

Varieties and germplasm released by the WheatCAP

Forty varieties and germplasm releases in 2022.

PVP source (search GRIN) <https://www.ars-grin.gov/cgi-bin/npgs/pvp/pvplist.pl>

Variety releases with PVP (3)

1. **'ND Heron'** (PVP 202200266, submitted 2/15/22) is an early maturing wheat variety best adapted to central and western North Dakota. It has high grain protein, very high-water absorption, and is moderately resistant to FHB, leaf rust and stem rust. It was genotyped at the USDA-ARS genotyping lab in Fargo during its development.
2. **'Ascend SD'** (PVP 202200513, submitted 8/01/22) is a South Dakota HRS wheat variety released in the Fall of 2021. Ascend SD has excellent yield potential and has above-average to good end-use quality. It has good resistance to BLS and FHB.
3. **'MT Sidney'** (PVP 202200291 submitted 03/04/2022) is a hollow-stem, high yielding semi-dwarf hard red spring wheat variety released by Montana State University in 2021. MT Sidney is moderately resistant to FHB (Scab), has 0.5% higher grain protein content than Vida, above average TWT and average end-use quality.

Variety releases with pending PVP (30)

1. **'Windom SF'** = CO18SF009W = Warhorse/Breck//CO12D1028 (PVP pending) 'Windom SF' is a Hard-White Winter wheat, released by Colorado State University in summer 2022. It has the semi-solid-stemmed trait for partial resistance to wheat stem sawfly.
2. **'UI GOLD'** (PVP pending) is a Hard-White Spring wheat cultivar released in October 2022 by the University of Idaho. It has very high grain yield and excellent bread-baking quality and good resistance to stripe rust.
3. **'IDO2002S'** is a Hard-White Spring wheat line developed by the University of Idaho using combination of DH technology and characterized via molecular marker for bread-baking quality. It will be submitted to NSGC in spring 2023.
4. **'IDO2202 CL2'** is a Hard-White Spring wheat line developed by the University of Idaho via MAS for herbicide resistance to Beyond.

5. **'IL19-14856'** is a breeding line licensed by the University of Illinois to a private seed company, and is ultra-early, high-yielding, and Fusarium Head Blight (FHB) resistant.
6. **'IL17-8930'** is a breeding line licensed by the University of Illinois to a private seed company, and is ultra-early, high-yielding, and Fusarium Head Blight (FHB) resistant.
7. **'US16-IL-063-063'** is a breeding line licensed by the University of Illinois to a private seed company, and is ultra-early, high-yielding, and Fusarium Head Blight (FHB) resistant.
8. **'IL19-5466'** is a breeding line licensed by the University of Illinois to a private seed company, and is ultra-early, high-yielding, and Fusarium Head Blight (FHB) resistant.
9. **'IL18MSFRS-18'** is a breeding line licensed by the University of Illinois to a private seed company, and is a high-yielding, and Fusarium Head Blight (FHB) resistant line with medium maturity.
10. **'IL18-17905'** is a breeding line licensed by the University of Illinois to a private seed company, and is a high-yielding, and Fusarium Head Blight (FHB) resistant line with medium maturity.
11. **'IL18-14534'** is a breeding line licensed by the University of Illinois to a private seed company, and is a high-yielding, and Fusarium Head Blight (FHB) resistant line with medium maturity.
12. **'US17-IL-108-039'** is a breeding line licensed by the University of Illinois to a private seed company, and is a high-yielding, and Fusarium Head Blight (FHB) resistant line with medium maturity.
13. **'KS Providence'** (PVP pending) is a Kansas Hard-Red Winter with excellent yield potential and yield stability. It has demonstrated good drought tolerance and is expected to be well adapted to the Central Corridor of Kansas. It carries *Lr34*, *Lr46* and *Lr68*, giving it very good resistance to leaf rust but is intermediate to stripe rust. Benefitted from genotyping lab analysis of regional nursery germplasm.
14. **'KS Big Bow'** (PVP pending) is a Kansas Hard-White wheat with excellent yield potential. Viewed as a Joe replacement having better yield, sprout tolerance and coleoptile length than Joe. Carries the *Wsm2* gene for WSMV. Benefitted from genotyping lab analysis of elite/regional nursery germplasm.
15. **'KS Territory'** (PVP pending) is a Kansas Hard-Red Winter wheat with good resistance to WSMV based on *Wsm2*. Benefitted from genotyping lab support of elite/regional nursery germplasm.
16. **'MN-Rothsay'** (PVP pending) is a Hard-Red Spring wheat that was released in January 2022 by the University of Minnesota. It has high grain yield and strong straw. The Fargo USDA-ARS Genotyping Center contributed DNA marker data used in the selection and development of MN-Rothsay.
17. **'TAM 116'** (TX14A001035= Billings/TX03A0563, PVP pending) TAM 116 is resistant to leaf rust, stripe rust, and stem rust. Good bread-making quality and adapted to intense management systems in the Texas High Plains and Texas Rolling Plains.

18. **'TX14V70214'** (PVP pending) Pedigree: Art/TAM 401. It is awnless with high biomass yield and resistance to leaf, stripe and stem rust. It has statewide adaptation and is suitable for dual purpose, silage, and graze-out management systems.
19. **'TX14M8024'** (PVP pending) Pedigree: TAM 203/Duster. It is resistant to Hessian fly, leaf rust, stripe rust, and stem rust. Good bread-making quality and is adapted to the Texas Rolling Plains, Texas Blacklands, and South Texas.
20. **'TX16M9216'** =TX07A001482/TAM 401//Duster (PVP pending). TX16M9216 is resistant to Hessian fly, leaf rust, stripe rust, and stem rust. It has very good bread-making quality and is adapted to all wheat growing areas in Texas.
21. **'MI16R0720'** was released as a soft red winter wheat from Michigan State University. This line was genotyped as part of the 5-State nursery.
22. **'VA17W-75' marketed as 'EPIX 1375'** (PVP pending) is a high yielding, high test weight, semi-dwarf, awnless soft red winter wheat with excellent resistance to foliar diseases, including leaf rust and powdery mildew, as well as expressing moderate resistance to fusarium head blight (FHB) in the mid-Atlantic and southern U.S. Molecular markers were used in the development.
23. **'15VDH-FHB-MAS38-01'** (PVP pending) is an exceptionally early, high yielding, short, semi-dwarf, awned soft red winter wheat with good leaf rust and powdery mildew resistance, and exceptional FHB resistance (contains the Fhb1 locus) developed with substantial resources from the USWBSI. Molecular markers were used in the development.
24. **'15VDH-FHB-MAS33-13'** (PVP pending) is a high yielding, high test weight, semi dwarf, awnless soft red winter wheat with excellent FHB (contains the Fhb1 locus), leaf rust and septoria leaf blotch resistance developed with substantial resources from the USWBSI. Molecular markers were used in the development.
25. **'14VDH-HRW-02-029' marketed as 'Phoenix 29'** (PVP pending) is a Hard-Red Winter wheat specifically adapted to Mid-Atlantic, and the first hard wheat developed with yield potential comparable to commercial soft red winter wheat varieties grown in the region with acceptable milling and baking qualities for use in flour blends to manufacture bread products. Molecular markers were used in the development.
26. **'Inspire'** (PVP pending) is a soft white winter wheat and was developed for the intermediate rainfall areas of Washington with excellent disease resistance, end-use quality, and high falling numbers. Developed with the assistance of molecular markers.
27. **'Jameson'** (PVP pending) is a soft white winter wheat developed for the low rainfall areas of Washington with excellent emergence from deep planting, snow mold tolerance, and good end-use quality. Developed with the assistance of molecular markers.
28. **'Roger'** (PVP pending) is a spring club wheat developed for production in Washington with high grain yield, excellent end-use quality, and the first spring club wheat developed with Hessian fly tolerance. Developed with the assistance of molecular markers.
29. **'AR09137UC-17-2'** is a common soft red winter wheat variety released by the Board of Trustees of the University of Arkansas in 2021 before Esten Mason moved to CO.

30. ‘**ARS16W1067**’ =ARS05-1044/Baldwin. ARS16W1067 is a HRW intended to replace NuEast in local milling and baking as a wheat with comparable quality but substantially higher yields. The release is supported by 4 y of testing in the USDA Uniform Bread Wheat Trial and genotyping for major disease resistance, bread-making quality, and phenology genes.

2022 PVP that were reported as pending in previous WheatCAP reports (7)

1. ‘**Amplify SF**’ (PVP 202300009 submitted 09/16/2022) Amplify SF (Bearpaw/Antero//Antero) is a Hard-Red Winter wheat, released by Colorado State University in 2021. It has the semi-solid-stemmed trait for partial resistance to wheat stem sawfly.
2. ‘**Kivari AX**’ = CO14A055-258 = AF28/Byrd/3/AF10 /2*Byrd. (PVP 202200001, submitted 10/04/2021). Kivari AX is a new high-yielding CoAXium wheat that was released by Colorado State University in summer 2020.
3. ‘**KS Hatchett**’ (PVP 202100488, application submitted 09/02/2021) is a Hard-Red Winter wheat cultivar developed by Kansas State University for central Kansas. It has excellent yield potential and good test weight. It has durable resistance to leaf rust.
4. ‘**AM Cartwright**’ (PVP 202100489, application submitted 09/03/2021) is a Hard-Red Winter wheat variety developed by Kansas State University. It has competitive yields, excellent disease resistance package, and good baking quality.
5. ‘**SD Midland**’ (PVP 202200516, application submitted 8/26/22) is a HRW semi-dwarf variety with medium-tall in height and late in maturity. It is high yielding with average protein and test weight and good to excellent milling and baking quality. SD Midland is moderately resistant to stripe rust and yields well in lower rainfall areas. SD Midland got Miller’s choice ‘Best-of-Show’ award at the 2022 for good end-use quality.
6. ‘**TAM 115**’ (PVP 202000429, application submitted 9/18/2020). TAM 115 (TX11A001295 = TAM 112/TX02U2508) is resistant to greenbug (*Gb3*), wheat curl mite (*Cmc4*), leaf rust, stripe rust, and stem rust. It has good bread-making quality and is adapted to the Texas High Plains and Texas Rolling Plains.
7. ‘**TAM 205**’ (PVP 202000430, application submitted 9/18/2020) TAM 205 (TX12V7415 = ND 801/TX02D5813]//RonL) is resistant to leaf rust, stripe rust, stem rust, Fusarium head blight (*Fhb1*) and wheat streak mosaic virus (*Wsm2*). It has excellent bread-making quality and is adapted to the Texas High Plains, Texas Rolling Plains, and Central Texas.

2022 Germplasm (6)

1. ‘**CdDH-266**’ is a Hard-White Spring wheat line developed by the University of Idaho using combination of DH technology and characterized via molecular marker for bread-baking quality. It will be submitted to NSGC in spring 2023.

2. **PI 698810:** *Wapo-A1b* allele (haplotype H2) for increased number of spikelets per spike introgressed into tetraploid Kronos. Developed by UC Davis.
3. **PI 699107:** *FT-A2 A10* allele for increased number of spikelets per spike introgression into tetraploid Kronos. Developed by UC Davis.
4. **PI 700734:** stem rust resistance gene *SrKN (Sr9e)* introgressed into Fielder. Developed by UC Davis.
5. **PI 700735:** stem rust resistance gene *Sr22b* introgressed into Fielder. Developed by UC Davis.
6. **Eight *Sst1* isogenic pairs** (CSU): Near isogenic lines with and without the solid-stem locus *Sst1* locus in eight different genetic backgrounds. These were distributed to Katherine Frels (UNL) and Jeffrey Boehm (USDA-Lincoln) for screening in 2023.