REHABILITATION OF AGRICULTURE AFTER FLOOD 2022 AND POSSIBLE ROLE OF ZTBL

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ZARAI TARAQIATI BANK LIMITED

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REHABILITATION OF AGRICULTURE AFTER FLOOD 2022 AND POSSIBLE ROLE OF ZTBL

Climate Change and Its Impact on Global Food Security:

Climate change is one of the most pressing challenges facing global food security today, as it poses significant threats to agricultural productivity and the stability of food systems. Scientific evidence increasingly shows that human-induced climate change is causing more frequent and severe weather events, such as floods, droughts, and heatwaves, disrupting food production and distribution (Perkins-Kirkpatrick, S. E. et al., 2022). These climatic shifts are particularly concerning in regions like South Asia, where agriculture is a major source of livelihood and food supply. In Pakistan, for example, extreme weather events have become more common, leading to devastating floods that not only destroy crops and livestock but also erode soil quality and reduce arable land (Lobell, D. B. et al., 2011).

The 2022 floods in Pakistan exemplify the vulnerability of the country's agricultural sector to climate change, impacting millions of people and causing substantial economic losses. The reliance on monsoon rains for agriculture in Pakistan makes the country especially susceptible to changes in precipitation patterns, which are becoming increasingly erratic due to climate change (Sattar, M. N., et al., 2020). This unpredictability challenges farmers' ability to plan and manage their crops effectively, leading to decreased yields and threatening food security (FAO, 2021). Moreover, the rising temperatures associated with climate change exacerbate the situation by increasing the frequency of heatwaves, which can further stress crops and reduce productivity (Schlenker, W., & Roberts, M. J., 2009).

As climate change continues to alter weather patterns, its impact on global food security is expected to intensify, with developing countries like Pakistan facing the brunt of these challenges. The need for adaptive strategies and policies is crucial to mitigate the adverse effects of climate

change on agriculture and ensure sustainable food production for future generations (Wheeler, T., & Von Braun, J., 2013). Efforts such as developing climate-resilient crops, improving water management, and enhancing agricultural practices are essential steps toward safeguarding food security in the face of a changing climate (Vermeulen, S. J., et al., 2012).

History of Floods in Pakistan:

Since the independence of Pakistan in 1947, the recurrence of the major flood is almost a decade or less, mostly due to heavy monsoon rainfall in July and August causing severe losses in terms of human lives, agriculture, infrastructure, property, and economy. Three major floods occurred in Pakistan are in 2010, 2011, 2012, and 2022 where the 2010 floods caused inundation of over 70,000 km2 and affected around 900,000 households (Haq. M, 2012). The most recent' 2022 Pakistan floods' impacted approximately 33 million people, killing nearly 1500 people, and destroying critical infrastructure, agricultural land, and properties. In August 2022, Bloachistan province of Pakistan received 590% more rainfall than normal while Sindh received 726% more rainfall than average for this month. The World Weather Attribution group reports a 75% increase in heavy rainfall during the 60 days in the Indus River basin of Pakistan, Otto, F. E. L. *et al*. (2022).

The post-disaster damages assessment is extremely important in the context of global warming causing more frequent extreme events. The loss and damages (L&D) assessment is key to post-disaster recovery and rehabilitation under the conference of parties (COP) commitments. Frameworks of L&D assessments enable evidence-based policies to reduce the risk of disaster and its impacts on various sectors. Adaptation of the L&D mechanism in the agriculture sector can help in monitoring and evaluating the economic impacts of disasters and support the compensation mechanisms. The damages are partial or complete destruction of physical assets while production losses refer to declines in the value of agricultural production resulting from a disaster. The

production losses not only cause deficits in the income of impacted communities but may also result in near-term food shortages in the region and it is likely to slow down the post-disaster recovery if not properly managed.

The monsoon spell that started in the second week of July 2022, has caused widespread flooding and has led to extensive human and infrastructure damage across many parts of Pakistan. The Government of Pakistan estimates that around 33 million people across the country are affected by the rains, floods and consequent impacts such as landslides. More than 421,000 refugees living in calamity-declared districts are also affected or at risk. As of August 2022, some 6.4 million people are estimated to need of assistance.

According to the National Disaster Management Authority (NDMA)' Monsoon Situation Report on August 30, 2022, around 1,057,388 houses were damaged (including 324,386 fully and 733,002 partially damaged). In addition to this, around 5063 KM roads have been washed away, 243 bridges have collapsed, and 730,483 animals have died.

Death and injury is extensive and likely higher because of unreported number in Balochistan, Khyber Pakhtunkhwa (KP), and Sindh provinces. In the same vein, livestock and agriculture was impacted threatening food security. In addition, the floods are expected to strain existing healthcare services as gastrointestinal illnesses, malaria, skin infections, snake bites and injuries are anticipated to increase significantly.

Sindh province is affected most adversely by heavy rainfall and resultant flooding in Pakistan. Over 110 districts have declared a state of emergency in Pakistan. According to the Provincial Disaster Management Authority of Sindh, over 240,000 people remain displaced in the province as of 3 December 2022. Nearly 90% of flood-displaced people are reportedly with host

communities, while the remaining are in tent cities and relief camps. While receding flood waters have allowed millions of people to go home, there are reports of significant service gaps in areas of return, in addition to extensive impacts to homes, agriculture, and livelihoods. In general, access to clean food, water, clothing, shelter and the ability to find safe areas to rest and sleep are other key challenge.

Public health concerns are high due to damaged infrastructure, stagnating water and inadequate sanitation facilities. In Sindh, between July and early October, nearly 350,000 people were suspected of having malaria, more than 700,000 had some form of diarrhea, and over 770,000 people reported skin-related diseases. The practice of open defecation has increased from one-fifth before the floods to over one-third of the affected population, with 6 million no longer having home sanitation facilities.

An Overview of Damage caused by Flood 2022 in Sindh

Overview of Damage in Sindh (according to Provincial Disaster Management Authority (PDMA) Sindh from June to Dec 2022):

- 8,422 people injured
- 801 deaths
- 436,435 Livestock Perished
- 642,672 houses partially Damaged, 1,415,677 houses fully damaged
- 3,777,272 acres of land damaged
- 12,356,860 people affected
- 194,562 people displaced
- 59 health facilities fully damaged and 461 partially damaged

Agriculture losses in Flood 2022:

Nationally, Pakistan's Sindh Province accounts for 42% of the rice production, 23% of the cotton production, and 31% of the sugarcane production. The 2022 Pakistan floods caused unprecedented damage to agriculture crops, livestock, and infrastructure, including storage facilities with millions of tons of grain, posing the risk of an unprecedented food security crisis in the country. The floods struck before the harvesting stage of key crops, including cotton, rice, and sugarcane. Using an approach based on satellite imagery, we assessed potential crop production losses for major crops at the sub district-level to support the Government of Pakistan's rehabilitation and compensation planning processes in Sindh Province. According to flood extent mapping using Sentinel-1 satellite images acquired during 22–28 August, flood waters directly inundated about 2.5 million hectares of land (over 18% of Sindh's total area), which resulted in obstructed access and mobility in around three-fourths of the province area. The northwestern districts of Jacobabad, Larkana, Shikarpur, and Kashmore were the worst-affected areas. The satellite data of 3 September 2022, shows that the expansion of flood water is continuing through the water coming from the western mountain region of Balochistan and is increasing river discharge at Guddu barrage, resulting in additional flooding in the Indus River. The total agricultural area of Sindh is about 4.9 million hectares. In summer (kharif) season, most of the area is cultivated under three commercial crops: rice, cotton, and sugarcane. The flood inundation is highest in the rice crop zone, which has resulted in an overall estimated loss of 1.9 million tons of rice, or an 80% loss of the expected total rice production in Sindh. Sugarcane is predominantly grown in the northeastern districts, where flood inundation remained relatively lower. Damage amounted to 10.5 million tons, or a 61% loss of the expected production of sugarcane. Like the sugarcane zone, the cotton zone also received

relatively lesser inundation. However, this zone received several exceptionally high daily rainfall spells, which almost completely devastated cotton crops at maturity (with cracked cotton balls). A loss of about 88% of the total expected cotton production (3.1 million bales) as a result of the flood inundation and exceptionally high rainfall in the cotton-growing areas of Sindh.

Economic loss calculation:

In economic terms, Rice Sugarcane and Cotton these three crops faced a direct loss of USD 1.30 billion (rice: USD 543 million, cotton: USD 485 million, sugarcane: USD 273 million). In addition, three key vegetable crops – tomato, onion, and chilli – face losses total USD 374 million in the flood affected districts, with the highest losses in Thatta, Badin, and Mirpur. As per estimates, floods killed 42,273 livestock, including sheep, goats, camels, cows, buffaloes, and donkeys, causing a direct loss of around USD 13 million to livestock in the province. The economic losses in agriculture are much beyond the estimated direct losses to crop production and livestock. Direct damages and losses to agriculture tools and machinery, infrastructure in farms and rural areas, and trees are likely to compound the economic losses. The indirect costs involved in draining and land rehabilitation, increased cost of transportation resulting from damaged roads and infrastructure, losses in successive crop cycles due to water logging and delays in sowing, and the government's rehabilitation and compensation support are likely to have deeper and long-term impacts on Pakistan's agriculture. (ICIMOD, 2022).

ROLE OF ZARAI TARAQIATI BANK LIMITED (ZTBL) IN FLOOD-AFFECTED AREAS DURING FLOOD 2022

In response to the devastating floods of 2022, Zarai Taraqiati Bank Limited (ZTBL) played a pivotal role in supporting the affected communities, particularly focusing on the agricultural

sector. The bank implemented a series of measures and introduced new schemes to minimize the financial burden on farmers, provide aid in the recovery for revival of agriculture and livestock. Here are the key initiatives undertaken by ZTBL:

1. Rescheduling of Loans

ZTBL promptly introduced a facility for the rescheduling of loans to provide immediate relief to its borrowers affected by the floods. This measure was crucial in helping farmers manage their financial obligations without the added pressure of immediate repayments during such a challenging time. The rescheduling facility allowed affected borrowers to extend their loan repayment period by one year, offering them much-needed breathing space to recover from the impacts of the flood.

2. Interest-Free Loan & Risk Sharing Scheme for Landless Farmers (IF&RSLF)

In collaboration with the Government of Pakistan (GOP) and the State Bank of Pakistan (SBP), ZTBL launched the Interest-Free Loan & Risk Sharing Scheme for Landless Farmers (IF&RSLF). This initiative targeted landless farmers in flood-affected areas who typically have limited access to formal credit. The scheme aimed to provide interest-free loans to these farmers, enabling them to restart their agricultural activities without the burden of interest payments. Additionally, the risk-sharing component of the scheme provided an added layer of security, encouraging lending institutions to support these vulnerable farmers.

3. GOP Markup Subsidy Scheme (GMSS) for Revival of Agriculture/Livestock

To further assist the flood-affected farming communities, ZTBL launched the GOP Markup Subsidy Scheme (GMSS) for the revival of agriculture and livestock. This scheme, introduced in collaboration with the Government of Pakistan (GOP) and the State Bank of Pakistan (SBP), aimed

to facilitate the affected farmers by offering subsidized interest rates on loans for both farm and non-farm sectors. The primary objective of the GMSS was to reduce the financial burden on farmers, allowing them to access the necessary funds to rehabilitate their agricultural operations and livestock rearing activities.

The GOP Markup Subsidy Scheme (GMSS) provided subsidies on the markup rates of loans, making it more affordable for farmers to obtain credit for various agricultural purposes. This included the purchase of seeds, fertilizers, livestock, and equipment necessary for rebuilding their farms and ensuring a swift recovery of agricultural productivity in the flood affected areas.

4. Development of Agro Advisory Services for Flood affected areas:

Following the devastating floods of 2022, the immediate rehabilitation of affected communities became a priority, with a focus on restoring agriculture and ensuring food security. To address these urgent needs, The Zarai Taraqiati Bank Limited (ZTBL) played a crucial role which led to the development of targeted agricultural advisory services posters for flood affected areas

These agro advisory services for flood affected areas were developed in guidance of senior experts from PMAS-Arid Agriculture University Rawalpindi (PMAS-AAUR) and University of Agriculture Faisalabad (UAF) to assist flood-affected farmers in rehabilitating their lands and resuming agricultural activities. To maximize outreach, advisory content was disseminated extensively through posters in flood affected branches of ZTB, mass media, and social media platforms. The key areas of focus included:

Wheat Crop Cultivation in Flood-Affected Areas:

Guidelines were provided on selecting suitable wheat varieties and implementing cultivation practices for flood affected areas.

Fodder Cultivation in Flood-Affected Areas:

Recommendations were made for cultivating fast-growing and nutritious fodder crops in flood affected areas to support livestock recovery, which is critical for sustaining rural livelihoods and food security.

Vegetable Cultivation in Flood-Affected Areas:

Farmers were advised on cultivating short-duration vegetable crops, which can quickly generate income and improve nutrition in affected communities and to resolve immediate food security issues in flood affected areas.

Kitchen Gardening Advisory for Flood Affected Areas:

ZTBL developed a poster on kitchen gardening to help flood-affected communities initiate small-scale gardens, providing them with essential guidance on growing vegetables and herbs. This poster was widely distributed, offering practical advice to improve food security and community resilience.

کسان بھائیوں کے لئے سیلاب سے متاثرہ علاقوں میں گندم کی کاشت کے لیے زرعی سفارشات

سیلاب سے متاثرہ زمینوں میں گندم کی کاشت کے لیے درج زیل سفارشات ہیں:

1۔ زمین کی تیاری:

- سیلاب سے متاثرہ دیہاتی زمینوں میں گہرا ہل چلانے کی سفارش نہیں کی جاتی البتہ دو سے تین ہل چلا کر سہاگہ دیں تا کہ زمین نرم اور بھربھری ہو جائے۔ دیہاتی کھیتوں میں دو یا تین مرتبہ اتھلا سے ہل چلائیں۔ اس سے جڑی بوٹیاں ختم ہو جاتی ہیں اور زمین میں موجود خدائی عناصر پودے کے لیے قابل حصول حالت میں تبدیل ہو جاتے ہیں۔
- اگر سیلاب سے متاثرہ علاقوں میں گندم والی زمین پر کسی اور فصل کے باقیات موجود ہوں تو ایک بار روٹاویٹر چلا کر باقیات ختم کر دیں اور اس کے بعد ہل چلا کر زمین تیار کریں۔ سیلاب کے بعد جہاں پر زمین کٹاؤ کا شکار ہوا ہے وہاں زمین کو ہموار کریں۔

2۔ وقت کاشت:

- سیلاب سے متاثرہ زمینوں کو خشک ہونے میں تین سے چھ ہفتے کا وقت لگتا ہے۔ جو زمین مناسب حالت میں آ جائے یا خشک ہو جائے تو اس زمین کو گندم کی کاشت کے لیے تیار کریں سیلاب سے متاثرہ زمینوں پر گندم کی بجائی کا موزوں وقت دسمبر کے مہینے میں سفارش کیا جا رہا ہے۔
- سیلاب سے متاثرہ زمینوں پر گندم کی کاشت نومبر سے تین ہفتے دسمبر تک مکمل کر لیں۔ تاہم کسان اپنی زمینوں کی حالت دیکھ کر اگر ممکن ہو جلدی کاشت کر سکتے ہیں۔

3۔ بیج کی اقسام:

- سیلاب سے متاثرہ علاقوں میں گندم کی بجائی میں تاخیر ہوگی اس لیے یہ سفارش کی جاتی ہے کہ گندم کی جلد تیار ہونے والی اقسام کاشت کی جائیں اور جلد پکنے والی اقسام درج ذیل ہیں:

صوبہ	نوعیت	اقسام
پنجاب	آبپاش علاقے	ہوفی، پنجاب کے لیے فخر بھکر، بھکر سٹار، اکبر 2019، فاتح 2019 اور زرگول 2016
	بارانی علاقے	بارس 2009، عرباب 2011، مرکز 2019، اور گوتم 2016
سندھ	آبپاش علاقے	TD-1، نیاسفر 2010، نیاسفر کی 2010، امید 2005، نیاسارنگ 2010، سسی 2006
	بارانی علاقے	TD-1، صحرا، نیاسارنگ 2013، اصول
خیبر پختونخوا	آبپاش علاقے	سیاسی 2013، پاشم 2006، فرید 2006، پاسبان 2013، فخر سرحد
	بارانی علاقے	سیاسی 2015، انصاف، نیاظفر 2013، عائشہ 2017
بلوچستان		شیرکار 2013، شاہکوٹ 2014، بولان 2016

نوٹ: بیجوں کی یہ اقسام سیڈ کارپوریشن، نجی و سرکاری ادارے یا فوکل سیڈ ڈیلرز سے با آسانی دستیاب ہوں گے

کاشت سے قبل بیج کو پھپھوندی کش دوائی ضرور لگائیں تا کہ اکھوا بہتر ہو اور بیماریوں سے بچاؤ ممکن ہو۔

4۔ کھادوں کا استعمال

- سیلاب سے متاثرہ زمینوں میں جراثیموں کی سرگرمی متاثر ہوتی ہے اس لیے زمین کی تیاری کے وقت چار ٹرالی گوبر کی گلی سڑی کھاد فی ایکڑ لازمی استعمال کریں۔
- سیلاب سے متاثرہ علاقوں میں ڈی اے پی کھاد کا استعمال ہرگز نہ کریں۔
- زمین کی تیاری کے وقت ڈی اے پی کی جگہ متبادل کھاد (Nitrophos) نائٹروفاس ایک بوری یا سنگل سپر فاسفیٹ کی چار بوری فی ایکڑ استعمال کریں۔
- پہلے پانی کے ساتھ آدھی بوری یوریا فی ایکڑ ڈالیں اور دوسرے پانی کے ساتھ آدھی بوری یوریا فی ایکڑ استعمال کریں۔

5۔ آبپاشی:

- سیلاب سے متاثرہ علاقوں میں گندم کو پہلا پانی بجائی کے 30 دن بعد لگائیں۔ گندم کو دوسرا پانی بجائی سے 90–80 دن بعد لگائیں۔ گندم کو تیسرا پانی بجائی سے 125–120 دن بعد گوبھی کی حالت میں لگائیں۔
- نوٹ: موسمی حالات کو مدنظر رکھتے ہوئے آبپاشی کے دورانیے میں ردوبدل کیا جا سکتا ہے۔

6۔ جڑی بوٹیوں کی تلفی:

- خودرو جڑی بوٹیاں گندم کی پیداوار میں 12 سے 35 فیصد تک کمی کا باعث بنتی ہیں۔ سیلاب سے متاثرہ علاقوں میں گندم کی اچھی پیداوار حاصل کرنے کے لیے جڑی بوٹیوں کا بروقت تدارک کریں۔

7۔ کیڑے بیماریاں اور ان کا تدارک:

- گندم کی فصل پر گنگی، گانگیاری، روہ، خمار، پھپھوندی کی بیماریاں حملہ آور ہوتی ہیں۔ ان بیماریوں سے فصل کو بچانے کے لیے اوپر دی گئی سفارش کردہ اقسام کاشت کریں اور بیماری کے شدید حملے کی صورت میں محکمہ توسیع زراعت کے متعلقہ محکمہ کی سفارش کردہ زہروں کا سپرے کریں۔
- گندم کی فصل پر تیلے کا حملہ جم سے گندم کی فصل کو تیلے کے حملے بچانے کے لیے گندم کی فصل میں ایک ایکڑ رقبے پر تین سے چار ٹرالی سرسوں کی کاشت کریں۔

8۔ گندم کی کٹائی، گہائی اور ذخیرہ کاری:

- فصل کی کٹائی اور گہائی کا موزوں وقت وہ ہے جب فصل اچھی طرح پک کر تیار ہو جائے اور اس وقت دانوں میں نمی کا تناسب 12%–10% ہو۔ بارش ہونے کی صورت میں کٹائی روک دی جائے اور اس وقت تک دوبارہ شروع نہ کرائی جائے جب تک موسم بہتر نہ ہو جائے۔ کھلے اور چھوٹے اور نجی جگہ پر گہائی کریں۔
- قریب ترین کے بعد اناج ذخیرہ کرنے سے پہلے گودام کی اچھی طرح صفائی کر کے زہر کے محلول کا سپرے کریں تا کہ گودام کیڑے مکوڑوں اور دیگر بیماریوں سے پاک ہو جائے۔ سپرے کرنے کے بعد گودام کو دو دن کیلئے ہوا بند رکھیں اور کھولنے کے 4 تا 6 گھنٹے تک گودام میں داخل نہ ہوں۔ گودام میں کیڑے مکوڑوں کے حملے سے بچاؤ کیلئے مختلف کیمیائی مرکبات بھی استعمال کیے جا سکتے ہیں۔

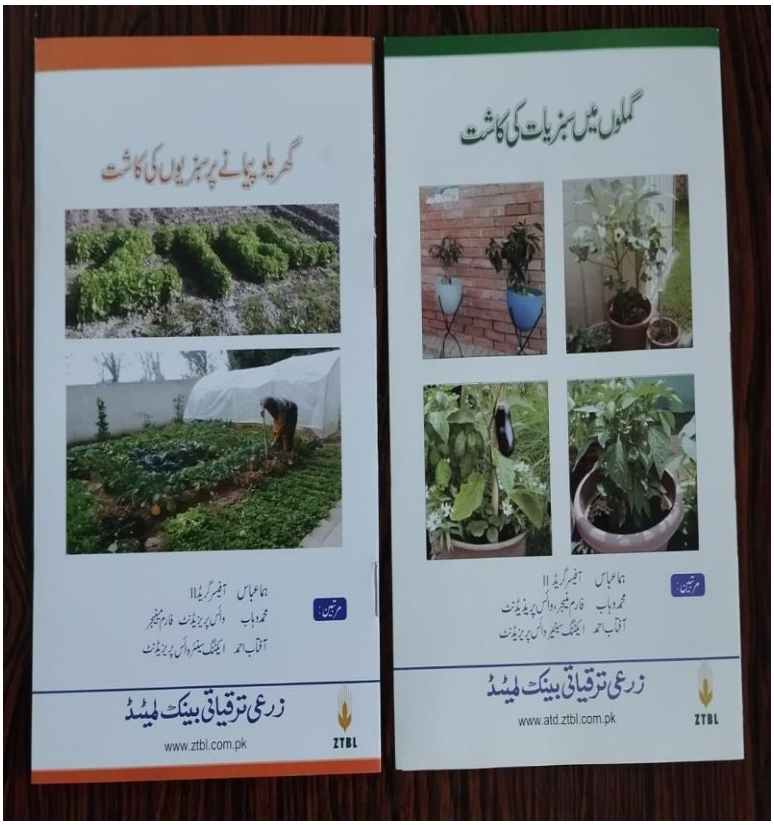
کسان بھائیوں کے لیے سیلاب سے متاثرہ علاقوں میں چارہ جات (Fodders) کے بارے میں جدید زرعی سفارشات

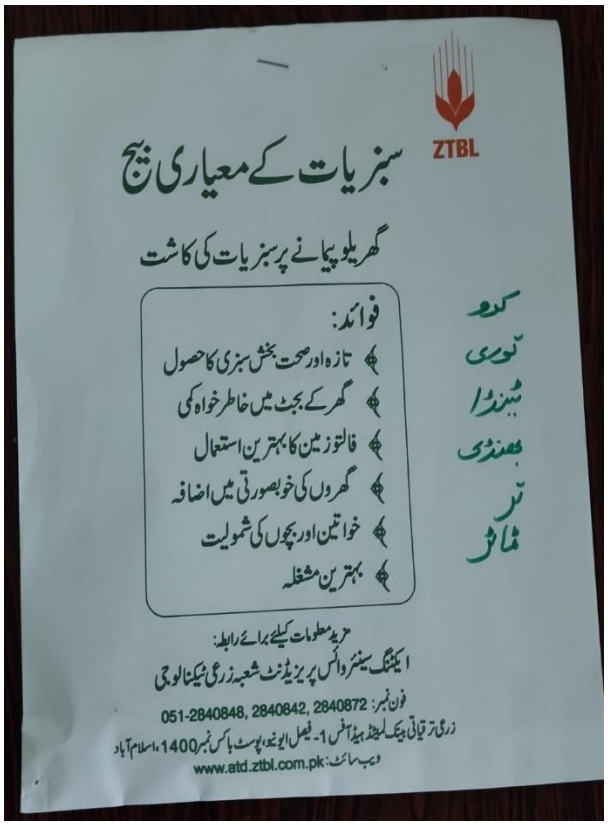
سیلاب سے متاثرہ علاقوں میں چارہ جات کے لیے زرعی سفارشات درج ذیل ہیں:

فصل		وقت کاشت	مقدار بیج فی ایکڑ	قطاروں کا فاصلہ	پودوں کا فاصلہ	کھادفی ایکڑ بوریاں
برسیم		اگیتا: شروع اکتوبر درمیانہ: وسط اکتوبر تا وسط نومبر	اگیتا 8 کلوگرام درمیانہ 6 تا 8 کلوگرام	چھڈہ سے کاشت	چھڈہ کاشت	کمزور زمین: دو بوری نائٹروفاس زرخیز زمین: ایک بوری نائٹروفاس
لوبن		اگیتا: شروع اکتوبر درمیانہ: وسط اکتوبر تا وسط نومبر	چھڈہ: 6 کلوگرام ڈرل: 4 تا 5 کلوگرام	چھڈہ سے کاشت	چھڈہ سے کاشت	کمزور زمین: دو بوری نائٹروفاس اور تین تا چار بوری یوریا سالانہ
جئی		اگیتی: اکتوبر پچھیتی: شروع نومبر	چھڈہ 30 تا 35 کلوگرام ڈرل: 20 تا 25 کلوگرام	چھڈہ سے کاشت	چھڈہ یا ایک فٹ کی قطاروں میں کاشت	کمزور زمین: دو بوری نائٹروفاس اور ڈیڑھ بوری یوریا زرخیز زمین: ایک بوری نائٹروفاس اور ایک بوری یوریا
جوار، چری		اگیتی کاشت مارچ عمومی کاشت: اپریل تا جولائی	30-25 کلوگرام	چھڈہ سے کاشت	چھڈہ یا 2.5 فٹ کی کھیلیاں	کمزور زمین: دو بوری نائٹروفاس اور دو یوریا زرخیز زمین: ایک بوری نائٹروفاس اور ایک یوریا
سدابہار		اگیتی کاشت: مارچ عمومی کاشت: اپریل تا جولائی	8 تا 10 کلوگرام	ڈیڑھ فٹ	ایک تا تین انچ	کمزور زمین: ایک بوری نائٹروفاس اور دو یوریا زرخیز زمین: ایک بوری نائٹروفاس اور ڈیڑھ یوریا
روڈگراس		بہاریہ: اپریل موسمی: نومبر تا دسمبر	4 تا 6 کلوگرام	9 انچ	چھڈہ یا مسلسل قطار	دو بوری نائٹروفاس یا زرخیز بوقت کاشت اور 3 تا 4 بوری یوریا سالانہ

Empowering Flood Victims through Kitchen Gardening for Food Security:

Flood 2022 in Pakistan has damaged major portion of Agricultural land. Besides other challenges, the flood victims are also facing challenges of food security. Major segment of land is not suitable for immediate crop production. Zarai Taraqiati Bank has therefore taken the initiative to promote kitchen gardening in flood affected areas. In this respect, the Bank has prepared and disseminated 60 seed kits in Districts of D.G Khan and Tando Allahyar, enough for 5 marla area, containing seeds of six different vegetables including Radish, Spinach, Methi, Turnip, Sarsoon and Peas. The package also includes two booklets in Urdu on vegetables management procedures both on land and in containers. Moreover, short video clip on kitchen gardening has also be prepared and was be circulated through social media platforms. This activity helped households to meet their vegetables needs at their doorsteps.





Impact of ZTBL's Initiatives

The initiatives undertaken by ZTBL played a crucial role in mitigating the adverse effects of the floods on the agricultural sector. By providing financial relief through loan rescheduling, interest-free loans, and subsidized credit, ZTBL helped farmers regain their footing and resume their agricultural activities. These measures not only alleviated the immediate financial distress of the affected farmers but also contributed to the long-term revival and sustainability of agriculture and livestock in the flood-affected regions.

Through its proactive approach and collaboration with the Government of Pakistan and the State Bank of Pakistan, ZTBL demonstrated its commitment to supporting the farming community during times of crisis. The bank's efforts were instrumental in ensuring that the affected farmers had the necessary financial resources and support to rebuild their lives and livelihoods in the aftermath of the 2022 floods.

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