



The Soya Project

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THE SOYA PROJECT - WHY WE DO VERTICAL FARMING

- LESS RESOURCES
 - WATER
 - PESTICIDES & FUNGICIDES
 - FERTILISER
- SHORTEN SUPPLY CHAINS
- SMALLER FOOTPRINT

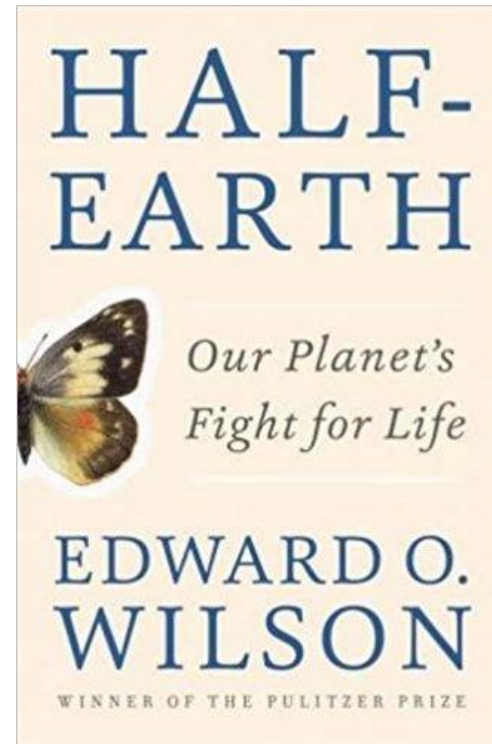
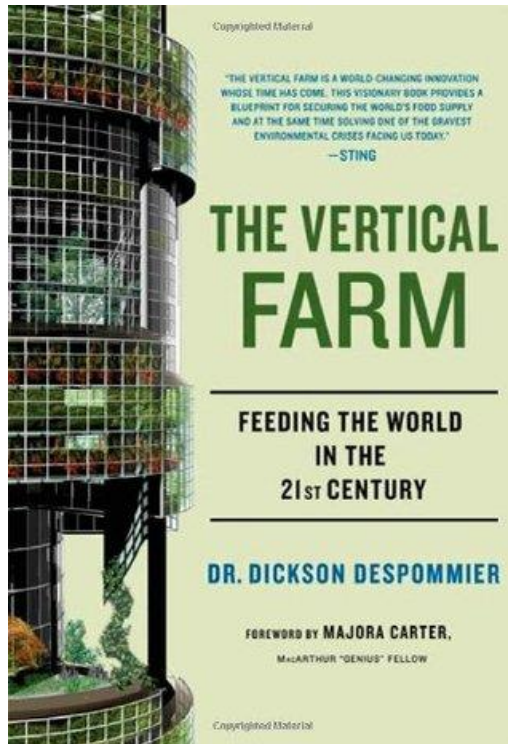


THE SOYA PROJECT - VERTICAL FARMING SO FAR

- LARGELY URBAN PHENOMENON
 - ROOFTOP, UNDERGROUND, CONTAINER,...
- MOSTLY LEAFY GREENS
 - HIGHER PROFIT MARGINS

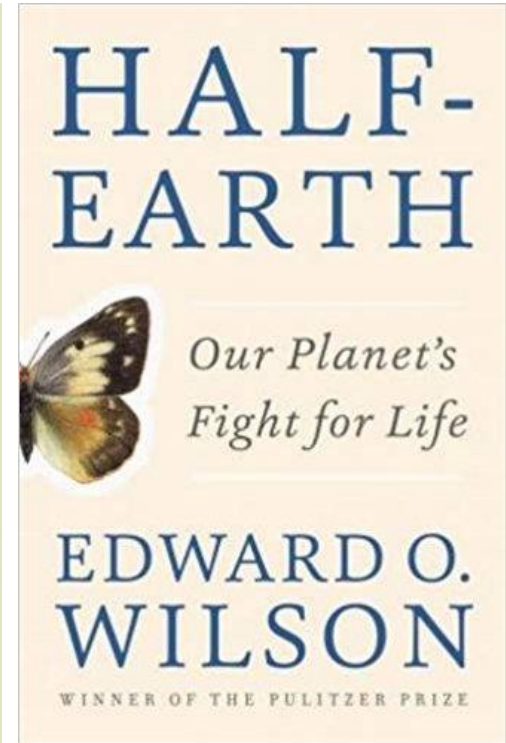
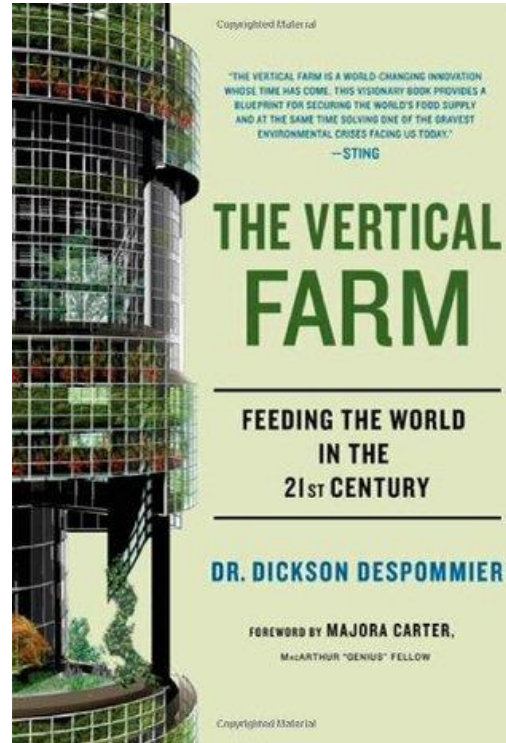


THE SOYA PROJECT - CAN WE DO MORE?



THE SOYA PROJECT - CAN WE DO MORE?

- BOTH ADVOCATE RETURNING LAND TO NATURAL ECOSYSTEMS
- WHAT CROPS WOULD MOST ENABLE US TO ACHIEVE THIS?



THE SOYA PROJECT - THE COMMODITY CROPS

- WHICH OF THE BIG COMMODITY CROPS BEST SUITS VERTICAL FARMING?
- MOSTLY LEAFY, NOT TOO TALL OR GENERALLY TOO BIG... SOY!



THE SOYA PROJECT - THE MONOCULTURE PROBLEM

- ENVIRONMENTAL HARMS
 - DEFORESTATION
 - THE CHEMICAL ARMS RACE
 - RUN-OFF
 - SOIL DEGRADATION
- "VIRTUAL" LAND-USE: LAND SCARCITY IN DEVELOPED COUNTRIES

THE SOYA PROJECT - THE MONOCULTURE PROBLEM

- SOCIAL HARMS
 - DISPLACEMENT OF PEOPLE
 - DISPLACEMENT OF LOCAL FOOD SYSTEMS
 - AGROCHEMICALS' NEGATIVE EFFECTS ON PEOPLE
 - ECONOMIC IMBALANCE

- IT'S A BATTLE WE'RE DESTINED TO LOSE EVENTUALLY!

THE SOYA PROJECT - WHY IT CAN'T POSSIBLY BE DONE

- ECONOMICS

- HIGH VF COSTS
 - CAPEX
 - OPEX
- LOW VALUE CROP
- LOW MARGIN

- TECHNOLOGY

- ENTIRELY NEW GROWING SYSTEMS MAY BE REQUIRED

THE SOYA PROJECT - HOW WE CAN DO IT ANYWAY

● ECONOMICS

○ REDUCE CAPEX

- LEASING, RENTAL, AS-A-SERVICE MODELS
- STANDARDISATION

○ REDUCE OPEX

- AUTOMATION
- TAX BREAKS?
- PERI-URBAN/RURAL

● ECONOMICS

○ RAISE REVENUE

- SUBSIDIES
- CO-LOCATION
- SECONDARY PROCESSING FOR ADDED VALUE

○ GROW AT SCALE

○ GROW WHERE NEEDED

○ COUNT THE EXTERNALITIES!

THE SOYA PROJECT - HOW WE CAN DO IT ANYWAY

- TECHNOLOGY
 - NEW GROWING SYSTEMS
 - "DEEP AEROPONICS"
 - PIEZO-ELECTRIC NEBULISER?!
 - ENABLE A RANGE OF NEW CROPS -->



THE SOYA PROJECT - BIGGER PICTURE, BIGGER BENEFITS

- IN ORDER TO SUCCEED, WE NEED TO:
 - LOWER COSTS
 - RAISE REVENUE
 - GROW AT SCALE

- ISN'T THAT WHAT EVERY VERTICAL FARM IS TRYING TO DO??

THE SOYA PROJECT - EVEN MORE BENEFITS!

- THE PROTEIN GAP
 - REDUCING THE LAND USED FOR SOY PRODUCTION
 - GROWING SOY WHERE IT IS NEEDED
- ECOSYSTEM RENEWAL & REWILDING
- ECOSYSTEM PROTECTION - WE HAVEN'T HARMED IT ALL... YET...
- SOCIAL BENEFITS/HARM REDUCTION

THE SOYA PROJECT - CONTEXT IS KING

- WHERE ARE WE DOING THIS?
 - SOUTH AMERICA?
 - USA?
 - EUROPE?
 - CHINA? (IMPORTS EQUATE TO ~ 50% OF GLOBAL SOY MARKET!)
- EACH PLACE - AND REGIONS WITHIN - WILL REQUIRE A UNIQUE APPROACH

THE SOYA PROJECT - WALKING UNCONVENTIONAL PATHS

*"TWO ROADS DIVERGED IN A WOOD, AND I—
I TOOK THE ONE LESS TRAVELED BY,
AND THAT HAS MADE ALL THE DIFFERENCE."*

~ THE ROAD NOT TAKEN, ROBERT FROST

THE SOYA PROJECT - SO MANY QUESTIONS, SO LITTLE TIME!

- THE SOYA PROJECT IS JUST BEGINNING
- WE CANNOT AND SHOULD NOT DO IT ALONE
- THAT MEANS WE NEED YOU...

THE SOYA PROJECT - WHAT WE NEED



Universities &
Institutions



Growers &
Practitioners



Policy
Experts



Municipal
Authorities



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