Ask PQNK Field Answers 3: The Mulcher, Crop Yields, Moisture from the Air, Grow Bags and Clay Slurry

Answers from Asif Sharif to the third set of questions the Ask PQNK assistant could not yet answer: the mulcher, crop yields under PQNK, moisture from the air, holes in grow bags, and clay slurry

When the assistant does not know, it says so, and the question comes to the author. His answer is then published here, so the next farmer who asks gets it at once.

About This Paper

This is the third paper in the Ask PQNK Field Answers series. The questions below reached Ask PQNK, the PQNK assistant on WhatsApp and at pedaver.com/ask, on 16 and 17 November 2026, and it could not answer them from the PQNK library. They were passed to Asif Sharif, Researcher and Developer of PQNK, and his answers are published here. The earlier sets are in KP-226 and KP-227.

1. The Mulcher: What It Does

Question: What is the mulcher that is attached to the PQNK precision planter, and what jobs can it do in PQNK?

The mulcher slashes the mature cover crop (Jantar) on the beds and spreads it evenly as mulch, leaving the whole root system in the soil. It is also used to spread crop residue evenly. So the mulcher is meant for crop residue management: to cover the beds evenly with mulch.

2. Crop Yields Under PQNK

Question: What is the maize yield with PQNK? How much chilli yield is there? How much cotton yield is obtained per acre? What is the yield of sugar beet, and of beetroot? And what about the Tata Diggaj cotton variety in Agra district?

We are very reluctant to mention crop yields, because so many factors are involved:

1. How the transition steps are followed to shift a conventional field to PQNK.

2. The maturity of the soil system after the PQNK transition.

3. Soil type.

4. The seed variety used.

5. Planting time.

6. The number of plants per acre and the plant-to-plant distance.

7. Mulch cover.

8. Water management.

As a rule of thumb, if all the PQNK steps are properly followed, at least 40% higher yield can be expected without the use of inputs.

Even if the yield is not as good as a conventional crop during the first few crops, a PQNK crop is always much more profitable, because the cost of production is reduced: no tillage, no seedbed preparation, one-pass planting, no fertilizer, no weedicides, no pesticides, no fungicides, and at least 80% less irrigation water. PQNK produce also earns a premium for its higher quality.

The same answer applies to maize, chilli, cotton, sugar beet and beetroot, and to any variety in any district, including the Tata Diggaj cotton variety in Agra.

3. Can Plants Live on Moisture from the Air?

Question: Can plants survive only by air irrigation?

Irrigation is not required when the soil has retained roots from previous crops. Rainwater is absorbed by the soil and held there by a thick organic mulch, which restricts evaporation. The mulch also adds dew and moisture from the air to the soil. If all the PQNK steps are properly followed, together with Soil Moisture Management (SMM), irrigation is not required to grow crops around the year, especially where rainfall is 16 inches (400 mm) a year or more.

4. Holes in Grow Bags

Question: Where should the holes for excess water be made in a grow bag, and how many?

In a grow bag, the holes are at the bottom of the bag. Letting water run out of the bag is not good practice: apply only as much water as the plants need. Never water before you see the leaves begin to wilt, and keep the soil covered with organic mulch.

5. Clay Slurry

Question: Can you guide me on how to make a clay and water slurry?

This question needs an explanation of why the slurry is used and for what purpose. There may be many reasons for it, including:

1. Increasing the size of the seed, so that it can be singulated for planting.

2. Choking the pores of sandy soil, to retain water.

3. Helping water flow along the furrows in sandy soil.

The farmer should raise a detailed question in the PQNK learning groups on WhatsApp.

Conclusion

Every question a farmer asks is a gap the library can close. These answers cover the mulcher, crop yields under PQNK, moisture from the air, grow bags and clay slurry. The yield answer holds for every crop: follow every PQNK step, and the field gives at least 40% more without inputs, at a far lower cost.

PQNK Principle: Yield depends on how well every step is followed. Profit begins with the first crop.

Related PQNK Sources

1. KP-226: Ask PQNK Field Answers 1. https://pedaver.com/papers/ask-pqnk-field-answers-1/

2. KP-227: Ask PQNK Field Answers 2. https://pedaver.com/papers/ask-pqnk-field-answers-2/

3. PQNK Book, Chapter 23: The Eight-Step Transition Protocol. https://pedaver.com/books/natural-ecosystem-science/

4. The Mulcher and Bed Renovator. https://pedaver.com/machines/mulcher-bed-renovator/

5. KE-058: Dew Is the Second Best Source of Water: Dew on PQNK Sugarcane Leaves. https://pedaver.com/field-evidence/
6. Ask PQNK: https://pedaver.com/ask, or on WhatsApp at https://wa.me/923437506442

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