

PACKAGE OF PRACTICES

Wheat variety NL-1073 (Bajo Kaa 3)

1. General Information

Wheat variety NL-1073, known as Bajo Kaa 3, is an early-maturing *Triticum aestivum* developed by the Agriculture Research and Development Centre (ARDC), Bajo. It has the pedigree WAXWING*2 / VIVITSI and originates from an advanced CIMMYT line (FRANCOLIN) introduced from Nepal. The variety matures in about 132 days from seed to seed.

2. Area of Adaptation

NL-1073 is suitable for cultivation up to 1800 masl. In areas below 1400 m, November sowing under irrigated conditions is recommended, while in mid-altitude zones (1400–1800 m), sowing from August to October is ideal. The variety has not been tested above 1800 m. It fits best as a maize-based crop after maize harvest and performs well in dry land without irrigation.

3. Soil and Land Preparation

The variety performs well in less fertile soils when adequate farmyard manure (FYM) is applied. Land preparation should include 2–3 ploughings to achieve a fine tilth, with well-decomposed FYM incorporated during preparation.

4. Sowing Details

NL-1073 should be sown using the standard national wheat seed rate with line sowing preferred and standard wheat spacing maintained. The recommended sowing time is August to October in mid-altitude dry land areas and November in low-altitude irrigated areas.

5. Nutrient Management

A fertilizer dose of 80:80:40 kg NPK per hectare is recommended. Application of FYM is strongly encouraged to enhance yield, and nitrogen should be applied in split doses where feasible.

6. Water Management

The crop is primarily rainfed in mid-altitude dry land conditions and performs well without irrigation. Irrigation is required only in low-altitude areas when sown in November.

7. Weed Management

Timely manual weeding during early crop growth is important. Fields should be kept weed-free during the tillering stage to ensure optimal crop development.

8. Pest and Disease Management

No major disease incidence has been observed under field conditions when the variety is grown as a maize-based crop. Minor aphid infestation may occur in dry land conditions and can be managed through regular field monitoring and integrated pest management practices.

9. Agronomic Features

NL-1073 has a plant height of about 80 cm, high tillering ability, and early maturity. It exhibits an erect plant type with a semi-erect flag leaf and fully awned ears, making it well suited for maize-based cropping systems, dry land conditions, and less fertile soils.

10. Yield Performance

The variety produces an average yield of about 942 kg per acre, which is 62% higher than the local check variety Bumthang Kaa Drukchu. On-farm demonstrations recorded yields of 942 kg/acre in Tsirang (Sergithang), 1052 kg/acre in Wangdue (Pinsa), 1071 kg/acre in Punakha (Dzomi), and 1015 kg/acre in Dagana.

11. Harvesting

Harvesting should be done at full maturity when the grains are hard and the straw turns yellow. Timely harvesting is recommended to prevent shattering and loss of grain quality.

12. Farmer Acceptability

Farmers highly prefer NL-1073 because it fits well after maize harvest, yields higher than earlier released varieties, performs well without irrigation, and is suitable for dry land and marginal soils. It is currently grown in Pachaling, Sergithang, and Mendrelgang geogs.

13. Seed Production Recommendation

For seed production, the variety is best grown from August to October as a maize-based crop in mid-altitude areas and can be sown in November under irrigated conditions in low altitudes. Seed purification and maintenance should continue through on-station activities.

14. Conclusion

Bajo Kaa 3 (NL-1073) is an early-maturing, high-yielding wheat variety well suited to maize-based cropping systems in mid-altitude dry land areas. Its strong performance under rainfed conditions, tolerance to low soil fertility, and significant yield advantage make it a promising variety for wider release and adoption.

