1. There are MN cells and each cell is containing 4 probabilities of agent-facing direction d ∈ (N, S, E, W), and have velocity less than vmax, so 4MN(Vmax+1)
2. If previous state has non-zero velocity, only fast or slow is possible option, while zero velocity can reach three options (left, right, fast) so maximum is 3.
3. No, it may take all around the tree.
4. Yes, it may lose guarantee of optimality.