faded plants. In those areas, rice is the
crop by salinity rather than vegetables a
This might be due to the specific salt to
these crops, with rice being generally le
vegetables and watermelons (Al-Tamin
The annual damage of crops is mostly
21K-50K (76 respondents), followed by
respondents). Less frequent are dama
(32 respondents), 1-2Lakh (32 respond
2Lakh (20 respondents). The majority
(73%) reported that in the absence o
the expected rice production levels a
30 maund per bigha. Besides this,
calamities are responsible for less prod
like floods, heavy rainfall, drought, flow
erosion. Among all of them, floods are
natural calamity responsible for reduced
clarified by 78% of respondents. As
rate declines due to salinity and other n
people in these areas mostly depend on
in Gher. From the 1980s, rising seas a
began pushing saltwater over the banks o
ruining crops and this led farmers to flo
with brackish water and stock the briny p
tiger prawn fry (Guardian, 2022). Althou
plant breeding or the application of alt
techniques can combat salinity (Afzal *et a*
might not be completely informed about
developments. So, the economic situatio
a result of lower crop yields induced by l

Salty River Water Affecting Farms: Solut

The investigation undertaken in the Pas
disclosed a clear connection between
water salinity. Soil salinity increased in
salinity as one proceeded south. This m
river water percolates into the soil and co
the soil profile via evaporation and capi
detrimental effects of salinity on Agricult
were readily apparent due to the de
of salinity as the majority of produc
diminished crop yields, with rice be
impacted. A variety of solutions can
address this issue. The adoption of fres
techniques can effectively decrease the
salts by diluting their existing state (FA
Khal is one of the tributary rivers of

l., 2014).

(FAO, 2020b). The development and adoption of salt-resistant plants may serve as bioremediation to give a sustainable way of mitigating soil salinity (Wang *et al.*, 2020). Furthermore, soil amendments such as gypsum or limestone might boost drainage capacity and reduce the adverse effects of salt on the structure of the soil. Farmers dwelling in the Pashur River region can work towards controlling salinity and enhancing agricultural output by applying the previously listed measures.

CONCLUSION

The investigation found considerable differences in water and soil quality parameters, as well as strong correlations between several variables in the Pashur River basin and their consequences for local agriculture and livelihoods. The EC's geographic distribution demonstrated a southward shift in salt levels in both water and soil samples, indicating that water salinity may influence soil characteristics. This conclusion underlines the need to comprehend and mitigate the consequences of saltwater intrusion on agricultural productivity and coastal communities. The study uncovers variances in land size and crop choices in agriculture, with smaller farms focusing on vegetables, medium farms on rice, and large farms on high-value crops like watermelon, thereby increasing productivity and profitability based on available acreage. The study also showed that salt negatively influenced agricultural production, with rice production dropping considerably.

Farmers in the region confront issues in mitigating soil salinity and improving agricultural production, necessitating the installation of effective mitigation techniques such as freshwater irrigation, drainage systems, salt-tolerant crops, and soil additives to reduce salinity and improve yields. Even though the study gives information on the interconnection between water and soil features in the Pashur River basin, further research is needed on saltwater intrusion mechanics, mitigation effectiveness, and socioeconomic impacts. Collaborative efforts among scientists, policymakers, and communities are crucial for sustainable coastal agriculture. Overall, addressing soil salinity issues in the Pashur River basin will require multidisciplinary study and collaboration among scientists, legislators, and community members to build resilience and sustainability in coastal agriculture systems by better understanding these complex environmental challenges and implementing effective mitigation techniques.

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