:

4G mobile phone bands: Band 3 (1800 MHz), Band 7 (2600 MHz)

#### Electrical Data:

Battery: LiPo 3.7V, 3500/6000 mAh

Solar panel: 1.5/2.5W, 6VC

Maximum consumption: 600 mA @3.7VC

Medium consumption: 5 mA @3.7V





Con la presente xFarm Technologies Italia S.r.l. dichiara che questo dispositivo è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla Direttiva 2014/53/UE.

La dichiarazione completa di conformità è disponibile alla sede di xFarm Technologies Italia S.r.l., Via Lanza 29, 15040 Valmacca (AL), Italia o sul sito [www.xfarm.ag](http://www.xfarm.ag)



#### **Unione Europea – Informazioni sullo smaltimento**

Questo simbolo presente sul prodotto, sulle batterie o sulla confezione indica che non è possibile smaltire il prodotto e le batterie in esso contenute insieme ai rifiuti domestici. È responsabilità dell'utente individuare un punto di raccolta appropriato per il riciclaggio delle batterie e delle apparecchiature elettriche ed elettroniche.

La raccolta differenziata e il riciclo consentono di preservare le risorse naturali e impedire potenziali danni all'ambiente e alla salute. Uno smaltimento improprio può causare il rilascio di sostanze pericolose contenute nelle batterie e nelle apparecchiature elettriche ed elettroniche. Per ulteriori informazioni sui punti di raccolta delle batterie e delle apparecchiature elettriche ed elettroniche, contattare gli uffici preposti del Comune di residenza, il servizio locale di gestione dei rifiuti domestici o il rivenditore del prodotto.

Questo prodotto può utilizzare batterie alcaline o al litio.

#### **Comunicazione Wireless Radio:**

Frequenza di Operatività: 868.0...868.6 MHz

Potenza d'uscita: 25 mW

Portata: 1000...3000m (campo aperto / ostacoli)

#### **Comunicazione Wireless Cellulare:**

Bande Cellulari 4G: Banda 3 (1800 MHz), Banda 7 (2600 MHz)

#### **Dati Elettrici:**

Batteria: LiPo 3.7V, 3500/6000 mAh

Pannello Solare: 1.5/2.5W, 6V

Consumo Massimo: 600 mA @3.7V

Consumo Medio: 5 mA @3.7V



Por la presente, xFarm Technologies Italia S.r.l. declara que este dispositivo cumple los requisitos esenciales y otras disposiciones pertinentes de la Directiva 2014/53/UE.

La declaración de conformidad completa está disponible en la sede de xFarm Technologies Italia S.r.l., Via Lanza 29, 15040 Valmacca (AL), Italia o en [www.xfarm.ag](http://www.xfarm.ag).



#### **Unión Europea - Información sobre el descarte**

Questo simbolo presente sul prodotto, sulle batterie o sulla confezione indica che non è possibile smaltire il prodotto e le batterie in esso contenute insieme ai rifiuti domestici. È responsabilità dell'utente individuare un punto di raccolta appropriato per il riciclaggio delle batterie e delle apparecchiature elettriche ed elettroniche.

Este símbolo en el producto, en las pilas o en el embalaje indica que el producto y las pilas que contiene no pueden desecharse con la basura doméstica. Es su responsabilidad identificar un punto de recogida adecuado para el reciclaje de pilas y aparatos eléctricos y electrónicos. La recogida selectiva y el reciclaje ayudan a conservar los recursos naturales y a evitar posibles daños al medio ambiente y a la salud. Una eliminación inadecuada puede provocar la liberación de sustancias peligrosas contenidas en las pilas y los aparatos eléctricos y electrónicos. Para más información sobre los puntos de recogida de pilas y aparatos eléctricos y electrónicos, póngase en contacto con las autoridades locales, el servicio local de gestión de residuos domésticos o el vendedor de su producto.

Este producto puede utilizar pilas alcalinas o de litio.

#### **Radiocomunicación inalámbrica:**

Frecuencia de funcionamiento: 868,0...868,6 MHz

Potencia de salida: 25 mW

Alcance: 1000...3000m (campo abierto / obstáculos)

#### **Comunicación inalámbrica celular:**

Bandas de telefonía móvil 4G: Banda 3 (1800 MHz), Banda 7 (2600 MHz)

#### **Datos eléctricos:**

Batería: LiPo 3.7V, 3500/6000 mAh

Panel Solar: 1.5/2.5W, 6V

Consumo máximo: 600 mA @3.7V

Consumo medio: 5 mA @3.7V





xFarm Support

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