

Experiments with Autumn Sown Crops Throughout Ontario

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THREE hundred and forty-three farmers throughout Ontario conducted experiments with autumn sown crops during the last year. Reports have been received from 39 counties and districts throughout Ontario. Those sending the greatest number of reports were Nipissing, Rainy River, Northumberland, Huron, Simcoe and Lennox. The average results of the carefully conducted co-operative experiments with autumn sown crops are here presented in a concise form.

WINTER WHEAT.

Five varieties of winter wheat were distributed last autumn to those farmers who wished to test some of the leading varieties in their farms. The average yields per acre are given in the following table:

Variety.	Straw Per Acre. (Bush.)	Grain Per Acre. (Bush.)
Imperial Amber	1.63	37.7
American Banner	1.40	30.8
Crusoe	1.24	24.4
Benanka	1.29	28.8
Imperial	1.27	28.8

The Imperial Amber, which occupied second place in the average of 19 years' results of 14 varieties tested at the College, occupies first place throughout Ontario in 1914. The American Banner, the only white wheat included in this experiment, comes second. It closely resembles in appearance the Lawson's Golden Chaff. The Crusoe Red, although a rather weak strawed variety, is a good yielder and produces grain of excellent quality.

WINTER RYE.

In the autumn of 1913, the Mammoth White winter rye and the Imperial Amber winter wheat were distributed to be tested under uniform conditions. The average results show that the Imperial Amber winter wheat surpassed the Mammoth White winter rye by a yield of 83.2 pounds of grain an acre. In experiments throughout Ontario for seven years the Mammoth White surpassed the Common variety of winter rye by an annual average of practically four bushels an acre.

WINTER EMMER AND WINTER BARLEY.

A comparative test of winter emmer and winter barley has been made throughout Ontario in each of the past five years. The average results for the three years previous to 1913 showed that the winter emmer gave 1,890 and the winter barley 1,812 pounds of grain an acre. The average results of an experiment conducted on two farms in 1914 show that the winter barley gave 1,480 lbs. and the winter emmer 720 lbs. an acre. The winter emmer was badly winter killed.

HAIRY VETCHES AND WINTER RYE FOR FODDER.

In each of the past three years hairy vetches and winter rye have been compared as fodder crops in the co-operative experiments. Four good reports of this experiment were received in each of the past three years. In 1913 and again in 1914 the winter rye produced a greater yield than the hairy vetches in each of the separate tests. The low yield of the hairy vetches is due to the fact that the crop was badly winter killed.

FERTILIZER WITH WINTER WHEAT.

In the co-operative experiments with different fertilizers applied in the autumn to winter wheat, the average yields of grain per acre for eight years were as follows: Mixed Fertilizer, 23.5 bushels; Nitrate of Soda, 22.0 bushels; Muriate of Potash, 21.5 bushels; Superphosphate, 21.2 bushels. On similar land, cow manure, at

the rate of 20 tons an acre, gave an average yield of 25.8 bushels, and the land which received neither fertilizers nor manure gave an average of 18.1 bushels. The Superphosphate was applied at the rate of 320 pounds and the Muriate of Potash and the Nitrate of Soda each 160 pounds an acre. The Mixed Fertilizer consisted of one-third of the quantity of each of the other three fertilizers here mentioned. In the past two years the fertilizer experiment with winter wheat was the same as in other years, except that the fertilizers were applied in the spring instead of the autumn of the year. From the spring applications the land which received the mixed fertilizer gave the highest average yield, and the unfertilized land the lowest average yield of grain. The cost of fertilizers used in this experiment would be approximately from \$4 to \$5 an acre.

In another experiment Nitrate of Soda increased the yield of wheat more than common salt when applied either in the autumn or in the spring.

As long as the supply lasts, material will be distributed free of charge in the order in which the applications are received from Ontario farmers wishing to experiment and to report the results of any one of the following tests: 1, three varieties of Winter Wheat; 2, one variety of Winter Rye and one of Winter Wheat; 3, spring applications of five fertilizers with Winter Wheat; 4, Autumn and spring Applications of Nitrate of Soda and Common Salt with Winter Wheat; 5, Winter Emmer and Winter Barley; 6, Hairy Vetches and Winter Rye as Fodder Crops. The size of each plot is to be one rod wide by two rods long. Fertilizers will be sent by express for Number 4 this autumn and for Number 3 next spring. All seed will be sent by mail except that for Number four, which will accompany the fertilizers.

Alfalfa Proves Hardier

Jno. C. Chisholm, Antigonish Co., N. S.

I read with much interest in Farm and Dairy of July 31st that at Mac-

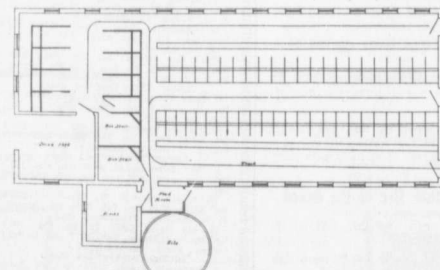
donald College alfalfa was killed. On my own farm I lost all my clover, while the alfalfa came through very well. The seeding of 1913 seemed to stand the severe frost better than the seeding of the previous year. Ontario alfalfa seed was sown in 1912 and Turkestan in 1913. This would indicate that Turkestan is a hardy variety.

Two years ago Mr. Boving of Macdonald College visited my farm. He expressed himself as well pleased with the appearance of my alfalfa. He asked me to try the experiment of disking the alfalfa after removing the crop. I was a bit wary at first, but this summer, after taking off the first crop, which was cut on July 31st, I went over a small portion, about half an acre, three times with the disk harrow. The alfalfa on that part of the field is now (July 28th) over 22 inches in height. I intend having that part for seed. Alfalfa is as yet grown to only a very limited extent in this part of the country. It certainly deserves more attention from our farmers, as it is a grand crop.

A Prize Winning Plan

In 1904, when Prof. Jas. W. Robertson was engaged in establishing the Macdonald College at St. Anne de Bellevue, he advertised a competition in barn plans for a Canadian farm of about 100 acres. This was open to Canada and the United States—in fact, the second prize went to New York State. The accompanying drawing shows the stable plan of the successful design which was submitted by Alfred A. Gilmore, then located in Atholston, Que., but now making a specialty of sanitary farm architecture, with office in Preston, Ont.

The ventilation used was very similar to that known as the King system and was worked out by the architect himself. The plans consisted of ground and barn floors, side and end elevators and details. An estimate of material and specification also was supplied. The frame was of plank and built with cantilever trusses. The basement walls were to be built of concrete 12 inches thick and the floor of concrete four inches thick. The plan submitted had a driveway on the level at the dairy stable end this was 12 feet wide and had a tight floor all over except at centre, where a door was arranged so hay or grain



A Stable Arrangement That is Considered Ideal

This is approximately the same plan as was chosen by Dr. Jas. W. Robertson as the best of all those submitted to him in connection with a great competition. Some particulars may be had from the article, "A Prize-Winning Plan."

donald College alfalfa has proved more hardy than any of the other clovers. My experience with alfalfa during the past winter is similar to that at Macdonald College. Last winter, in this part of Nova Scotia, was unusually severe. Practically all

could be unloaded to the mows without driving up into the second floor. This floor was 12 feet above the ground. This drive is not shown in the design, published herewith, because Mr. Gilmore now considers it one of the weak points in the plans.

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"AYRMONT FANNY"—2627—Oct. 10, 1909, Sire, Blondeste King, 2619, Dam, Woodside Fanny, 2510.
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2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2688, 2689, 2690, 2691, 2692, 2693, 2694, 2695, 2696, 2697, 2698, 2699, 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708, 2709, 2710, 2711, 2712, 2713, 2714, 2715, 2716, 2717, 2718, 2719, 2720, 2721, 2722, 2723, 2724, 2725, 2726, 2727, 2728, 2729, 2730, 2731, 2732, 2733, 2734, 2735, 2736, 2737, 2738, 2739, 2740, 2741, 2742, 2743, 2744, 2745, 2746, 2747, 2748, 2749, 2750, 2751, 2752, 2753, 2754, 2755, 2756, 2757, 2758, 2759, 2760, 2761, 2762, 2763, 2764, 2765, 2766, 2767, 2768, 2769, 2770, 2771, 2772, 2773, 2774, 2775, 2776, 2777, 2778, 2779, 2780, 2781, 2782, 2783, 2784, 2785, 2786, 2787, 2788, 2789, 2790, 2791, 2792, 2793, 2794, 2795, 2796, 2797, 2798, 2799, 2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839, 2840, 2841, 2842, 2843, 2844, 2845, 2846, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2854, 2855, 2856, 2857, 2858, 2859, 2860, 2861, 2862, 2863, 2864, 2865, 2866, 2867, 2868, 2869, 2870, 2871, 2872, 2873, 2874, 2875, 2876, 2877, 2878, 2879, 2880, 2881, 2882, 2883, 2884, 2885, 2886, 2887, 2888, 2889, 2890, 2891, 2892, 2893, 2894, 2895, 2896, 2897, 2898, 2899, 2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2955, 2956, 2957, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971, 2972, 2973, 2974, 2975, 2976, 2977, 2978, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 2999, 3000, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3008, 3009, 3010, 3011, 3012, 3013, 3014, 3015, 3016, 3017, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3035, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3085, 3086, 3087, 3088, 3089, 3090, 3091, 3092, 3093, 3094, 3095, 3096, 3097, 3098, 3099, 3100, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3110, 3111, 3112, 3113, 3114, 3115, 3116, 3117, 3118, 3119, 3120, 3121, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3130, 3131, 3132, 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, 3144, 3145, 3146, 3147, 3148, 3149, 3150, 3151, 3152, 3153, 3154, 3155, 3156, 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3171, 3172, 3173, 3174, 3175, 3176, 3177, 3178, 3179, 3180, 3181, 3182, 3183, 3184, 3185, 3186, 3187, 3188, 3189, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199, 3200, 320