

# STATS



# NFL 2017

Using STATS ICE Pro Analytics Platform and STATS X-Info Data for an innovative look into the 2017 season

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Why did Bill Belichick spend money on a – gasp – running back?

How does toxic differential explain the Patriots' latest Super Bowl victory, how their opponent got there, and what's become of the Raiders? And – back up a second – what is toxic differential?

How valuable was Mike Evans? What does DeSean Jackson do for him and Jameis Winston?

What makes Aaron Rodgers – well – Aaron Rodgers?

These are questions that used to only be addressed with inadequate and antiquated metrics. They left those asking the questions with unquantifiable answers that essentially amounted to a pass-fail grade from the expert's eye test. With STATS ICE and X-Info, anyone settling for that eye test isn't completing the job. Read on as we answer each of these questions and more.

## STATS ICE Pro Analytics Platform

STATS ICE is an advanced and engaging analytics platform that provides football teams with a premier player-evaluation, personnel-management and game-preparation system that delivers enhanced levels of efficiency and strategic insight.

Leveraging unique STATS X-Info data, STATS ICE delivers advanced statistics and helps NFL and NCAA football teams access, manage and analyze critical information. Presenting key performance insights through an intuitive interface, STATS ICE gives teams and media access to the information that delivers a competitive advantage.

## STATS X-Info Data

Proprietary STATS X-Info data provides detailed insights on statistical events not captured via traditional data collection methods. STATS integrates this data with conventional play-by-play information to create exclusive metrics for unrivaled football player analysis in NFL and NCAA competitions. STATS pioneered the collection of advanced football statistics, and our experts have been collecting X-Info data since the 2002-03 season.

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# BELICHICK'S WAY?

Right This Way: Explosive Plays and Toxic Differential

Questioning any roster move New England Patriots boss Bill Belichick executes might seem ridiculous. The noted football genius is fresh off guiding the franchise to its fifth Super Bowl title after all. But you wouldn't be the first to wonder why Belichick let running back LeGarrette Blount, his 1,161 yards and league-leading 18 touchdowns in 2016 sign this offseason with Philadelphia in favor of former Buffalo backup Mike Gillislee, who came at a higher cost.

STATS' X-Info data clears that up a bit when considering the Patriots run an up-tempo offense behind Tom Brady.

Gillislee finished 2016 with an explosive-play percentage of 9.9, meaning that 10 of his 101 carries went for at least 15 yards while spelling Bills starting back LeSean McCoy. Blount's explosive-play percentage was a mere 4.0.

## EXPLOSIVE PLAY

Any pass or reception of 25+ yards, any rush of 15+ yards and any kick or punt return of 25+ yards

## SUCCESSFUL RECEPTION

First-down catch that gains at least 40% of the yardage necessary for a first down, a second-down catch that gains 50% of the yardage remaining, or a third- and fourth-down catch that achieves a first down

## QUALITY RUSH

First-down rushing attempt that gains at least 40% of the yardage necessary for a first down, a second-down run that gains 50% of the yardage remaining, or a third- and fourth-down run that achieves a first down

## SUCCESSFUL TOUCH %

$[\text{Successful Reception} + \text{Quality Rush}] / [\text{Offensive plays}]$

## TOXIC DIFFERENTIAL

$[\text{Takeaways} - \text{Giveaways}] + [\text{Explosive Plays} - \text{Explosive Plays allowed}]$



Furthermore, Gillislee ran more efficiently. Blount is known as more of a move-the-chains kind of back, but that's not supported by the numbers. Gillislee had an NFL-leading 63.4 quality-rush percentage in 2016 [minimum of five rushing attempts per team game], while Blount's 43.5 mark tied Theo Riddick for 37th. That also resulted in a league-leading successful-touch rate among running backs of 59.8 percent for Gillislee.

Belichick signing Gillislee to a two-year offer sheet with \$4 million guaranteed in 2017 and giving up a fifth-round pick to complete the restricted free agent's move from Buffalo seems like a wise move when digging deeper into the numbers.

But the Patriots haven't won all those Super Bowls simply because of their offense. They've been balanced on both sides of the ball, and X-Info helps prove that.

Toxic differential is a metric that defines balance, weighing takeaways and giveaways while tying it to explosive-play ability and the amount of explosive plays allowed. Essentially, it's balancing turnovers and big plays that have the potential to be game-changing moments. Hold your shock for a second, but New England finished atop the NFL with a plus-32 toxic differential. The Patriots' Super Bowl opponent, Atlanta, finished second at +30. See a trend?

Go back a year to the Carolina Panthers' 15-1 regular season and a trip to the Super Bowl, and they led the league with a +38 mark. The Raiders went from tied for last in 2014 [minus-34] to 14th in 2015 [+1] to tie for fifth in 2016 [+18] and improved their record from 3-13 to 7-9 to 12-4.

Of last year's 12 playoff teams, only three had a negative toxic differential. The Texans' -11 was the worst in large part because they played most of the year without disruptor J.J. Watt. They were followed by Detroit [-4] and Miami [-2], and those teams had the three worst records among playoff teams.

The Patriots also tied for the NFL lead in explosive-play differential with Dallas at +20, and they added another offensive weapon in the offseason who surely will make an impact. Brandin Cooks tied for fifth among wide receivers with 13 explosive plays while with New Orleans last season, which was actually three more than one of the league's breakout wide receivers over the past few seasons.

That man was Mike Evans. Read on for more on Tampa Bay's clutch target and how he might work with Jameis Winston and DeSean Jackson in 2017.



# EVANS AND WINSTON AND JACKSON, OH MY

Clutch Receiving, Air Yards and the Case for the Buccaneers' Passing Game

Picking up from the last section, Mike Evans also finished with double-digit explosive plays [10], but that only begins to scratch the surface of his value to young Tampa Bay quarterback Jameis Winston and the Buccaneers' offense. X-Info data delves deep beyond the basics of a catch and helps provide insight into the impact of each grab.

Clutch-reception percentage analyzes how many of a player's receptions resulted in plays that enhanced the team's overall performance. The definition of a clutch reception seems simple enough, but X-Info tracks field position, game time, down and distance and the final result of the catch to give a clear look as to which players to target – or defend – in certain situations.

## CLUTCH RECEPTION

Any reception that results in either a first down or a touchdown

## AIR YARDS CATEGORIES

- Targeted behind line of scrimmage
- Short: Targeted at 0-10 yards
- Intermediate: Targeted at 11-20 yards
- Deep: Targeted at 21+ yards

Evans led the NFL with an 84.4 clutch-reception percentage after totaling 96 catches overall in 2016. Larry Fitzgerald [55.1 CRP], Antonio Brown [60.4], Odell Beckham Jr. [64.4], Julian Edelman [56.1] and Jordy Nelson [63.9] all had more total receptions than Evans, but none came close to matching Evans' CRP.

He also led the NFL in successful receptions [92] as defined in the section above, but what stands out further is the timing of Evans' receptions. X-Info tracked that Evans led the NFL in clutch receptions on both second down with 34 and third down with 28. Of those third-down catches, 11 were in the fourth quarter and 10 were in third-and-long situations to help keep Tampa Bay's drives alive.

Now, let's add offseason acquisition DeSean Jackson to the mix as another weapon for Winston. It's easy to come to one of two optimistic conclusions here: 1.] Problems covering Evans will free up Jackson, or 2.] the deep threat of Jackson will free up Evans as teams key on him even more in 2017.

We've first got to find a way to measure the man throwing them the ball. Winston's QBR on throws defined as short ranked 11th [90.7], which was 10 spots higher than his overall rating [86.1]. Bump it to intermediate and he falls to 22nd [79.9]. On deep balls, he's 23rd [67.4] and his seven interceptions there trailed only Philip Rivers.

## 2016 CLUTCH RECEPTIONS

<b>1. M. Evans</b>	<b>81</b>
2. T. Hilton	66
3. O. Beckham Jr.	65
T4. J. Jones	64
T4. A. Brown	64

Remember explosive plays? Jackson tied with Beckham at third among receivers with 14, behind only T.Y. Hilton (16) and Amari Cooper (15). Consider his comparatively minimal 56 receptions (T66), his middling 5.2 yards after catch (T37), and his impressive 10.1 yards per target (fifth), and the main area of benefit might be for Winston, who now has Kirk Cousins' former downfield threat. Cousins' 99.9 intermediate rating was eighth, and his 120.4 deep rating ranked fourth. D-Jax hauled in 506 deep yards, which was nearly three times the league average (175.7), nearly double that of Beckham (260), plenty more than Antonio Brown (387), and just behind Hilton (508).

What's more is 193 of Jackson's deep yards came from the right side and 162 came from the right sideline on a collective 8 of 16 (50 percent). Those were all delivered by Cousins. When throwing deep to other receivers on the right and right sideline, Cousins was 7 of 21 (33.3). Cousins threw two deep TDs on the right and right sideline. Who caught them? Let's just say the guy on the receiving end remembered to save his showboating for after he broke the goal line.

When Evans was targeted on either the right or right sideline, he caught 1 of 12 deep throws for 31 yards, no TDs and a drop. Plenty of that may fall on Winston, but the young QB was better throwing the ball to other receivers in those spots. To non-Evans targets, he was 4 of 11 for 150 yards and three TDs.

Winston may not become the most accurate downfield passer overnight, but the addition of Jackson is a well-advised move to add a quantifiable difference maker on deep right-side routes while also utilizing Evans most effective spots.

## JAMEIS WINSTON PASSING MAP

### DEEP (21+)

	LS	L	M	R	RS	TOTAL
Comp/Att	9/21	3/11	1/3	2/7	3/16	18/58 [18/51]
Comp%	43%	27%	33%	29%	19%	31% [34.1%]
Yds	248	117	39	57	93	554 [637.9]
TDs	5	3	0	1	2	11 [5.5]
iNTs	3	0	0	2	1	6 [3.0]
QB Rating	87.0	111.0	81.9	61.0	64.8	67.7 [89.0]

### TOTAL

	LS	L	M	R	RS	TOTAL
Comp/Att	63/110	77/127	43/61	101/153	61/116	345/567 [320/506]
Comp%	57%	61%	70%	66%	53%	61% [63.0%]
Yds	822	894	492	1193	689	4090 [3648.3]
TDs	7	9	2	5	5	28 [22.3]
iNTs	6	4	1	5	2	18 [11.1]
QB Rating	79.4	92.4	98.5	86.9	77.8	86.1 [89.2]

[LEAGUE AVERAGE]

# EVERYBODY RELAX

Assessing Aaron Rodgers with Number of Rushers, Release Time and a New Tight End



If Aaron Rodgers never took another snap, he'd retire as the highest-rated quarterback in NFL history.

Over the past decade since Rodgers became the Packers' signal caller, no one comes close to his touchdown percentage (6.4). Only Tom Brady can eclipse his interception percentage, barely (1.4 to 1.5). He's the total package, and his numbers last season (65.7 completion percentage, 40 TDs to 7 INTs, a 104.2 passer rating), while remarkable, have basically become the standard for Rodgers.

He was great, but not perfect.

Rodgers' ability to keep things alive when a play breaks down is perhaps his greatest strength – who will soon forget that 35-yard dart to Jared Cook down the sidelines in Dallas during the divisional playoffs to set up the game-winning field goal? – but that confidence to fit a throw into every tight window can occasionally result in trouble.

STATS' X-Info data allows us a window into how much pressure a QB faced every time he dropped back to pass, and Rodgers' 2016 breakdown paints an interesting picture. When Rodgers faced little pressure from opposing defensive fronts, he struggled the most. Of 30 quarterbacks who took at least 14 pass attempts per team game, Rodgers' 78.0 passer rating when he faced three or fewer rushers was 25th. While only 67 of his 610 pass attempts (11%) last season came in this situation, it directly led to three of his seven interceptions. His completion percentage plummeted to 52.5.

## 2016 QB RATINGS VS 3 OR FEWER RUSHERS

1.	B. Roethlisberger	130.8
2.	A. Luck	119.3
3.	T. Brady	117.6
4.	S. Bradford	116.5

**25. A. Rodgers 78.0**



Add another rusher into the equation and watch Rodgers pick the defense apart. When facing pressure from four defenders, Rodgers also threw three picks – in 397 pass attempts. He tossed an NFL-high 27 touchdown passes in that scenario and his 108.7 rating ranked behind only Matt Ryan and Dak Prescott. Throw even more heat – five or six rushers – and Rodgers' passer rating (106.2) is still above his own lofty standards.

X-Info also lets us see how quickly a QB got rid of the ball in a variety of situations. Rodgers is known for a lightning-quick release once he identifies his target, but there's a difference between that and how long a passer typically takes from the snap of the ball.

In the latter case, Rodgers is rarely in a rush – even if he's hurried. Of 27 qualifying QBs, Rodgers took the second-longest amount of time between snap and throw [4.12 seconds] when he's "hurried" in the pocket. And while he's buying time with his legs, Mr. Discount Double Check isn't usually looking for a checkdown. Rodgers took a leisurely 3.64 seconds from the snap before getting rid of his deep balls, nearly a third of a second longer than any other QB in the NFL. Remember the famous throw to Cook? Rodgers ran off 5.9 seconds before unleashing that one.



## 2016 DEEP-BALL RELEASE AVERAGE [SECONDS]

1.	A. Rodgers	3.64
2.	T. Taylor	3.34
3.	R. Tannehill	3.19
4.	A. Luck	3.16
5.	M. Ryan	3.13

For a guy who famously told Packers fans to "relax" in tough moments, STATS' X-Info data shows Rodgers at least tends to follow his own advice. And that should provide even more time for Rodger's eccentric new target to find some space in opposing defenses.

The always entertaining Martellus Bennett undoubtedly was excited about joining Rodgers and Co., so much so that he spent his first night at training camp sleeping in front of his locker. Judging from X-Info data, Rodgers should be just as excited about adding the self-nicknamed Black Unicorn to an already-potent offense.

Bennett was a key cog of the Patriots' Super Bowl-winning team last season, hauling in a career-high seven TDs on 55 receptions that went for 701 yards. His yardage ranked ninth in the league among tight ends, but what made it even more impressive was his ability to keep plays going after simply making the catch. Of his 701 yards, 431 came after the reception, or 61.5 percent of his total yardage – the best among tight ends and third-highest total among all receivers.

## 2016 YARDS AFTER CATCH PERCENTAGE

1.	C. Patterson	73.3
2.	A. Humphries	64.8
3.	M. Bennett	61.5
4.	R. Cobb	60.7
5.	T. Kelce	59.2



The Packers didn't have nearly the same kind of production from the two primary tight ends on their roster last year – Cook, who is now with Oakland, and Richard Rodgers. The pair combined for 266 yards after the catch, or 41.0 percent of their 648 total yards.

Green Bay wasn't exactly hurting in its passing attack, though, which comes as no surprise with a receiving corps featuring Jordy Nelson, Devonte Adams and Randall Cobb. Bennett, however, may help open things up.

Rodgers was his most comfortable throwing to the right end, as 936 of his 4,428 yards, or 21.1 percent, went to that location with Nelson and Adams counting for 665 of those yards. Bennett should have no problem getting open there, as he also racked up his most yards on the right end with 156, but obviously not every Packer receiver can run routes to the right end on every play. No worries though, as Bennett can fill a gap in an area that didn't see as much action last season to help spread the field.

STATS X-Info charts 10 pass directions, and each pass a specific QB throws in those areas can be broken down further into time of game, down and distance, field position and personnel on the field. For Rodgers, the right hash only accounted for 327 of his passing yards [7.4 percent]. But the right hash is where Bennett amassed his most yards, 123 [17.5 percent], from Tom Brady.

We examined earlier Rodgers' clutch play under pressure, and a tight end is often a quarterback's best friend when he needs to get rid of the ball in a hurry. Bennett excelled in those situations last season, getting open at an alarming rate when Brady was blitzed. Among the top 10 tight ends in receiving yards in 2016, none had a bigger percent of their yards come against the blitz than Bennett's 43.6.



## 2016 PERCENT OF TOTAL RECEIVING YARDS AGAINST BLITZ

1.	M. Bennett	43.6
2.	T. Kelce	37.0
3.	D. Pitta	30.5
4.	D. Walker	29.5
5.	G. Olsen	28.9

Of those blitz plays, Bennett got a first down 89.8 percent of the time. Only Jimmy Graham [97.9] and Travis Kelce [96.3] had a better rate of moving the chains.

Anything else he can bring to the table, you ask?

STATS X-Info defines long as eight-plus yards to go for a first down, and Bennett caught 46 passes on such plays, or 83.6 percent of all his catches. That's the biggest percentage among the top 10 receiving TE leaders. He was able to move the chains on exactly half of those receptions, while Richard Rodgers and Cook only got the first down on 15 of their 40 receptions [37.5 percent] when needing at least eight.

Bennett's addition could help Rodgers in plenty of areas according to X-Info data, giving Rodgers yet another weapon within a depth of talented playmakers.

# ABOUT **STATS**

STATS, the global leader in sports data and intelligence, operates at the intersection of sports and technology. The world's most innovative teams, leagues and brands trust STATS to find their winning edge. STATS combines the industry's fastest and most accurate data platform with video analysis, sports content and research, player tracking through STATS Sport-VU®, and a range of customizable digital solutions for brands. The pioneer of live sports data, STATS continues to speed innovation in the industry while enhancing both team performance and fan experience. We are trusted by millions of fans and athletes around the globe to analyze performance data from more than 100,000 games a year with unrivalled speed and accuracy.

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STATS has perfected a projection model that powers award-winning fantasy rankings, taking into account every statistic and variable in order to ensure accuracy. Projecting player performance isn't routine guessing based on simple metrics and gut feelings. There's a science behind it, and the awards justify STATS having the best predictive data in the world.

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