

TECHNICAL COMPARISON OF PUTTING GREEN GRASSES

- TIFEAGLE
- ZOYSIA
- PASPALUM

AGRONOMIC PERFORMANCE &
MAINTENANCE IMPLICATIONS

 **HAZEL P. MANARANG**



MARCH 9, 2026



GOLF MAINTENANCE EXPERIENCE



Zoysia / Tifdwarf



Tifeagle



Evergreen



Zoysia



Tifeagle



Tifeagle / Tifdwarf



Zoysia / Miniverde



Paspalum



Zoysia



Zoysia



Tifeagle / Paspalum

OBJECTIVE OF COMPARISON

- EVALUATE AGRONOMIC PERFORMANCE
- COMPARE MAINTENANCE INTENSITY
- ASSESS STRESS TOLERANCE DIFFERENCES
- DETERMINE SUITABILITY PER SITE CONDITION

MORPHOLOGICAL CHARACTERISTICS

	TIFEAGLE	ZOYSIA	PASPALUM
Growth Habit	Aggressive Stolons	Slow	Moderate
Thatch	High	Moderate	Moderate
Density	Very High	High	High
Roots	Deeper & Evenly Spread	Shallow-Heavy Surface Roots	Dense Surface/ Strong Lateral

DENSITY

TIFEAGLE



ZOYSIA



PASPALUM



THATCH

TIFEAGLE



1 inch

ZOYSIA



0.5 inch

PASPALUM



0.6 inch

ROOTS

TIFEAGLE



3 to 4 inches

ZOYSIA



2 inches

PASPALUM



Greater than 5 inches

MAINTENANCE INTENSITY

	TIFEAGLE	ZOYSIA	PASPALUM
Grooming Frequency	High	Low	Moderate
Verticutting	Frequent/Shallow	Minimal	Moderate
Topdressing	High	Moderate	Moderate
Nitrogen Requirement	High	Low	Moderate

VERTICUTTING TIFEAGLE

(Tolerable in -2mm to -4mm)

Frequent/Shallow or Infrequent/deep



VERTICUTTING ZOYSIA

(Mostly acceptable depth is -2mm)



EXPECT REDDISH DISCOLORATION / STRESS BRONZING AND SCALPING OF TURF IF DEEPER THAN -2mm

VERTICUTTING PASPALUM

(Mostly acceptable depth is -2mm)



EXPECT REDDISH DISCOLORATION / STRESS BRONZING AND SCALPING OF TURF IF DEEPER THAN -2mm

HIGH RATE OF FERROUS SULPHATE IN PASPALUM AND ZOYSIA

This will cause severe iron staining or browning



MAINTENANCE INTENSITY

	TIFEAGLE	ZOYSIA	PASPALUM
Primo	Frequent/Low Rate	Less Frequent/Med Rate	Less Frequent/High Rate
Rolling	Minimal	Moderate	Frequent
Cutting Height	2.6mm/3.0mm/4.2mm (Tournament/Daily/Stress)	2.8mm/3mm/4.5mm (Tournament/Daily/Stress)	2.6mm/3mm/4mm (Tournament/Daily/Stress)
Contamination	Highly Susceptible	Low	Medium

CONTAMINATIONS ON TIFEAGLE



CONTAMINATIONS ON ZOYSIA

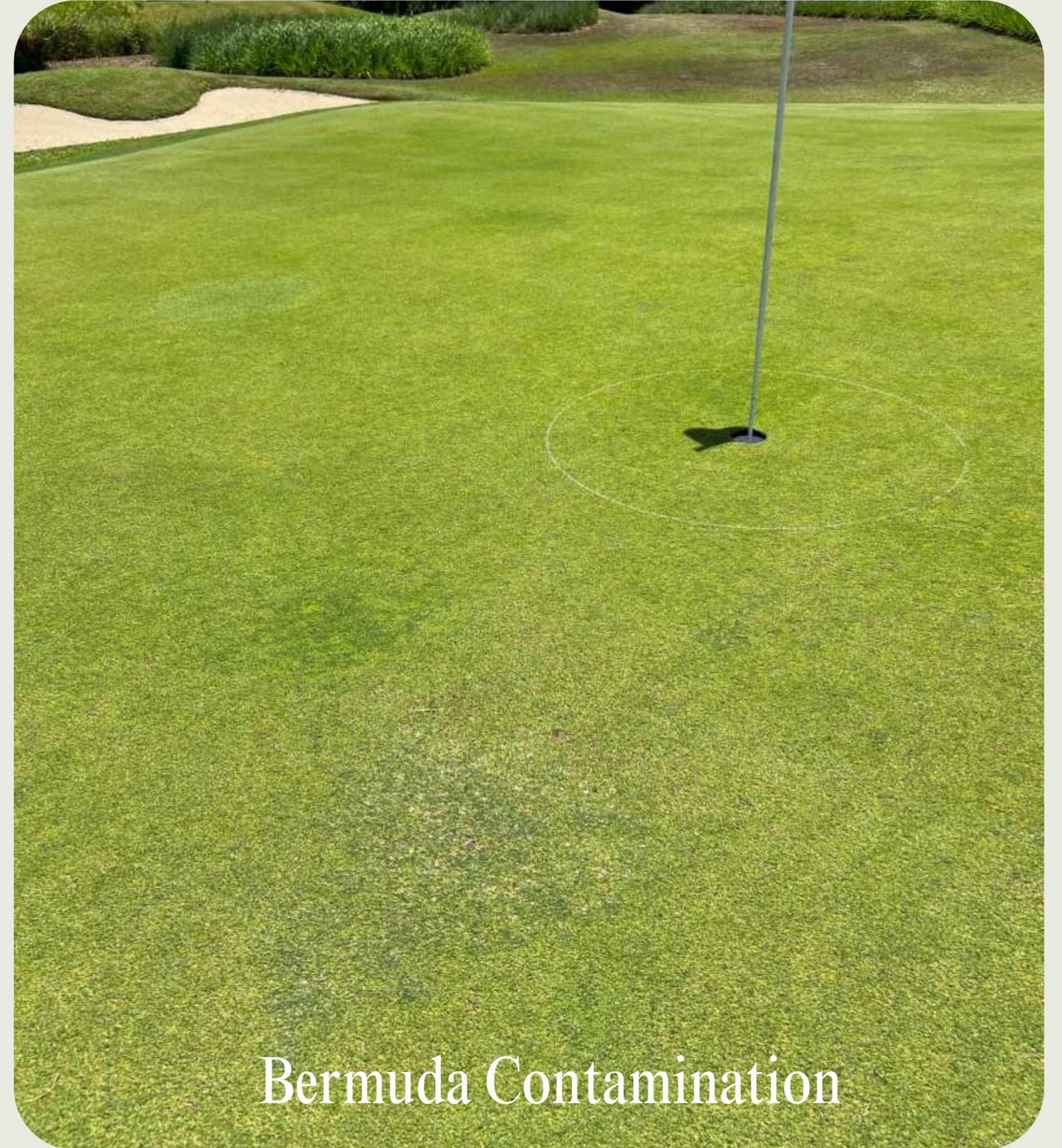


Bermuda Contamination

CONTAMINATIONS ON PASPALUM



Zoysia Contamination



Bermuda Contamination



Zoysia Contamination

CLIMATE & ENVIRONMENTAL TOLERANCE

	TIFEAGLE	ZOYSIA	PASPALUM
Heat Tolerance	Excellent	Excellent	Excellent
Cold Tolerance	Low	High	Moderate
Shade Tolerance	Low	Moderate	Moderate
Salt Tolerance	Low	Low	Very High
Drought Tolerance	Moderate	High	High

COLD WEATHER TOLERANCE

Cold months in the Philippines: December to February

Usually has an effect on Tifeagle - redness and thinning



SHADE TOLERANCE OF TIFEAGLE



SHADE TOLERANCE OF ZOYSIA



SHADE TOLERANCE OF ZOYSIA



SHADE TOLERANCE TRIALS OF ZOYSIA

RESULT OF TRIALS AFTER 2 MONTHS (as of April 17, 2023)



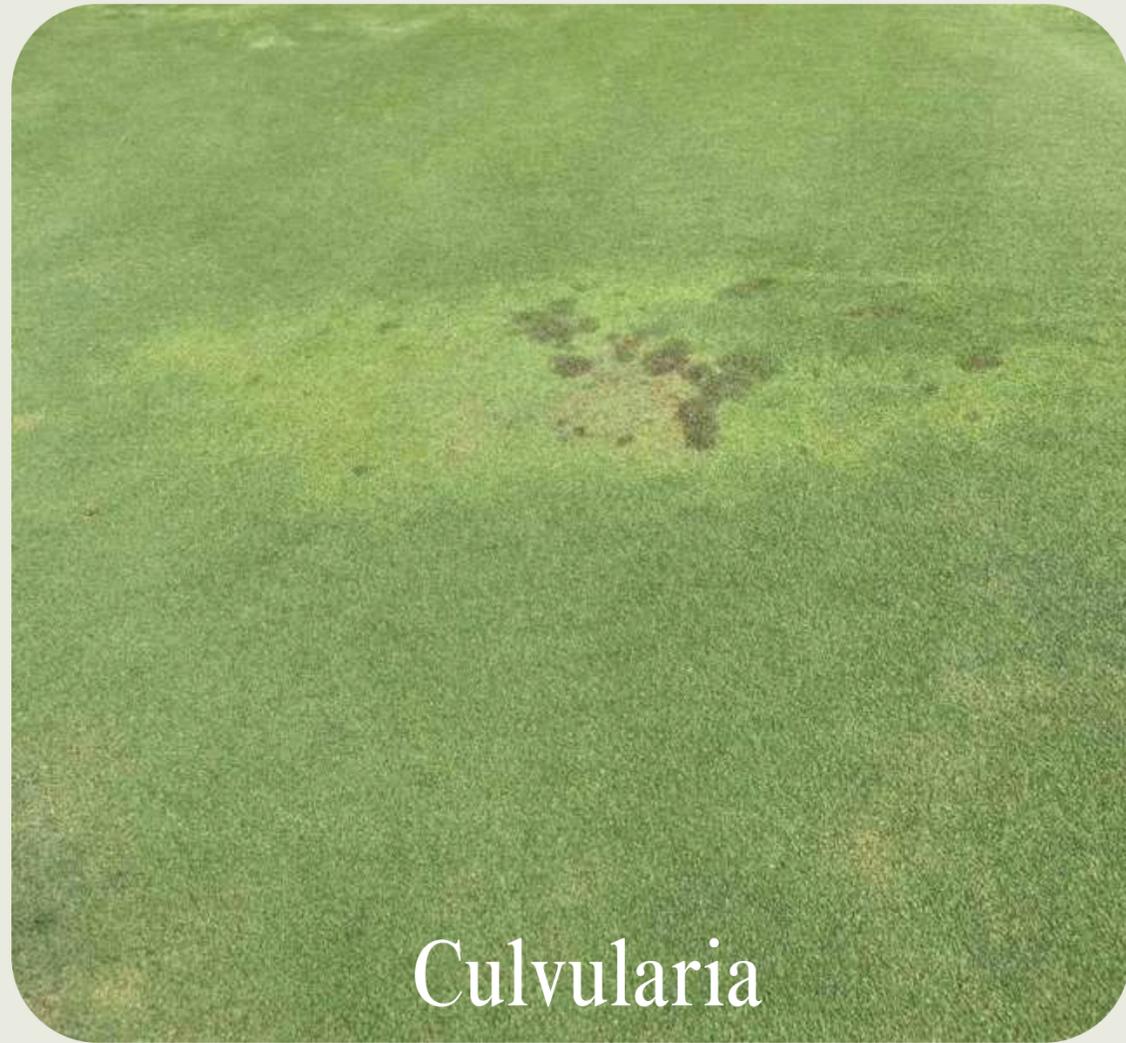
SHADE TOLERANCE OF PASPALUM



DISEASE SUSCEPTIBILITY

	TIFEAGLE	ZOYSIA	PASPALUM
Dollar Spot	Low	Low	High (Common)
Culvularia	Low (Common)	Low	Moderate
Fairy Ring (Seasonal - Jan/July)	Moderate	Moderate to High	Moderate
Bermuda Decline (Seasonal - July to August)	Low	-	-
Melt-Out (Seasonal - September to November)	-	-	High

COMMON DISEASES OF TIFEAGLE



COMMON DISEASES OF ZOYSIA



Culvularia



Fairy Ring



Dollar Spot

COMMON DISEASES OF PASPALUM



Dollar Spot



Culvularia



Fairy Ring



Melt-out

INSECT INFESTATION

TIFEAGLE

ZOYSIA

PASPALUM

Grubs	July & October	July & October	July & October
Worms	Anytime	Anytime	Anytime
Frit Fly	January	No Record	No Record
Termites	No Record	Common	Minimal

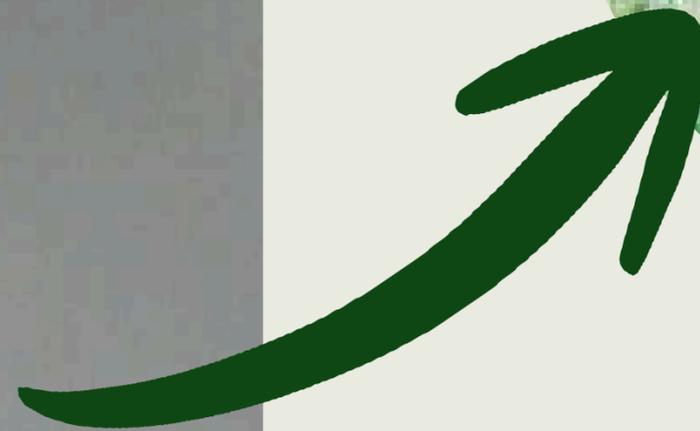
WEB WORM INCIDENCE



FRIT FLY



Larvae does the damage



FRIT FLY INCIDENCE



Usually the pattern of damage starts from the collars going inwards

FRIT FLY INCIDENCE



Usually the pattern of damage starts from the collars going inwards

RECOVERY & TRAFFIC

	TIFEAGLE	ZOYSIA	PASPALUM
Aeration Recovery	Fast	Slow	Moderate
Sodding Recovery	Fast to Moderate	Slow	Slow
Ball Mark Recovery	Fast	Slow	Moderate
Traffic Tolerance	Moderate	High	Moderate

TIFEAGLE SOD RECOVERY



Takes only 1 to 2 months to tie-in

PASPALUM SOD RECOVERY



Takes 3 to 4 months before it fully recovered and tied-in

PLAYING QUALITY

TIFEAGLE

ZOYSIA

PASPALUM

Speed Potential

Very High

Moderate

Moderate to High

Smoothness

Excellent

Good

Good

Grain Effect

Moderate

Low

Moderate to High

Ball Mark Visibility

High

Low

Moderate

BEST FIT BY CONDITION

SITE CONDITION

RECOMMENDED GRASS

**Premium Green Speed
Demand**

TifEagle

Championship Tournament

TifEagle

Coastal / Saline Irrigation

Paspalum

Lower Facility & Labor Input

Zoysia

Heavy Daily Traffic

Zoysia

TAKE AWAY

TIFEAGLE

Highest performance ceiling but highest maintenance demand

ZOYSIA

Stable, durable, lower input

PASPALUM

Salt-tolerant, balanced performance

THE BEST PUTTING SURFACE DEPENDS ON ENVIRONMENT, LABOR CAPACITY, AND PERFORMANCE EXPECTATIONS

Thank you.

The background features a series of thin, parallel green lines on the right side, which are slightly curved and create a sense of depth and movement. The lines are set against a light, neutral background.