**1.1. Desi types**

**1.1.1 Mastewal**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | **2,200-2,600** | **2,600-2,800**  **1,800-2,200** | **2,800-2,900**  **1,200-1,800** | **>2,900**  **<1,200** |
| LGP (days) | **130-150** | **150-160**  **120-130** | **160-170**  **90-120** | **>170**  **<90** |
| pH | **6.7-7.5** | **5.5-6.7**  **7.5-8** | **5-5.5**  **8-8.5** | **<5**  **>8.5** |
| Rainfall (during growing period) | **900-1,000** | **1,000-1,100**  **700-900** | **1,100-1,200**  **600-700** | **>1,200**  **<600** |
| Temperature (⁰c) | **18-20** | **16-18**  **20-22** | **14-16**  **22-24** | **<14**  **>24** |
| Soil depth (cm) | **>80** | **60-80** | **40-60** | **<40** |
| Drainage | **Well drained** | **Somewhat excessively drained; moderately well drained** | **Excessively drained; imperfectly drained** | **Poor** |
| Soil type | **B-Cambisols,**  **G-Gleysols,**  **H-Phaeozems,**  **L-Luvisols,**  **N-Nitosols** | **C-Chernozems,**  **O-Histosols,**  **V-Vertisols,**  **T-Andosols** | **A-Acrisols,**  **E-Rendzinas,**  **J-Fluvisols** | **Q-Arenosols,**  **I-Lithosols,**  **R-Regosols,**  **Z-Solonchaks,**  **X-Xerosols,**  **Y-Yermosols** |
| Soil texture | **Loam,**  **Silt loam,**  **Sandy clay loam** | **Clay loam,**  **Silty clay loam** | **Sandy loam,**  **Sandy clay,**  **Silt,**  **Silty clay,**  **Clay** | **Sand,**  **Loamy sand** |
| Slope (%) | **0-8** | **8-16** | **16-30** | **>30** |

**1.1.2 Naatolii**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 2.200-2,700 | 2,700-2,800  1,800-2,200 | 2,800-2,900  1,200-1,800 | >2,900  <1,200 |
| LGP (days) | 130-150 | 150-160  120-130 | 160-170  90-120 | >170  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 900-1,000 | 1,000-1,100  700-900 | 1,100-1,200  600-700 | >1,200  <600 |
| Temperature (⁰c) | 18-20 | 16-18  20-22 | 14-16  22-4 | <14  >24 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | Well drained | Somewhat excessively drained; moderately well drained | Excessively drained; imperfectly drained | Poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols, | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols*, | A-Acrisols,  E-Rendzinas,  J-Fluvisols, | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols  Y-Yermosols |
| Soil texture | Loam,  Silt loam,  Sandy clay loam | Clay loam,  Silty clay loam | Sandy loam,  Sandy clay,  Silt,  Silty clay,  Clay | Sand,  Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |

**1.1.3 Teketay**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 1,800-2,600 | 2,600-2,800  1,500-1,800 | 2,800-2,900  1,200-1,500 | >2,900  -<1,200 |
| LGP (days) | 120-140 | 140-150  100-110 | 150-160  90-100 | >160  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 800-900 | 900-1,000  700-800 | 1,000-1,100  600-700 | >1,100  <600 |
| Temperature (⁰c) | 18-20 | 16-18  20-22 | 14-16  22-24 | <14  >24 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | Well drained, | Somewhat excessively drained; moderately well drained | Excessively drained; imperfectly drained | Poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols* | A-Acrisols,  E-Rendzinas,  J-Fluvisols, | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols,  Y-Yermosols |
| Soil texture | Loam,  Silt loam,  Sandy clay loam | Clay loam,  Silty clay loam | Sandy loam,  Sandy clay,  Silt,  Silty clay,  Clay | Sand,  Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |

**1.2 Kabuli types**

**1.2.1 Arerti**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 1,800-2,600 | 2,600-2,700  1400-1800 | 2700-2800  1200-1400 | >2800  <1200 |
| LGP (days) | 120-150 | 150-160  100-120 | 160-170  90-100 | >170  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 800-1,000 | 1,000-1,200  700-800 | 1,200-1,400  600-700 | >1,400  <600 |
| Temperature (⁰c) | 18-20 | 16-18  20-22 | 14-16  22-24 | <14  >24 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | Well drained | Somewhat excessively drained; moderately well drained | Excessively drained; imperfectly drained | poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols, | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols*, | A-Acrisols,  E-Rendzinas,  J-Fluvisols, | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols  Y-Yermosols |
| Soil texture | Loam,  Silt loam,  Sandy clay loam | Clay loam,  Silty clay loam | Sandy loam,  Sandy clay  Silt,  Silty clay,  Clay | Sand,  Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |

**1.2.2 Habru**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 1,800-2,500 | 2,500-2,700  1,400-1,800 | 2,700-2,800  1,200-1,400 | >2,800  <1,200 |
| LGP (days) | 120-150 | 150-160  100-120 | 160-170  90-100 | >170  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 800-1,000 | 1,000-1,200  700-800 | 1,200-1,400  600-700 | >1,400  <600 |
| Temperature (⁰c) | 18-20 | 16-18  20-22 | 14-16  22-24 | <14  >24 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | Well drained | Somewhat excessively drained; moderately well drained | Excessively drained; imperfectly drained | Poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols, | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols*, | A-Acrisols,  E-Rendzinas,  J-Fluvisols, | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols  Y-Yermosols |
| Soil texture | Loam,  Silt loam,  Sandy clay loam | Clay loam,  Silty clay loam | Sandy loam,  Sandy clay,  Silt,  Silty clay,  Clay | Sand,  Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |

**1.2.3. Kasech**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 1,700-2,400 | 2,400-2,600  1,500-1,700 | 2,600-2,800  1,200-1,500 | >2,800  -<1,200 |
| LGP (days) | 120-140 | 140-150  100-110 | 150-160  90-100 | >160  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 700-800 | 800-900  600-700 | 900-1000  550-600 | >1,000  >8.5 |
| Temperature (⁰C) | 20-22 | 18-20  22-23 | 16-18  23-25 | <16  >25 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | Well drained | Somewhat excessively drained; moderately well drained | Excessively drained, imperfectly drained | Poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols* | A-Acrisols,  E-Rendzinas,  J-Fluvisols | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols,  Y-Yermosols |
| Soil texture | Loam,  Silt loam,  Sandy clay loam | Clay loam,  Silty clay loam | Sandy loam,  Sandy clay,  Silt,  Silty clay,  Clay | Sand,  Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |

**1.2.4. Yelbey**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | S1 | S2 | S3 | N |
| Altitude (masl) | 1,700-2,400 | 2,400-2,600  1,500-1,700 | 2,600-2,800  1,200-1,500 | >2,800  -<1,200 |
| LGP (days) | 120-140 | 140-150  100-120 | 150-160  90-100 | >160  <90 |
| pH | 6.7-7.5 | 5.5-6.7  7.5-8 | 5-5.5  8-8.5 | <5  >8.5 |
| Rainfall (during growing period) | 800-900 | 900-1,000  700-800 | 1,000-1,100  600-700 | >1,100  <600 |
| Temperature (⁰c) | 20-22 | 18-20  22-23 | 16-18  23-25 | <16  >25 |
| Soil depth (cm) | >80 | 60-80 | 40-60 | <40 |
| Drainage | well drained | Somewhat excessively drained; moderately well drained | Excessively drained; imperfectly drained | poor |
| Soil type | B-Cambisols,  G-Gleysols,  H-Phaeozems,  L-Luvisols,  N-Nitosols | *C-Chernozems*,  *O-Histosols*,  V-Vertisols,  *T-Andosols* | A-Acrisols,  E-Rendzinas,  J-Fluvisols | Q-Arenosols**,**  I-Lithosols,  R-Regosols,  Z-Solonchaks,  X-Xerosols  Y-Yermosols |
| Soil texture | Loam, Silt loam, Sandy clay loam | Clay loam, Silty clay loam | Sandy loam, Sandy clay, Silt, Silty clay, Clay | Sand, Loamy sand |
| Slope (%) | 0-8 | 8-16 | 16-30 | >30 |