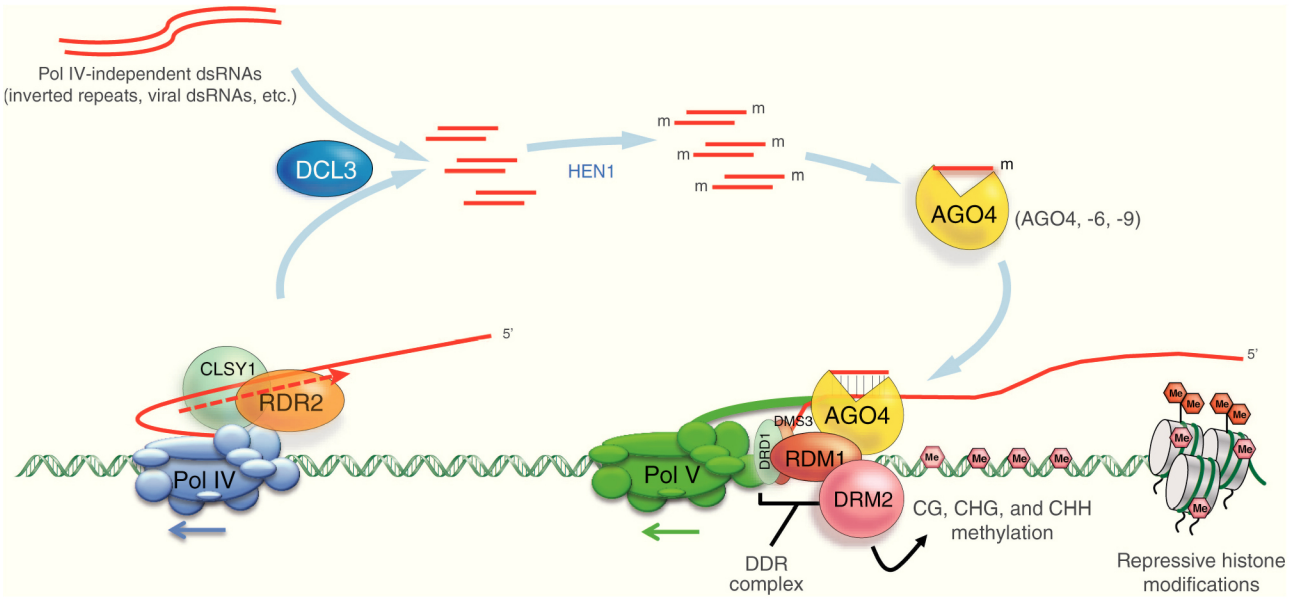

Figure 6. RdDM. Retrotransposons, viruses, transgenes, or repetitive genes are subject to silencing by RdDM. RNA Pol IV is thought to generate single-stranded RNAs (*bottom left*) that serve as templates for the RNA-dependent RNA polymerase, RDR2. Resulting dsRNAs are diced by DCL3 to generate 24-nt siRNA duplexes that are then methylated by HEN1 and loaded onto AGO4, or its closely related family members, AGO6 or AGO9. dsRNA derived from inverted repeat transgenes or viruses (*top left*) can bypass the need for RNA Pol IV and RDR2. AGO-siRNA complexes are recruited to their sites of action by binding to transcripts generated by RNA Pol V, as well as by physical interactions with the carboxy-terminal domain of the RNA Pol V largest subunit. At some loci, RNA Pol II is thought to substitute for RNA Pol V for the production of scaffold transcripts to which AGO-siRNA complexes bind. The DDR complex (DRD1, DMS3, and RDM1) enables RNA Pol V transcription. The RDM1 subunit of the DDR complex also interacts with AGO4 and the de novo cytosine methyltransferase, DRM2, thus potentially serving as a bridge that recruits DRM2 to sites of RNA Pol V transcription.