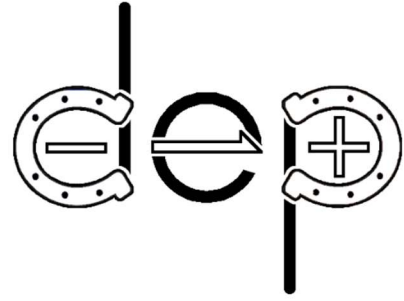


Introduction to Horseracing and Betting

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The banquet of the Dielectrophoresis 2026 conference is held on June 25, 2026 during Twilight Thursdays, a live horse racing event at Churchill Downs in Louisville, Kentucky. This document serves as an introduction to horseracing, focusing on terminology and examples of betting.

HISTORICAL CONTEXT

Horse racing has deep roots in many cultures, particularly British and American history, evolving from informal contests into an organized sport symbolizing tradition, spectacle, and social life. In the United States, this heritage is shown in Churchill Downs, founded in 1875 and home to the Kentucky Derby, the nation's longest continuously held sporting event. The racetrack has evolved over the decades, adapting to modern thoroughbred racing while blending athletic competition, betting, and pageantry. The cultural reach of horse racing and tracks is extended well beyond the track.

Horse racing is a sport built on athletic performance, statistics, probability, and strategy. This guide is designed to help new fans feel comfortable at Churchill Downs, understand the racing environment, learn how to read a racing program, and confidently interpret betting terminology when placing wagers.

RACING ENVIRONMENT

Key Areas

Paddock: Horses are saddled and shown before each race. Experienced fans observe horse behavior and composure.

Track: Thoroughbreds race primarily on dirt and sometimes on grass ("turf"). Distances are measured in furlongs (1 furlong = $\frac{1}{8}$ mile).

Grandstand / Clubhouse / Infield: Spectator viewing areas with varying amenities and sightlines.

Mutuel Windows & Self Service Machines: Locations where in-person wagers are placed and winnings collected.

How Betting Works

Horse racing uses a pari mutuel system, meaning bettors wager against each other, not the racetrack. All money wagered on a specific race goes into a pool. The track takes a commission. The remaining pool is divided among winning tickets. The amount of money may also influence the race's 'purse', or the total amount of money paid to the owners of the top finishing horses.

Odds and payouts are not fixed and change continuously until betting closes at post time. A bet's final odds are at post time – not when you placed your bet.

Types of Horse Races

Maiden: Horses that have never won a race.

Claiming: In claiming races, every horse is offered for sale at a set price, with ownership decided by a random draw if multiple claims are submitted.

Allowance: Competitive horses running under conditions; not for sale.

Handicap: Horses assigned different weights to balance competition.

Stakes: Highest quality races with the largest purses.

Reading the Racing Program

The racing program is your primary analytical tool. The following is some general information listed for each horse.

Race Number and Horse Number: Referenced when placing bets. Race Number is typically the numerical order of a particular race day. Horse Number is typically assigned based on post position.

Horse Profile: Name, age, sex, and color.

Pedigree: Sire (father) and dam (mother). Racehorses are typically colts, young male horse under 4 years old. Some races are exclusive to fillies, young female horses.

Jockey: Skilled riders who guide the thoroughbreds during a race. They have the responsibility of understanding their horse and adapt their riding style. The same jockey may ride multiple horses on a given race day.

Trainer: They are responsible for the comprehensive care, conditioning, and preparation of the horse. Their expertise typically involves the daily training regimen and nutrition.

Odds: Reflect betting public sentiment. The odds printed in the program are not the current odds as they change continuously.

Scratch: A horse withdrawn from a race after entries are published; wagers on that horse are refunded or adjusted according to bet type.

Post Position: The numbered starting stall from which a horse begins the race, which can influence trip dynamics depending on distance and field size.

Past Performances (PP): Detailed history of previous races, including distance and surface, finishing position, speed figures, class.

Distance and Surface: Race performance is highly conditional on distance and surface. Some horses excel in short sprints, others in longer, multi-turn routes, and many show clear preferences for dirt, turf, or synthetic tracks. When reviewing past performances, focus on whether today's conditions match those under which the horse has previously succeeded. Track conditions can range from 'fast' to 'sloppy'.

Speed Figures: When evaluating horses, look at their speed figures at today's surface over a comparable distance in order to get a feel for their ability and how they fit in with the rest of the field.

Class: Horse racing is organized into class levels to keep competition fair and wagering meaningful. Races range from elite Grade I stakes at the top, to low-level claiming races at the bottom. Evaluating whether a horse "fits" its class is essential to judging competitiveness.

BETTING TERMINOLOGY & EXAMPLES

Straight Bets

Win: Horse must finish first

Place: Horse must finish first or second

Show: Horse must finish first, second, or third

Across the Board: Win, Place, and Show combined

Straight bets are typically \$2 minimum. The odds for a horse are reflected on the payout if they win. For any payout, your wager is returned to you plus the payout. For example, for a \$2 wager on a horse with 3-2 odds, you will receive \$5 (\$2 bet and \$3 payout). Sometimes payouts are not exact, as displayed odds are rounded and the track takes a small share of the wager. The following table shows an example of odds and payouts for a \$2 bet from the 2026 Kentucky Derby.

Table 1. Kentucky Derby 2026 Odds and Payout

Horse	Odds	Win	Place	Show
Golden Tempo	23/1	\$48.24	\$19.14	\$11.90
Renegade	5/1	-	\$7.14	\$5.46
Ocelli	70/1	-	-	\$36.34

Exotic Bets: Multiple Horses

Exacta: First two finishers in exact order

Trifecta: First three finishers in exact order

Superfecta: First four finishers in exact order

Using the prior 2026 Kentucky Derby example, a \$2 exacta paid \$278.86, \$1 trifecta paid \$11,250.78, and \$1 superfecta paid \$94,489.95.

These higher-odds bets typically have a lower betting minimum (< \$2).

If you 'Box' the bet, then the horses you choose can come in any order; in effect, you are making more bets based on these additional combinations. For example, a "3, 7 Exacta Box" means that your wager will win if horses #3 and #7 finish first and second in either order (but both must finish first and second).

A 'Wheel' bet allows you choose a finishing horse with multiple other horses to fill out an exacta, trifecta, etc. For example, a you could wheel horse #4 in the first place slot, then fill second and third places with horses #2, #5, and #7 in any order. The more horses you include, the higher the total cost of the ticket since you've covering multiple combinations.

Exotic Bets: Multiple Races

Daily Double: Winners of two consecutive races

Pick 3 / Pick 4 / etc.: Winners of multiple consecutive races

How to Place a Bet (What to Say)

State the following in order: Race Number → Bet Amount → Bet Type → Horse Number(s). For example, "Race 5, \$2 Exacta Box, horses 3 and 7."

Always check your ticket before leaving the window.

Hold all tickets until the race is declared official.

Inquiries or objections delay payouts until resolved.

CONTEMPORARY ISSUES

Horse racing faces growing tension at the intersection of technology and regulation. One prominent issue is computer-assisted wagering, in which algorithmic betting syndicates place thousands of high-speed bets in the final seconds before post time, causing sudden swings in odds. These bets add revenue to horse tracks but undermine confidence among retail betters. In the future, tracks may impose timing and rate limits on automated bets. In addition, platforms such as Polymarket have a different challenge; prediction markets allow wagers on sporting and other events under federal commodities law rather than state gambling regimes. This regulatory classification enables participation often without consumer protections or tax collections. States are raising concerns about lost revenue and uneven oversight.