PQNK (Pristine Organic Farming) Guide to Wheat Cultivation

Question	PQNK (Paedar Qudratti Nizam Kashatqari) Answer
1. SEED PREPARATION	
Should we soak seeds before sowing or sow directly without soaking?	**Soak seeds before sowing.** Soaking (in water) hydrates the seed, kick-starts germination, giving it a head start and aligning with natural processes. It may not work when a planter is used; in such a case, ensure the soil is moist enough, pick up the soil from where the seed is going to be placed, and make a ball; if it holds, moisture is enough for germination; if not, apply water before or after planting.
Is this method applied for all wheat varieties like Sharabdi, Tukadi, Bansi, Sonamoti, Khapli?	**Yes, for all traditional/desi varieties.** The principle of giving a seed a protected start is universal and beneficial for all living seeds in a pristine system.
Selection method of seed, caution.	**Select seeds from the healthiest, most robust plants.** Use a visual selection for plump, uniform seeds and a buoyancy test (use seeds that sink). Caution: Do not use seeds from diseased or weak plants. The goal is to propagate evolutionary fitness within your farm's ecosystem.
Will non-PQNK seeds with PQNK process result in PQNK standard crop size, shine?	**They will show significant improvement, but the full potential is achieved with adapted seeds.** PQNK processes create a healthy environment, but seeds from chemically farmed parents may not have the same innate potential. Save seeds from your PQNK crop over 2-3 seasons to develop a landrace perfectly adapted to your pristine system.
2. SOWING & MOISTURE MANAGEMENT	
Should we irrigate after sowing if the soil is already moist?	**No.** If the soil has sufficient moisture, irrigation is an unnecessary intervention. The natural system has already provided the signal for germination. Adding water can disrupt soil structure and microbial life.
3. MARCH-APRIL HEAT MANAGEMENT (CORN/MAIZE)	
When should corn/maize be sown?	**Sow in the last week of February or first week of March.** This ensures the corn is tall enough by April to provide effective shade for the maturing wheat, using the system to manage the system.
How much corn should be planted?	**Plant as a "shading crop," not a main crop.** 1 row of corn for every 4-5 rows of wheat is sufficient for microclimate management.
What is the distance between seeds, distance from furrow, and sowing direction?	**Distance between corn seeds:** 1.5 to 2 feet within the row. **Distance from wheat:** plant on the edge of the bed-furrow to shade afternoon sun shine. **Sowing direction:** North-South, parallel to wheat beds, for optimal shadow duration.
Will corn be grown with no-till planter or manually?	**Manually.** This allows for precise placement without disturbing the already-established wheat and intercrop ecosystem.
Will corn reduce wheat row number?	**No, if planned correctly.** Corn is an additional, strategic element for shading and does not replace a wheat row.
4. SEED DENSITY & BED LAYOUT (42-INCH BED / PER ACRE)	
How much wheat seed per 42-inch bed and per acre?	**Significantly less than conventional methods. Aim for 8-10 kg per acre.** High density creates weakness; low density fosters strength by eliminating competition for light and nutrients.
What should be the distance between wheat seeds?	**6 to 8 inches between seeds within a row.** This wide spacing is critical for each plant to develop a massive root system and produce a high number of tillers. Plant two seeds per hill (spot where seed is dropped).
In a 5-row wheat bed, how many rows of green peas and radish should be grown, and what should be the distance from wheat?	**On a 42-inch bed: 5 rows of wheat, 2 rows of green peas, or 2 rows of radish** sown on either side of the bed, at the edge of the furrows. One also can plant 1 row of radish and 1 row of green peas on either side.

Total number of rows in 1 bed including wheat (main crop) + radish + green peas (time-utilization crop) + corn (shading purpose)	**On the bed:** 5 (Wheat) + 1 (Peas) + 1 (Radish) = 7 rows on the bed. **Corn:** 1 row is planted on the side of the bed (on the furrow). By this time (end Feb/early Mar), radishes will be harvested, and peas will near to maturity.
How to sow radish and green peas between wheat lines?	**Use a manually pushed seeder or sow by hand** dribbler to ensure precision within the complex system.
How to re-space no-till planter to avoid seed overlap of radish and green peas on wheat line? Should we run No-till planter first for wheat and second time with space change of seeder device to sow green peas & radish?	**Yes, run the no-till planter twice.** 1. **First Pass:** Sow all 5 wheat rows with 8-inch spacing. 2. **Second Pass:** Remove 3 central planter rows and adjust the two on the furrow edges. Change seed spools suitable for both types of seeds to sow the green peas and radish on the bed edges.
Should radish and green peas be grown in the same bed or different beds?	**In the same bed, as intercrops.** This is "Ecological Stacking." They form a plant community that maximizes resource use, provides ground cover (living mulch), fixes nitrogen (peas), and breaks compaction (radish).
5. MULCHING	
Will Jantar mulch be enough until rice straw is available (Nov–Dec)?	**Yes, absolutely.** Jantar mulch acts as a perfect bridge, maintaining soil ecosystem integrity (moisture, temperature, microbes) until the next on-farm biomass of new crop residue adds in. Beds should always be covered.
6. PRUNING / LEAF TOPPING	
Should pruning be based on time since sowing or seedling/shoot height? On average, how many days and how much height is achieved?	**Primarily based on height, but time is a guide.** First pruning at 25-30 days after sowing, or when the plant is 6-8 inches tall. The thumb rule is that the plant should not be allowed to form straw and nodes on it. If a node is formed on a tiller and we prune it, it will not regrow.
How many tillers are generally expected when first, second, and third pruning are done?	**After 1st Pruning:** 5-8 tillers. **After 2nd Pruning:** 15-25 tillers. **After 3rd Pruning:** 40-70+ tillers.
How many times should pruning be done?	**2 to 3 times,** with an interval of 20-25 days between each pruning.
Up to which month should pruning continue?	**The last pruning should be completed by the end of December.** After this, the plant enters its reproductive phase, and pruning would harm yield.
7. SUNLIGHT MANAGEMENT	
How to manage harsh sunlight in October–November?	**Use the canopy of the intercrops (radish and green peas).** Their quick growth creates a low canopy that shades the soil and wheat seedlings, managing the microclimate. However, soil temperature and moisture maintained by the organic mulch play a major role.
Will radish and green pea canopy help in initial heat management?	**Yes, this is one of their key ecological functions within the system.**
How to manage sunlight in March–April during wheat maturity? Corn canopy management.	**This is the primary function of the strategically planted corn.** The tall corn plants filter the harsh April sun during the critical grain-filling stage, preventing heat stress and ensuring plump grains.
8. HARVESTING	
When is the best time to harvest for maximum quality and yield?	**Harvest when the stalks are golden yellow, but the stem just below the earhead still has a slight greenish tinge. The grains should be hard.** This is physiological maturity.
WATER MANAGEMENT	
How much irrigation is required approximately? Which stage requires irrigation? What is minimum and maximum irrigation time if all PQNK steps are followed?	**Requirement is reduced by 50-70%.** Approximately 2-4 irrigations are sufficient through the furrows. Critical stages: Crown Root Initiation, Tillering, Late Jointing, Flowering, Milky/Dough stage. The **PQNK principle** is to irrigate only when the soil 2-3 inches below the surface feels dry, focusing on building a drought-resilient system through organic matter and mulch. Listen lecture on SMM (Soil Moisture Man.)

9. MIMICKING LOW-TEMPERATURE ZONE	
As wheat is a low-temperature zone crop, which PQNK master processes should be applied to mimic low-temperature conditions for maximum quality and quantity?	We mimic the *effect* of low-temperature (low-stress) conditions by managing the microclimate: 1. **Mulching:** Cools the root zone. 2. **Plant Community Canopy:** Cools the air zone around the wheat. 3. **Pruning:** Builds plant strength and delays sensitive stages. 4. **Robust Soil Health:** Makes the plant more tolerant to stress.
Is the use of ethanol required at any stage?	**In the core pristine PQNK philosophy, ethanol is not a standard input.** The focus is on achieving plant vitality solely through a perfectly designed ecosystem and soil food web, making such inputs unnecessary.
Apart from radish and green peas, can we grow leafy vegetables like coriander, spinach, fenugreek, amaranthus as short-duration options?	Yes. Under PQNK, diversity is encouraged through ecological stacking. Radish and peas are highlighted because they bring specific functions (radish breaks soil compaction, peas fix nitrogen, both create canopy shade). Leafy vegetables like coriander, spinach, fenugreek, and amaranthus also align with PQNK principles. They provide fast ground cover to protect soil, shallow roots that don't compete heavily, quick harvests for dietary and economic benefit, and biomass that enriches the mulch when residues are left behind. They should be sown at the furrow edges or between rows, ensuring mulch cover is maintained and overcrowding is avoided.
What should be the plant-to-plant distance between radish and green peas?	Radish: approximately 20 cm between plants, sown in single rows at the bed edges. Green peas: approximately 10 cm between plants, also sown in single rows at the bed edges. This spacing ensures radish has room for root bulking, peas form a nitrogen-fixing canopy, and together they create a low intercrop canopy that shades the soil and supports the main crop without excessive competition.