

XC-SPI Postmodern Era Historical Success Model

Super-Shoe Era onward: 2020–2025 team-profile persistence, 2026 success rates, and historical title odds

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Abstract

This report adds a historical benchmark to the 2026 XC-SPI Preseason Score. XC-SPI calls 2020 onward the **Postmodern Era (Super-Shoe Era onward)**. The label is a project convention, not a universal periodization claim: 2020 marks the contemporary advanced-footwear transition in elite track competition and also provides a practical boundary for comparing modern NCAA team profiles. World Athletics materially revised competition-shoe rules in January 2020, and subsequent research describes advanced footwear technology spikes as entering elite track competition around 2020.^{1;3} The historical model uses NCAA team scoring profiles from 2020–2024 to predict next-season NCAA outcomes in 2021–2025. It produces Historical Title, Podium, Top-10, and Top-20 success rates. These are a separate question from the 2026 Power Ranking and are allowed to order teams differently.

1. What This Model Answers

The **Power Ranking** asks which 2026 roster currently has the strongest Preseason Score. The **Historical Success Model** asks a different question: when a Postmodern Era NCAA team had a scoring profile shaped like this one, how often did that profile become a champion, podium team, top-10 team, or top-20 team one season later? The historical layer is therefore a persistence benchmark, not a replacement for current roster evidence and not the final athlete-level championship simulator.

2. Why the Postmodern Era Begins in 2020

XC-SPI uses 2020 as a transparent project cutoff. World Athletics announced major competition-shoe restrictions on January 31, 2020, including limits on sole thickness and rigid plates; later 2020 technical rules explicitly addressed road and spike shoes.^{1;2} Needles and Grabowski describe 2020 as the introduction point for advanced footwear technology spikes in elite track and field.³ The cutoff does *not* claim footwear alone caused every change in collegiate running. It simply avoids mixing a modern technology/roster environment with a much older competitive period when building the historical benchmark.

The 2020 NCAA cross-country season was disrupted by COVID-19 and its championship was held in March 2021. It remains in the main era because the user-defined Postmodern Era starts in 2020, but the model is rerun without that 2020 source profile as a sensitivity check.

3. The Four Simple Inputs

For each NCAA team profile the model uses four scoring-shape measures, standardized within sex and season so that the comparison is about relative profile shape rather than absolute point scale:

- **Team Score:** the five-runner NCAA score; lower is stronger.
- **Front Runner:** the first scorer's NCAA scoring place.
- **Fifth Runner:** the fifth scorer's place, capturing back-end scoring exposure.

- **Depth Gap:** the gap from scorer five to runner seven, capturing how much protection sits behind the scoring five.

For 2026, the same profile is formed from the audited adjusted runner scores underlying the frozen Preseason Score. The match is intentionally profile-based: the historical model does not pretend that a 2026 adjusted score is literally the same object as an observed 2024 NCAA place.

4. Model and Validation

The outcome has five categories: champion; 2nd–4th; 5th–10th; 11th–20th; and outside the top 20. A regularized multinomial logistic model estimates

$$P(Y = k \mid \mathbf{z}) = \frac{\exp(\alpha_k + \beta_k^T \mathbf{z})}{\sum_{\ell=1}^5 \exp(\alpha_\ell + \beta_\ell^T \mathbf{z})}. \quad (1)$$

The public name is simply **Historical Success Model**. Candidate versions using Team Score alone or smaller subsets were compared by held-out-season cross-validation. The four-input model with moderate regularization had the best mean held-out log loss (1.256), although the improvement over the simpler score-only model was modest. That small gain is important: XC-SPI should not claim that scoring shape transforms prediction if most of the useful information is still contained in overall team strength.

Across the held-out season predictions, the mean title probability was 4.0%, matching the observed 4.0% title rate among the 25 prior-year teams; mean podium probability was 15.2%, matching the 15.2% observed rate; and mean top-10 probability was 36.4%, matching the 36.4% observed rate. These checks describe this historical-profile benchmark only. They do not establish sportsbook-grade calibration for the future athlete simulator.

5. 2026 Men’s Historical Success

Table 1: Men’s 2026 Historical Success ranking. The ranking is ordered by historical podium rate because podium provides a less sparse benchmark than title alone.

Hist.	Power	Team	Score	Title	Podium	Top 10
1	1	Iowa State	167.3	30.1%	65.9%	84.5%
2	2	New Mexico	271.6	21.0%	47.6%	73.3%
3	3	Alabama	277.9	8.9%	39.1%	68.0%
4	4	Oklahoma State	291.9	7.5%	32.6%	58.3%
5	5	Colorado	330.6	9.8%	30.1%	63.0%
6	7	Wake Forest	424.9	6.0%	28.3%	54.5%
7	6	BYU	391.0	4.6%	22.1%	52.1%
8	8	Louisville	481.2	4.3%	19.8%	46.0%
9	9	Oregon	482.7	4.0%	17.9%	43.9%
10	10	Washington State	513.2	2.8%	16.9%	40.4%
11	12	Notre Dame	547.3	3.2%	14.9%	40.2%
12	14	Virginia Tech	553.8	2.8%	11.1%	33.7%
13	13	Michigan State	553.0	1.7%	8.4%	32.6%
14	11	Eastern Kentucky	533.4	1.1%	5.3%	22.7%
15	21	Butler	651.6	1.0%	5.0%	24.3%
16	18	Ole Miss	611.1	1.0%	4.6%	22.9%
17	17	Tulane	606.5	0.7%	4.3%	21.6%
18	16	Wisconsin	589.2	0.9%	3.8%	23.1%

Table 1: Men’s Historical Success ranking (continued).

Hist.	Power	Team	Score	Title	Podium	Top 10
19	20	Arkansas	623.9	0.6%	3.6%	18.5%
20	15	Northern Arizona	561.4	0.8%	3.1%	20.7%
21	22	Oklahoma	706.0	0.4%	3.0%	17.0%
22	19	Syracuse	621.8	0.4%	2.7%	16.9%
23	23	Virginia	719.8	0.2%	1.4%	12.5%
24	25	Princeton	797.8	0.2%	1.1%	10.9%
25	24	Georgia	772.8	0.1%	0.7%	9.0%

The men’s historical layer broadly agrees with the Power Ranking but does not duplicate it. Iowa State and New Mexico remain first and second. Colorado is fifth by Preseason Score yet has the third-highest historical title propensity because its current front-to-back scoring shape resembles Postmodern Era title-capable profiles differently from Alabama and Oklahoma State. That does not move Colorado to No. 3 in the Power Ranking; it is a separate historical statement.

6. 2026 Women’s Historical Success

Table 2: Women’s 2026 Historical Success ranking.

Hist.	Power	Team	Score	Title	Podium	Top 10
1	1	NC State	124.4	25.9%	68.6%	88.1%
2	2	BYU	234.4	9.6%	49.7%	79.1%
3	5	West Virginia	350.7	10.2%	38.2%	66.5%
4	4	New Mexico	335.3	7.3%	29.2%	62.5%
5	6	Oregon	395.6	6.0%	21.7%	47.3%
6	8	Stanford	442.1	5.3%	20.0%	45.4%
7	9	Notre Dame	473.0	5.1%	19.9%	45.2%
8	18	Arkansas	643.2	5.2%	18.6%	41.0%
9	16	Florida	558.5	4.3%	18.2%	43.0%
10	3	Iowa State	308.7	2.5%	15.4%	38.9%
11	7	Alabama	396.9	2.1%	14.2%	35.6%
12	12	South Carolina	539.4	2.3%	10.8%	36.0%
13	10	Northern Arizona	502.3	1.8%	8.3%	30.0%
14	11	Colorado	521.5	2.1%	7.8%	31.4%
15	15	Northwestern	554.5	2.2%	7.7%	29.7%
16	13	Utah	547.7	1.9%	7.5%	30.6%
17	14	Virginia	548.3	1.1%	6.2%	26.1%
18	17	North Carolina	598.4	0.8%	4.3%	21.7%
19	21	Oklahoma State	661.3	0.7%	3.9%	20.8%
20	19	Villanova	647.1	0.8%	3.3%	19.8%
21	20	Wisconsin	650.3	0.4%	2.1%	17.2%
22	22	LSU	697.4	0.4%	1.8%	13.9%
23	23	Penn State	757.5	0.2%	1.2%	11.6%
24	25	Washington	803.0	0.1%	1.0%	10.5%
25	24	Georgetown	765.3	0.1%	0.8%	9.7%

The women show a larger divergence. NC State remains first in both systems, while BYU remains near the top. Iowa State is No. 3 by Preseason Score but No. 10 in Historical Success because the current audited profile is extremely strong at the front while the fifth adjusted runner remains much weaker. West Virginia, by contrast, has a less dominant Power Ranking score but a historical profile that has converted to podium outcomes more often. These are not corrections to the Power Ranking; they identify different risk shapes.

7. Historical Title Odds

A title market must sum to 100% across mutually exclusive teams. The raw title success rates above are independent profile probabilities, so they do not necessarily sum to one when applied to the current field. To create a coherent **Top-25-conditional Historical Title Market**, XC-SPI normalizes the raw title rates within each displayed sex:

$$p_j^{\text{hist title}} = \frac{r_j}{\sum_{\ell=1}^{25} r_{\ell}}, \quad (2)$$

where r_j is the team's raw Historical Title rate. Fair American prices are then calculated from $p_j^{\text{hist title}}$. The prices are rounded to the nearest 25 because this is a small-sample historical benchmark, not a sportsbook-quality current forecast. They are conditional on the displayed Top 25 and do not allocate a separate probability to an unranked team.

7.1. Men's Top-25-Conditional Historical Title Odds

Title	Power	Team	Hist. share	Fair line
1	1	Iowa State	26.3%	+275
2	2	New Mexico	18.4%	+450
3	5	Colorado	8.6%	+1075
4	3	Alabama	7.8%	+1175
5	4	Oklahoma State	6.6%	+1425
6	7	Wake Forest	5.3%	+1800
7	6	BYU	4.0%	+2375
8	8	Louisville	3.8%	+2550
9	9	Oregon	3.5%	+2775
10	12	Notre Dame	2.8%	+3500
11	10	Washington State	2.5%	+3925
12	14	Virginia Tech	2.5%	+3925
13	13	Michigan State	1.5%	+6725
14	11	Eastern Kentucky	1.0%	+10350
15	21	Butler	0.9%	+10775

7.2. Women’s Top-25-Conditional Historical Title Odds

Title	Power	Team	Hist. share	Fair line
1	1	NC State	26.3%	+275
2	5	West Virginia	10.4%	+850
3	2	BYU	9.8%	+925
4	4	New Mexico	7.4%	+1250
5	6	Oregon	6.1%	+1550
6	8	Stanford	5.4%	+1750
7	18	Arkansas	5.3%	+1775
8	9	Notre Dame	5.2%	+1825
9	16	Florida	4.3%	+2200
10	3	Iowa State	2.5%	+3925
11	12	South Carolina	2.4%	+4150
12	15	Northwestern	2.2%	+4400
13	7	Alabama	2.2%	+4525
14	11	Colorado	2.1%	+4550
15	13	Utah	1.9%	+5050

These are **Historical Title Odds**, not full XC-SPI Championship Odds. Full current-model odds remain gated until athlete distributions, availability/selection, race adjustment, exact NCAA scoring simulation, and probability calibration are active.

8. COVID-Season Sensitivity

Removing the disrupted 2020 championship profile from model fitting changes the largest 2026 raw title estimate by about 2.2 percentage points and the largest podium estimate by about 5.5 points. Men’s Historical Success order is unchanged; women’s podium order moves by at most one place. The sensitivity check therefore supports retaining 2020 in the Postmodern Era while flagging it visibly rather than pretending it was an ordinary season.

9. Limits

Only five next-season outcome years (2021–2025) are available under the strict 2020-forward definition, yielding 250 team-season observations and only ten champions across men and women. The model is therefore most credible for broader outcomes such as podium/top 10, not as a standalone title oracle. Historical roster turnover is not reconstructed athlete by athlete for every old team; the model measures persistence of prior NCAA scoring shape. Current 2026 inputs are roster-adjusted, so the comparison is deliberately approximate. School prestige, coaches’ polls, and program name are not inputs. The model should be updated every season, and the full athlete simulator should eventually carry more weight than historical analogy.

10. Interpretation Rule

Three public rankings may legitimately disagree:

- **Power Ranking:** strongest current Preseason Score.
- **Historical Success Ranking:** what similar Postmodern Era profiles tended to become.
- **Championship Odds:** eventually, the validated current athlete simulation.

Disagreement is information about upside, floor, depth, and uncertainty; it is not an error that must be forced away.

References

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