# Dugu Hɛrɛw

I laɲini ye ka dugu ni ɲɛnamaya (ŋɔnɔ, ɲɛgɛnɛ, bakitɛri, humus) faamuya ani fɛn caman dabɔli dugu kɔnɔ ka baara kɛ ni yɔrɔ kelen ye ka i ka fɛnŋɛnamafɛnw bonya.



## KƆNƆKOW

1 An bɛna a jira i la cogo min na, sɛnɛfɛnsɛnɛw bɛ se ka dugukolo ta ka a kɛ a ka ɲi ka balo
2 WALASA DUGU KA KƐ JOLIYALEN YE, A KA KƐ
3 Nàfama jɛgɛnna jiminiw ka bonya ni ka kɛnɛya, u ka kan ni kɛnɛ ye, ji, ani balo ye. U
4 Dugu nɔgɔn ka bon ni **humus** ye, o bɔra dugukolo laɲiniw ni fɛŋɔgɔnw ka sa kɔ
5 **Humus**
6 Dugu ka kɛ:
7 Misɛli
8 acariens
9 **Termitiw**
10 O bɛ wele ko sigida dɔ ye min ka **nafa ka bon** ani a ka **kɛɲɛ ka ca**, o la mɔgɔ
11 O bɛ wele ko sigida dɔ ye min ka bon ani ka kɛɲɛɲɛ, o la mɔgɔ bɛɛ bɛ a ka baara kɛ, hali limace!
12 Fɛn ninnu bɛɛ bɛ baara kɛ ɲɔgɔn fɛ walasa ka dugukolo labɛn kokura, ka a mara k
13 WALIMA BAARA MIN BƐ KƐ BAARA-JURU KAN
14 A bɛ daminɛ na, yɔrɔ fitinin dɔ bɛ dugukolo nafama dɔw labɔ. Ni i bɛ taama-yɔrɔw
15 A daminɛ na, yɔrɔ fitinin dɔ ka dugukolo ɲuman dɔ bila a kan. Ni i bɛ taama-yɔrɔw fɛn, i bɛ o
16 Dugukolo datugu-kulu ka baara
17 Paillage ka baara
18 Paillage ka baara
19 Paillage ka baara
20 Kaaberɛ nin siranw donsoya
21 **Mikoro-organismu ni**
22 Mikoro-organisime ni
23 Mikoro-organismu ni
24 Micro-organismes ni nɛrɛw ye
25 Mikoro-organismu ni
26 BUGUNU JIRIWALAW KA DƆN KƐ SO KƆNƆ NI U KA SƆGƆSƆGƆLI NI U KA BAARA K
27 Bi fura bɛ bonya, u bɛ dugukolo kɔlɔsi ni tile ni hura ye.
28 FOTOZAN
29 Ni yɛlɛma sugari la min bɛ di u ma, sigi dɔw bɛ kɛ a ka da ye funtigi kama: u bɛ
30 Jiridenw bɛ ji ni balo sɔrɔ dugukolo kɔnɔ. O kama u bɛ u
31 Ni sɛnɛnna kɔfɛ, jijiw bɛ to duguma ka bɔ, o bɛ dugu barika bonya ni
32 Sankalaɲɔgɔnɲɔgɔn bɛ dugukolo di ni dugukolo-ɲɛfɛn ye. A bɛ se ka don
33 N'i sɔnna ka bin kura dabali, i ka fange-joli in laban duguma n'i ma a faga, walasa
34 X3
35 Baara min bɛ kɛ ni **planches de culture** ye, o ka bon ni fɛn caman ye: a bɛ dugukolo diɲɛ, o la a bɛ se ka dɔgɔya

1

PARTIE 1 SUR 35

## An bɛna a jira i la cogo min na, sɛnɛfɛnsɛnɛw bɛ se ka dugukolo ta ka a kɛ a ka ɲi ka balo



# An bɛna a jira i la cogo min na, sɛnɛfɛnsɛnɛw bɛ se ka dugukolo ta ka a kɛ a ka ɲi ka balo

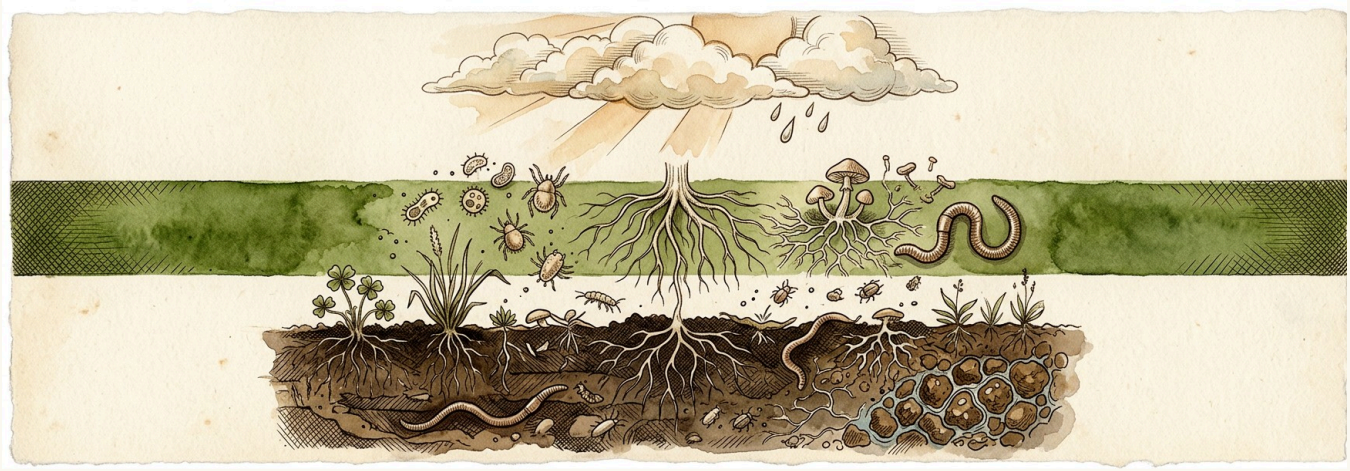
walasa ka se ka fɛnɲɛnama n’a ka fɛnɲɛnamaya ni nɛgɛnɛw ka kɛnɛya ni a ka bonya ɲuman garanti.



## WALASA DUGU KA KƐ JOLIYALEN YE, A KA KƐ

NIŊANIN YE

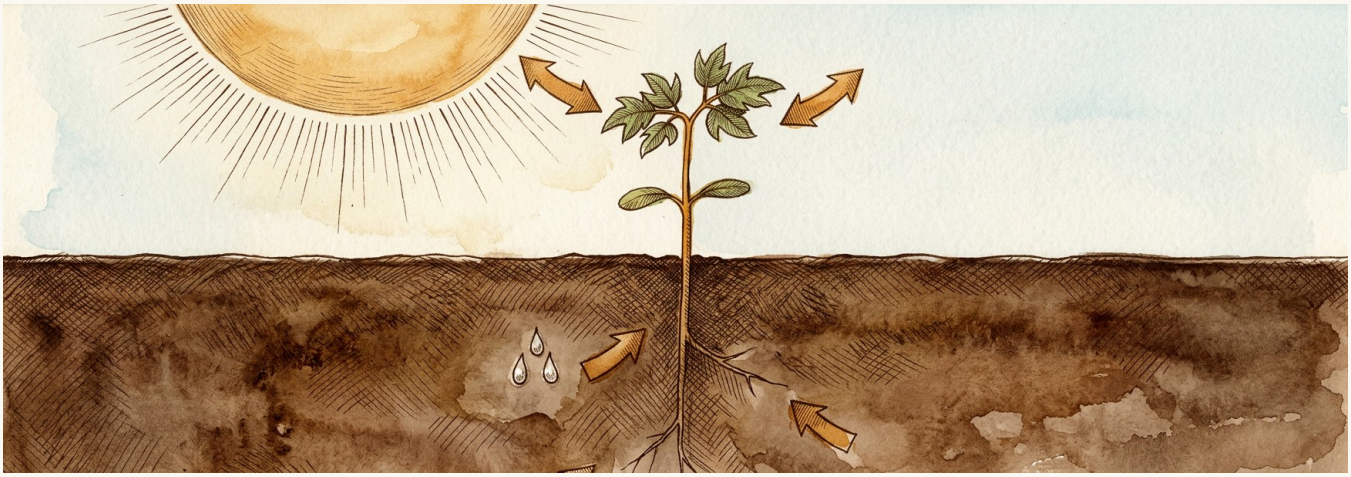
## Nàfama jɛgɛnna jiminiw ka bonya ni ka kɛnɛya, u ka kan ni kɛnɛ ye, ji, ani balo ye. U



## Nàfama jɛgɛnna jiminiw ka bonya ni ka kɛnɛya, u ka kan ni kɛnɛ ye, ji, ani balo ye. U

balila dugukolo sanfɛla fɛ (cɛntimɛtɛrɛ 10-20 gɛrɛn).

# Dugu nɔgɔn ka bon ni **humus** ye, o bɔra dugukolo laɲiniw ni fɛnɲɔgɔnw ka sa kɔfɛ (jɛgɛnni fɛnɲɔgɔnw...



## Dugu nɔgɔn ka bon ni **humus** ye, o bɔra dugukolo laɲiniw ni fɛnɲɔgɔnw ka sa kɔfɛ (jɛgɛnni fɛnɲɔgɔnw, filaworo,

sɔgɔsɔgɔbaga saaba, bɔnɔw...).



## **Humus**

Dugu min ka di, o ka di ni **humus** ye. O bɔra dugukolo laɲiniw ni fɛn camanw ka sa-sa-sa la (sege-sege-len yiriw, wulawula-wulawula-w, fɛnɲɛnɛw minnu sara, bɔnɔw…).

# Dugu ka kɛ:



## Dugu ka kɛ:

ka kɛ ni **dugukolo lajɛlen** ye i n'a fɔ **dugukolo ni yiriw ka fɛnɲɛnɛ** ani **kabakurunw**,

- ka kɛ ni **ji** ye min bɛ **dugukolo lajɛlen** ni **yɛlɛmafɛnw** jira, ani **kɔnɔkow**.

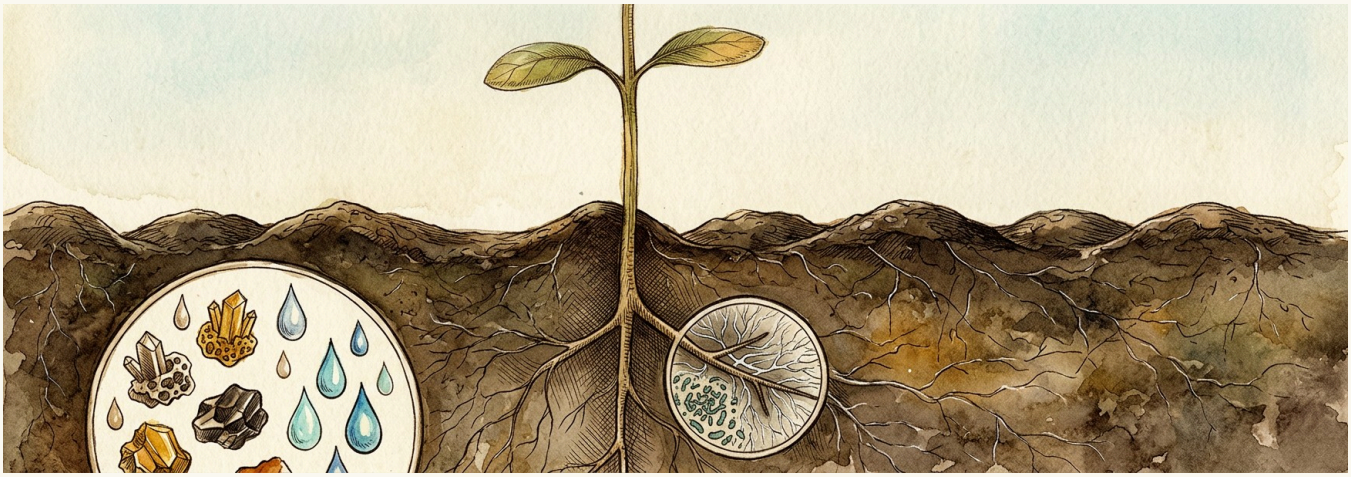


## Misɛli

bakteri

A ka sigi yɛrɛ ka walew ba fana kɛ:

- Walew dɔw minnu ma yɛlɛn jii la i n'a fɔ **bakteri** ni **fɔn** minnu ka fari fɛfɛnw ka diɲɛ, o de bɛ wele ko **misɛli**.

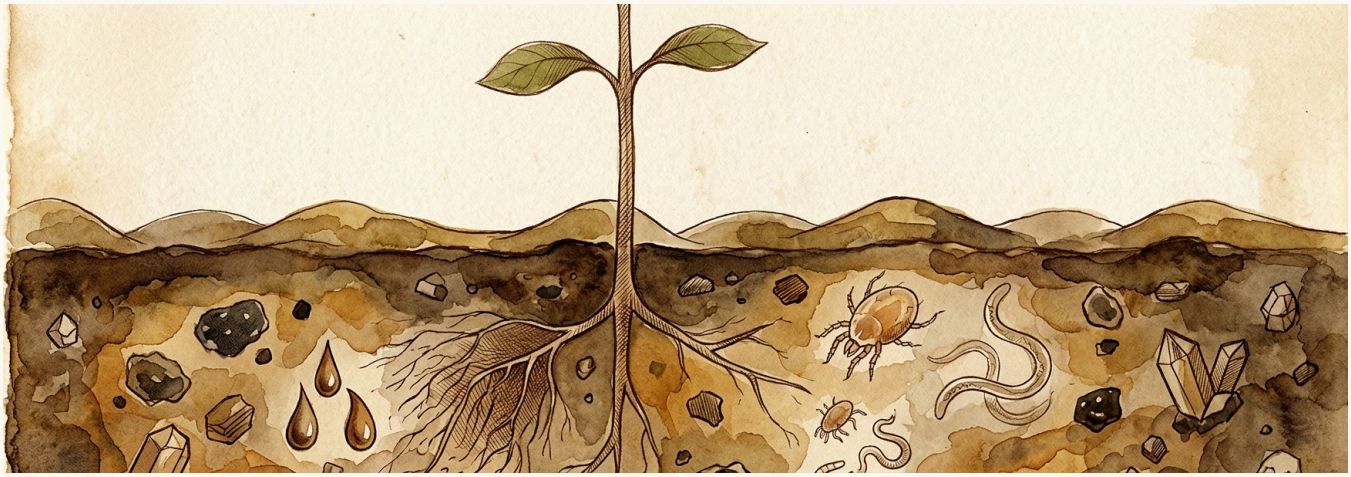


## acariens

nématodes larves

A accueille également des organismes vivants :

- des organismes de quelques millimètres comme des **acariens**, des petits vers (appelés **nématodes**) ou des **larves** d'insectes.

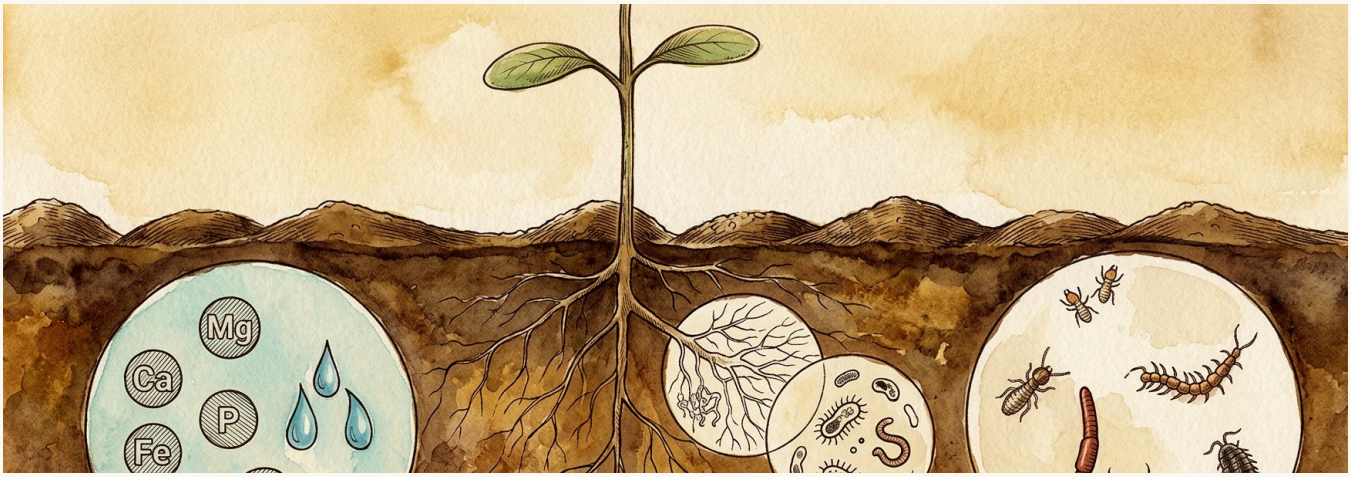


## **Termitiw**

dugukolo jɔn, kɛrɛkɛrɛkɛ, dugukolo nɛnɛ,ɲininkali

A bɛ sigi di fana dugukolo bɛnbaliw ma:

ani **sɛgɛsɛgɛw**: i n'a fɔ **dugukolo nɛnɛw**, **dugukolo jɔnw**, **termitiw**, **sɛgɛsɛgɛw**, **kɛrɛkɛrɛkɛw** walima **ɲininkaliw**.




## O bɛ wele ko sigida dɔ ye min ka **nafa ka bon** ani a ka **kɛɲɛ ka ca**, o la mɔgɔ bɛɛ bɛ a ka baara kɛ, hali **limace**!

O bɛ wele ko sigida dɔ ye min ka **nafa ka bon** ani a ka **kɛɲɛ ka ca**, o la mɔgɔ bɛɛ bɛ a ka baara kɛ, hali **limace**!

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## O bɛ wele ko sigida dɔ ye min ka bon ani ka kɛɲɛɲɛ, o la mɔgɔ bɛɛ bɛ a ka baara kɛ, hali limace!

O bɛ wele ko sigida dɔ ye min ka bon ani ka kɛɲɛɲɛ, o la mɔgɔ bɛɛ bɛ a ka baara kɛ, hali **limace**!



## Fɛn ninnu bɛɛ bɛ baara kɛ ɲɔgɔn fɛ walasa ka dugukolo labɛn kokura, ka a mara ka kɛ hɛrɛ ye, ka a to ka kɛ nɔgɔ ye,

ka kɛ fɛn ye min bɛ fɛnɲɛnɛn kɛ ani ka sigi sen kan walasa ka jiriw n'a fɛnɲɛnɛnw dabɔ.

O ni fɛnɲɛnɛn baara ye dugukolo nafa sigiɲɔgɔnna ye.



## WALIMA BAARA MIN BƐ KƐ BAARA-JURU KAN

O BƐ DUGU DAKAN K'A KƐ FƐN-KUNBA YE, O KƆRƆ YE KO A BƐ DUGU DAKAN K'A KƐ FƐN-KUNBA YE WA?



## A bɛ daminɛ na, yɔrɔ fitinin dɔ bɛ dugukolo nafama dɔw labɔ. Ni i bɛ taama-yɔrɔw fɛn, i bɛ o dugukolo ta ka don

dugukolo kan. O bɛ kɛ ka dugukolo nafama bɛɛ lajɛ yɔrɔ min na jɛgɛnw bɛ bon.

## A daminɛ na, yɔrɔ fitinin dɔ ka dugukolo ɲuman dɔ bila a kan. Ni i bɛ taama-yɔrɔw fɛn, i bɛ o



## A daminɛ na, yɔrɔ fitinin dɔ ka dugukolo ɲuman dɔ bila a kan. Ni i bɛ taama-yɔrɔw fɛn, i bɛ o

dugukolo in jigin yɔrɔw kan. O bɛ dugukolo ɲuman bɛɛ lajɛ yɔrɔ min na jikinɛw bɛna bon.

# Dugukolo datugu-kulu ka baara



## Dugukolo datugu-kulu ka baara

Dugukolo datugu-kulu (mulch) ka fisa ni a bɛ kɛ yɔrɔ minnu bɛ taa-ɲɔgɔn na:

* A bɛ ji minɛ i n'a fɔ ɛpɔn, walasa dugukolo ka sigi nɔgɔn na.

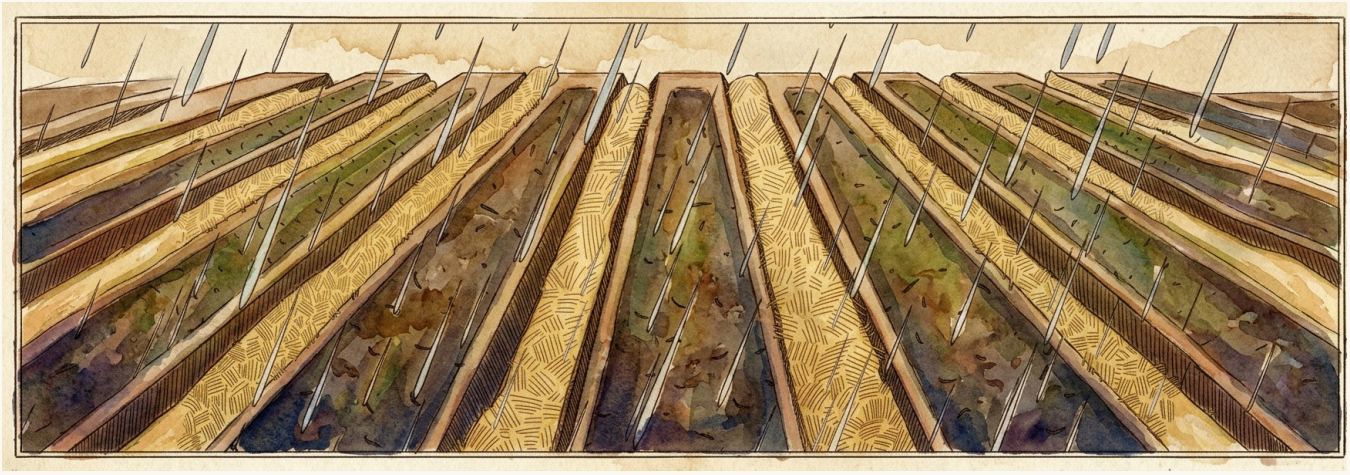
* A bɛ ji boli gɛlɛya ni sanji baa bɔra, o bɛ dugukolo boli bali.



## Paillage ka baara

Paillage (mulch) min bɛ kɛ yɔrɔ minnu na, o ka fisa:

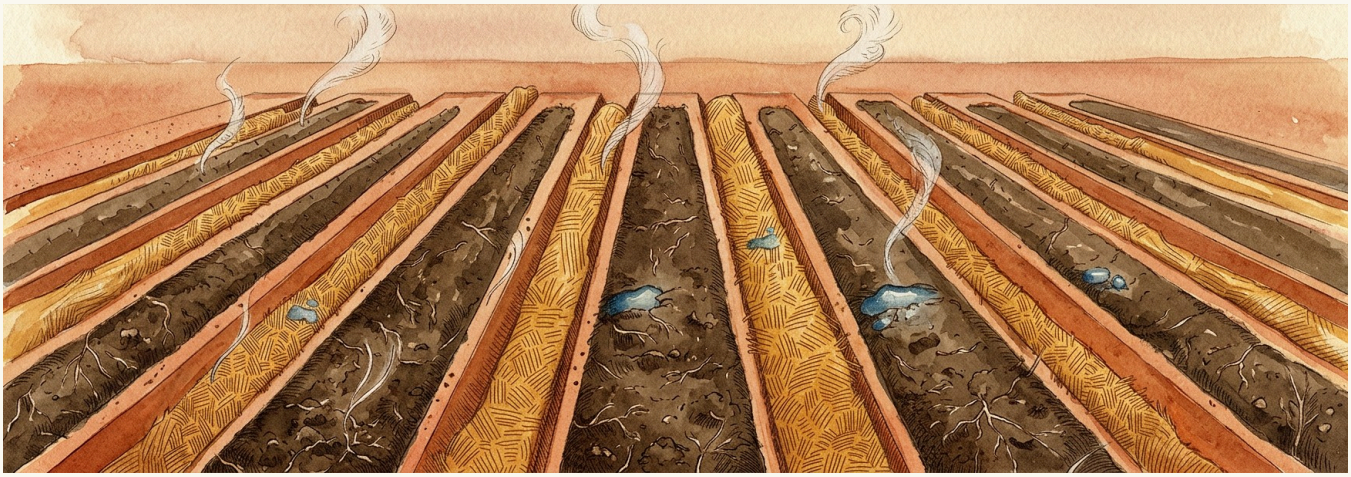
- A bɛ ji minɛ i n'a fɔ espɔnzi, walasa dugukolo ka kɛ jida ye.
- A bɛ ji boli gɛlɛya ni sanji gɛlɛn bɔra, o bɛ dugukolo gɛlɛya dɔgɔya.



## Paillage ka baara

Paillage (mulch) min bɛ kɛ yɔrɔ minnu na, o ka fisa ka kɛ:

- A bɛ ji minɛ i n’a fɔ espɔnzi, walasa dugukolo ka kɛ jikɔrɔ.
- A bɛ ji boli gɛlɛya ni sanji gɛlɛn bɔra, o bɛ dugukolo tiɲɛni dɔgɔya.



## Paillage ka baara

Paillage (mulch) ka baara ka bon kosɛbɛ:

* A bɛ ji minɛ i n'a fɛ ɛpɔn bɛ ji minɛ cogo min, walasa dugukolo ka kɛ nɔgɔn ye.

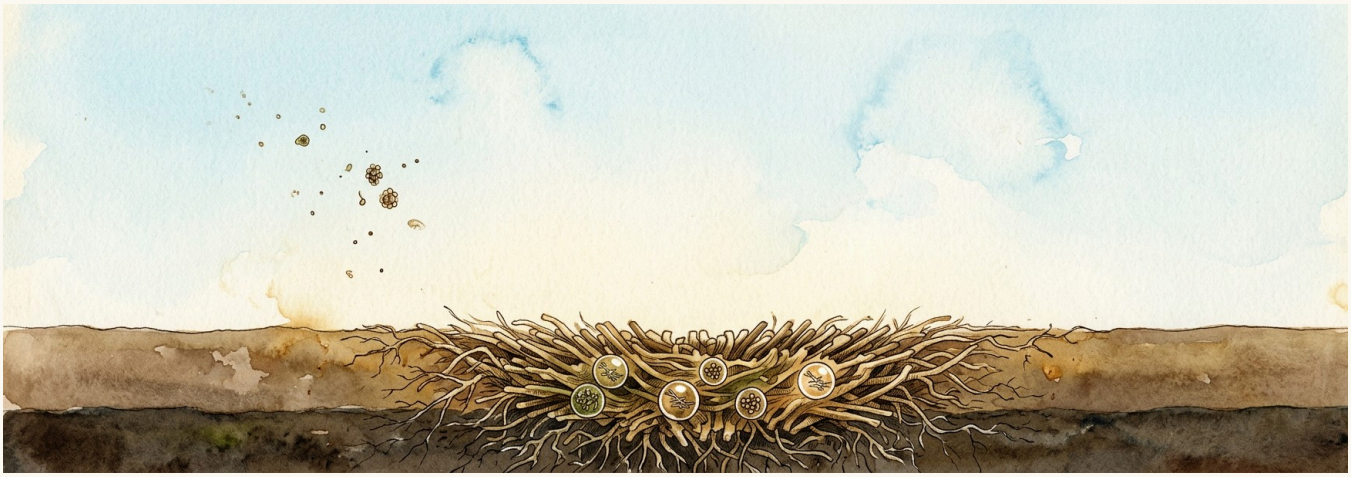
* A bɛ ji boli gɛlɛya ni sanji ka bon, o bɛ dugukolo bali ka bɔ.



## Kaaberɛ nin siranw donsoya

Siranw donsoya (bakteriɛw kaɛ fungiɛw) ye paali kan siran mena

# **Mikoro-organismu ni**



## **Mikoro-organismu ni**

**Dusukunw ka baara**

U bɛ kɛ **kloporow**, **dusukunw** (termitiw, nankurunw, kɔnɔntɔnw…) ni **dugukolo-ɲɔgɔnw** ka dumuni ye.



## Mikoro-organisime ni

Kabakurunba bɛɛ bɛ barika don paillage ka bonya la ka kɛ **komposi** ye. O la, an bɛ se ka kuma **komposi** kan min bɛ yɔrɔ la minnu bɛ taama. Mikoro-organisime ni kabakurunba ka **nɔgɔ** ni u ka **sugu** bɛ bonya ka kɛ **komposi** ye, o bɛ kɛ ka **komposi** lajɛ.



## Mikoro-organismu ni

Dusukunw ka baara

- **Dugukolo dusukunw** ni **terimitiw** bɛ dugukolo lafili-lafili, o bɛ **jii** ni **hakili** ka taama nɔgɔya, wa a bɛ segejɔgɔnw dɛmɛ u ka u ka **ɲɛsin** sɔrɔ.



## Micro-organismes ni nɛrɛw ye

Nɛrɛw ni nɛrɛw dɔnniya kɛlɛbɔ bɛɛ kɔnɔ, o bɛ se ka kɛlɛbɔ tɛmɛlenw ka kɛlɛbɔ kɔnɔ tɛmɛlenw bɛɛ kɔnɔ, o ye ka kɛlɛbɔ tɛmɛlenw ka kɛlɛbɔ kɔnɔ tɛmɛlenw bɛɛ kɔnɔ, ka kɛlɛbɔ tɛmɛlenw bɛɛ kɔnɔ tɛmɛlenw bɛɛ kɔnɔ, o ye ka kɛlɛbɔ tɛmɛlenw ka kɛlɛbɔ kɔnɔ tɛmɛlenw bɛɛ kɔnɔ.



## Mikoro-organismu ni

Dusukunw ka baara **Dusukunw** ni **sekɛnɛw** ka baara. **Azote** b'a to **yiridenw** ka bonya, **phosphore** b'a to **juruw** ka bonya, **potassium** b'a to **yiridenw** ka bonya, nka **calcium**, **magnésium**, **fer** ni **oligo-éléments** wɛrɛw fana bɛ baara kɛ, minnu ka fisa yiri ka bonya ni ka kɛnɛya.



## BUGUNU JIRIWALAW KA DƆN KƐ SO KƆNƆ NI U KA SƆGƆSƆGƆLI NI U KA BAARA KƐCOGO YE?

DUGUKOLO NI A KƆNƆ BAARA KƐCOGO NI A DUGUKOLO DƐMƐNNA?



## Bi fura bɛ bonya, u bɛ dugukolo kɔlɔsi ni tile ni hura ye.

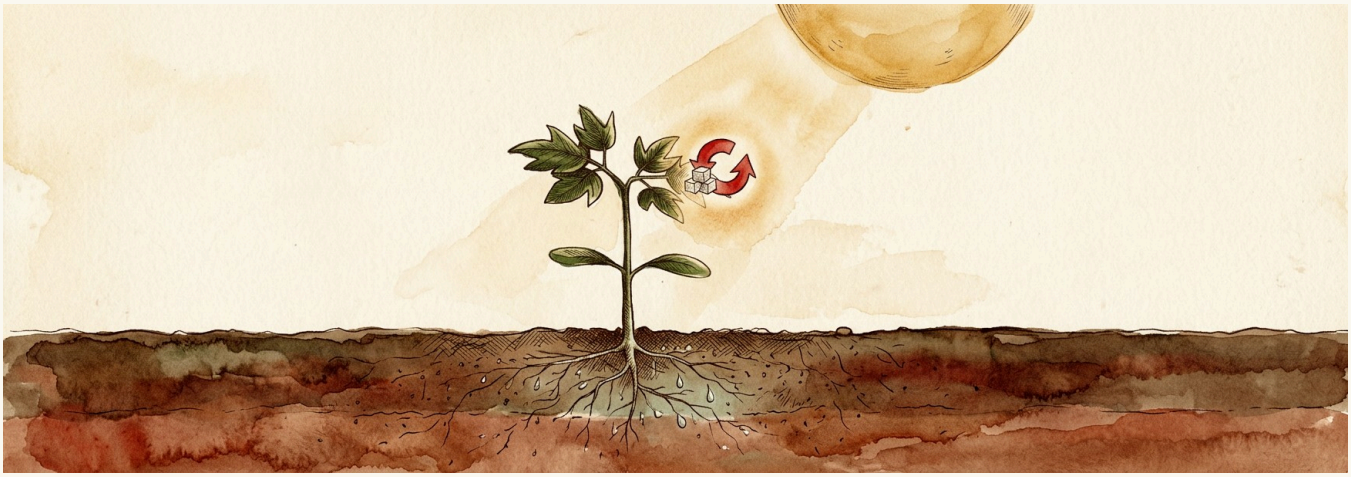
Bi fura bɛ bonya, u bɛ dugukolo kɔlɔsi ni tile ni hura ye.



## FOTOZAN

Jikin bi kulu ka dankanba ye **kɛnɛ** ye. Fotozan ka baara ye **sukuru** dilan ye min bɛ na **fɔn** ni **bakteri** dun dugu kɔnɔ.

# Ni yɛlɛma sugari la min bɛ di u ma, sigi dɔw bɛ kɛ a ka da ye funtigi kama: u bɛ



## Ni yɛlɛma sugari la min bɛ di u ma, sigi dɔw bɛ kɛ a ka da ye funtigi kama: u bɛ

dugukolo ka fɛnɲɛnama dɔw minɛ a nɔ na. O walewari min bɛ se ka kɛ ni mɔgɔ fila bɛ se ka nafa sɔrɔ, o bɛ wele ko **symbiose**. Ni o kɛra funtigi ni sigi cɛ, o bɛ wele ko **mycorhize**.

# Jiridenw bɛ ji ni balo sɔrɔ dugukolo kɔnɔ. O kama u bɛ u



## Jiridenw bɛ ji ni balo sɔrɔ dugukolo kɔnɔ. O kama u bɛ u

jijiw bonya. Jijiw bɛ dugukolo sin, u bɛ dugukolo gɛnɛ ka bonya ka u tanga baara ni kɔnɔna ma.

# Ni sɛnɛnna kɔfɛ, jijiw bɛ to duguma ka bɔ, o bɛ dugu barika bonya ni



## Ni sɛnɛnna kɔfɛ, jijiw bɛ to duguma ka bɔ, o bɛ dugu barika bonya ni

dugu bɛɛ la **dugukolo-jijikulu** (matière organique) min bɛ **dugukolo-ɲɛnajalaninw** (micro-organismes) bɔn. Sɛnɛw dɔw la, jijiw bɛ se ka taa kilomɛtɛrɛ caaman na: dugukolo-jijikulu min b'u la ni u bɛ bɔ, o tɛ foyi ye dɛ!



## Sankalaɲɔgɔnɲɔgɔn bɛ dugukolo di ni dugukolo-ɲɛfɛn ye. A bɛ se ka don

compostière kɔnɔ walima ka don dugukolo-ɲɛfɛn na min bɛ dugukolo-ɲɛfɛn di.

33

# N'i sɔnna ka bin kura dabali, i ka fange-joli in laban duguma n'i ma a faga, walasa



## N'i sɔnna ka bin kura dabali, i ka fange-joli in laban duguma n'i ma a faga, walasa

ka dugu-yɛrɛyɛrɛ in n'a ka ɲɛnamaya in to ka laban.

# X3



## X3

Maraîchage bio intensif ka baara kɛcogo min bɛ kɛ dugukolo hɛrɛma kan ni **planche permanentes** ni **paillage** ye, o bɛ dugukolo ka nafa bonya, wa a bɛ fɛnɲɛnama jɛnsɛn kɛ sisan **sii saba** ka tɛmɛ baara kɛcogo kɔrɔw kan.



## Baara min bɛ kɛ ni **planches de culture** ye, o ka bon ni fɛn caman ye: a bɛ dugukolo diɲɛ, o la a bɛ se ka dɔgɔya

fɛnɲɛnɛn caman na **compost** ni **matière organique** na, o la a bɛ se ka nafa sɔrɔ, k'a sɔrɔ a bɛ se ka fɛn caman dilan ani ka dumuniɲɛnɛn duman dilan.